

Using Moodle: A Technological Teaching Tool

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Abstract

ムードルとして知られている“モジュールオブジェクト指向ダイナミック学習教育”は、学生向けのオンラインダイナミックウェブ環境を提供するツールとして世界中の教育者の間で近年注目を集めている。ムードルとは、教育者と学習者の相互教育過程を支援し、生産的で有意義な体験ができるツールである。創設者兼主要開発者である、マーティン・ドーギアマス氏によると、(2010)ムードルは「オープンソースソフトウェアの使用による、インターネットベースの教育と学習の社会環境の構築、認知の支援を実現」し、教育者のみならず学習者も教育的な経験をすることができる、と言う。ムードルはまた、仮想学習環境(VLE)として、教育及び学習過程において相互的に支援するリソースやツールにアクセスするロケーションを提供し、授業形態学習をウェブベースで補助的に支援するという、成果指向の学習環境を提供する。ドーギアマス氏は、「ムードル」という言葉はまた、それを行う人に直感と創造性を頻繁に導き出すことができる興味心をそそると言う理由から、行動する際の即興的な過程を示す動詞としても使うことができると説く。そのようにして、ムードルは本来の目的に加えて、学生または教育者にオンライン学習への

薦めをも支援している。このように、学習過程における相互的支援を推進し、授業案内や読書リストの閲覧、また、電子書籍、ディスカッションボード、オンラインクイズ、ビデオやオーディオを含むマルチメディアコンテンツへのアクセス、教育評価や課題修正などに活用できるという点が Moodle の主な特徴である。Moodle を使用することのメリット、デメリットを検証し、本論文では学習用の通信英語プログラムをより効率的に行うために、既存の教材を VLE（仮想学習環境）に活用する方法を提案する。

I . Introduction

1 , Moodle: What is it?

Moodle has become very popular among educators around the world as a tool for creating online dynamic web sites for their students. As of July 16, 2010, Moodle has a user-base of 50,861 registered sites with 36,016,261 users studying 3,613,561 courses taught by 1,224,171 teachers in 214 countries in more than 75 languages¹⁾. It is an Open Source Course Management System (CMS), also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). A CMS is geared especially to meet the needs of teachers by helping them, control, conduct and supply materials online, for class. An LMS/VLE is geared to meet the needs of learners by helping them access class materials, contribute to class projects and communicate with peers and instructors²⁾.

2 , Moodle: Where did it originate?

Moodle originated via its founder, and lead developer, Martin Dougiamas, in his doctoral thesis; "*An exploration of the use of an Open Source software called Moodle to support a social constructionist epistemology of teaching and learning within Internet-based communities of reflective inquiry,*"³⁾ emphasizing that learners (and not just

1) URL: <http://clt.lse.ac.uk/Why-Use-VLE.php> accessed on July 17th 2010

2) Britto. F. "Tips for Teaching Writing" Bulletin of the Faculty of Foreign Studies, placePlaceNameSophia PlaceNameUniversity, No.41(2006)

3) Ibid.

teachers) can contribute to the educational experience.⁴⁾ Moodle supports an outcome-oriented learning environment. The word "Moodle" can also function as a verb which describes the improvisational process of doing things as it occurs for a person to do them, an enjoyable tinkering that often leads to insight and creativity. As such it applies both to the way Moodle was developed, and to the way a student or teacher might approach studying or teaching an online course.⁵⁾

3 , Moodle: Why is it used?

As a Virtual Learning Environment (VLE), Moodle provides web-based support for courses and programmes by bringing together a range of resources and tools in one location that is available at any time and from any place via the Internet⁶⁾ . Using Moodle offers advantages for both students and teachers; namely being accessible at any time, from anywhere, having readily available resources, providing an improved quality of both the teaching and learning experience, being a 'one-stop-shop' for all course-related documents, communication and activities, as well as providing information on student activity and performance⁷⁾. Moodle offers numerous features as potential teaching tools, such as: course information and reading lists, access to electronic readings, discussion boards, chat rooms, online quizzes, Multimedia content including video and assessment and assignment collection, to name but a few. The list below provides a more context specific description of the functions and options available for both teacher and student:

(1), **Uploading a single file** - this allows the student the opportunity to complete an assignment outside of Moodle, before submitting it as a file, into Moodle. The instructor then has ready access to all of the class assignments in one place to ease marking and grading

(2), **Advanced uploading of files** - as above, this option allows the student the

4) Op.cit

5) Ibid.

6) URL: <http://clt.lse.ac.uk/Why-Use-VLE.phpa> accessed on July 17th 2010

7) Ibid.

opportunity to complete their assignments outside of Moodle, before submitting them as files into Moodle. However, this option also enables the uploading of more than one file, as well as enabling the instructor to return graded or reviewed files to student, via Moodle.

(3), **Online text** - this option has proven to be one of the singularly most useful types of assignment options for a writing course. Within this, the student is able to write, review and submit an assignment in Moodle right up to the deadline date, by cutting and pasting their own computer written work directly onto the Moodle interface, into the text box. The instructor is then able to review and insert comments by using the *Comment Inline* option, where students are able to see their own submission, parallel to the reviewed version returned to them by the instructor. Figure 1 shows the instructor's screen allowing them to use a variety of HTML tools to grade and modify the student submission.

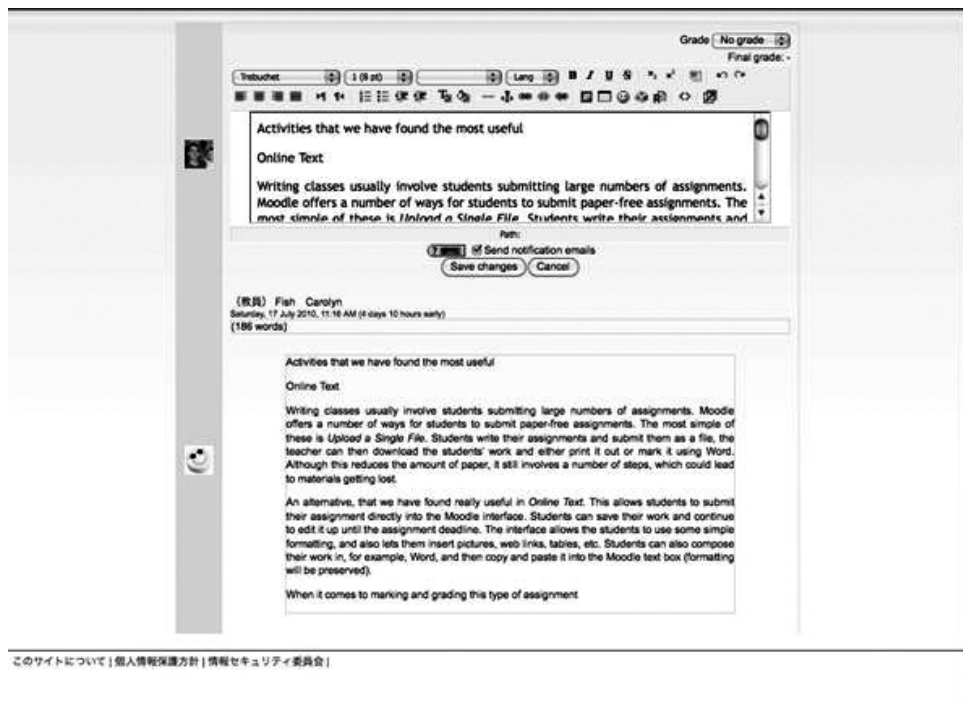


Figure 1

(4), **Offline Activity** - this is a useful option when the teacher wishes to set a task to

be completed outside of Moodle, for example, face-to-face activities, or web research, but still wants to use Moodle to notify the students of the task content, deadline, grading criteria, etc. The instructor can grade in a similar way to other Moodle activities enabling students to be notified of their grades in a consistent manner, and allowing the instructor to easily combine the grades with those of other Moodle activities during the course.

(5), **Chat** - functionally, this option is quite basic in its format - as a simple synchronous communication tool similar to MSN Messenger between instructor and student, or student to student (where the instructor is able to set “chat times” and the log can be saved for later viewing/reviewing). However, the *Chat* functions have a lot of potential, in terms of creating a sense of independent learning, for students. The chat room option can provide the opportunity for students to discuss in greater scope the topics discussed in class, thus consolidating their learning. The *Chat* option is also a suitable environment for providing an alternative to office hours in situations that preclude student and instructor being able to physically meet face-to-face.

(6), **Database** - allows a group to work together to create a database about any topic. Entries can be in a wide variety of forms - text, image, video, audio, URLs, etc. Users are able to search the database using keywords and display any of the entries. This option has proved very useful as a tool for collaborative group work where students are able to add content to a group/class project database. Users are also able to comment on entries, allowing instructors to provide feedback for students during the process of creating the archive.

(7), **Forum** - has proven to be an extremely useful teaching tool, similar to the *Chat* room option, where students are able to interact to discuss and consolidate a specific topic set by the instructor. The key difference between the *Forum* and *Chat* options being that whereas the *Chat* option could enable students to discuss the topic, after the lesson, the *Forum* could be used as a preparatory tool before the lesson. In this manner, students are required to post comments or thoughts about a pre reading exercise to generate ideas and opinions about the topic, as well as enabling students to prepare before the class with any context specific vocabulary that might arise.

Some of the main advantages to the *Forum* option include:

- a) It is asynchronous - meaning that users do not need to be on at the same time. Users can take their time preparing their replies - which may result in increased communicative confidence, as they have time to rewrite or correct their responses.
- b) The thread format that the *Forum* option is presented in makes it very easy to keep track of conversations.
- c) Student posts can be rated by other students, and/or graded by the instructor, providing a potential contributing factor to final grades.
- d) Students can be given the responsibility for moderating forums.
- e) The archived conversations can be used for reading study groups.

The differing *Forum* types available include:

- a) Single simple discussion - which keeps students focused on one issue
- b) Each person posts one discussion - which is useful when the instructor requires students to post a single question or assignment
- c) Q&A forum - where students must submit a post before they can see what other students have written
- d) Standard forum - students can start as many discussion threads as they like.

(8), **Glossaries** - allows instructors to create (in collaboration with all users) a list of definitions. New words and phrases that are encountered during a course can be added to the glossary by the instructor or by the students. Encouraging students to write their own definitions and provide their own examples of new terms may help them to remember better. Both students and instructors can comment on definitions, and terms can be refined over time. The glossary can be sub-divided into categories, and is fully searchable. A glossary can be used in conjunction with the *auto-linking* feature, allowing words to be automatically linked whenever they appear on the Moodle course. This means that the instructor can easily see when students are actively using the new terms in, for example, *forums* or chats.

(9), **Lesson** - this module allows the instructor to present the student with a full lesson. Students are presented with a series of pages, and are required to make a choice at the end of each one. The next page they receive will depend on the choice they have made. For a simple, linear lesson a student may just be required to press a button to access the subsequent page. In a more complex branching lesson, the student will have a number of choices. This allows the instructor to direct the student to specific material for their needs. For example, students may be redirected to an earlier part of the lesson if the teacher feels they need some remedial work. Lessons require a lot of work during set up, but can save the teacher time later on in a course and provide a more personalized and focussed experience for the students.

(10), **Feedback** - feedback about performance and self-assessment are important parts of a learning environment. This option allows the instructor to collect feedback from students by providing an online feedback via the *Questionnaire* option. The variety of question formats (as shown below) ensures that the instructor is able to ensure thorough and detailed feedback from students:

- a) Check boxes
- b) Date
- c) Dropdown Box
- d) Essay Box
- e) Label
- f) Numeric
- g) Radio Buttons
- h) Rate (Scale 1-5)
- i) Text Box
- j) Yes/No

(11), **Questionnaire** - allows instructors to create a questionnaire for students. A number of input methods are available including multiple choice, true/false, rating, numerical and short answer. Figure 2 shows an example of a questionnaire used to survey students' attitudes to using Moodle.

Questionnaire	
1	How did you first hear about Moodle? <input type="checkbox"/> From a colleague <input type="checkbox"/> At a conference <input type="checkbox"/> Internet search <input type="checkbox"/> From the media center <input type="checkbox"/> Other: _____
2	When did you enrol on Moodle? <small>(Use the day/month/year format, e.g. for March 14th, 1945: 14/3/1945)</small> _____
3	Where do you most often access Moodle? Choose: _____
4	What is the best thing about Moodle? _____ _____ _____
This just seems to put a line of text in	
5	How often do you access Moodle each week? _____
6	Which of the following do you think is the best reason to use Moodle? <input type="checkbox"/> Saves paper <input type="checkbox"/> Easy to access <input type="checkbox"/> Makes grading easier <input type="checkbox"/> Sounds like pocket <input type="checkbox"/> Another reason: _____
7	How user-friendly have you found Moodle? <small>not at all user-friendly not very user-friendly user-friendly very user-friendly</small> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
8	Which module did you enjoy the most? _____
9	Would you recommend Moodle to other teachers? <input type="radio"/> Yes <input type="radio"/> No

Figure 2

(12), Quiz - this option is particularly useful in terms of helping the instructor determine what the students have learned. The quiz module can display feedback and scores at different times during the quiz, using the review options. A wide variety of quiz reports (in addition to grades) are available. Quiz reports can not only focus on a single student's attempt to answer each question, but also can perform a robust analysis of a question's validity based upon aggregated student responses. Moodle's quiz module has a large number of options and tools. For example, quizzes with different question types can be randomly generated from categories of questions. Students can be allowed repeated attempts at a question; they can also be allowed to retake a quiz multiple times.

There are different options for scoring (marks/grades) individual questions in a specific quiz, grading attempts for a quiz and each question type. Further, different display methods can even make the same quiz appear different each time. This can be done by customizing the viewed format (by manually setting the page breaks) or by setting the number of questions per page. Questions can be shuffled in regards to presentation order, which, in addition can be made to look and act like a paper test.

When the computer does the majority of work, it's more convenient to provide students the opportunity to practice taking a test, or to give frequent small quizzes.

(13), **Wiki** - allows the easy creation of a collaborative web-page. Users are able to add and change content without any knowledge of web-authoring tools. Moodle records a complete history of changes and additions so that the instructor can see which students have been active in the page's creation. Uses of this module include: brainstorming an idea or project, dictogloss, and collaborative group work.

(14), **Workshop** - similar to the assignment module, this allows users to submit both online texts and to upload a single file. *Workshop* differs from these two methods in that it allows for peer assessment. Students receive two grades for each submission. One for their submission and one for the instructor's rating of the grading they have given to their peers.

II. Thoughts on Moodle Disadvantages

1, **Autonomy** - Moodle is open source software, widely available to download, enabling anyone, - anywhere, to write and use new modules, anytime. Moodle has proven to be innovative and independent. However, from an instructor's point of view, Moodle is not so straightforward to independently implement in class. University host servers of Moodle have to be approached with a course request, which has to be assessed, and then approved. When a course is created, there is a certain hierarchy of roles that Moodle requires users to adhere to:

(1), *The Administrator* (usually university IT departments) is a privileged role enabling complete access to, and complete control over all the contents of a Moodle server and its incumbent courses. The administrator is able to assign privileges as well as set limits for its users, create courses and control course enrolment.

(2), *The Course creator* (usually the instructor of the course) has content and management of courses privileges, will teach and control the Moodle activities of enrollees. The course creators can edit existing courses, decide whether the

course content is visible students on the course, can teach in other courses assigned by administrators; and can add or remove students.

(3), *Teachers* (usually teaching assistants) enjoy the same privileges as course creators, except certain privileges such as editing and assigning or removing students from existing courses. Teachers are unable to create new courses.

(4), *Students* attend courses, upload assignments, contribute to discussion forums and chat sessions. Students' functionality is limited to the access provided by the teacher, or the course creator.

2, **Accessibility** - Moodle is not the most appropriate tool to use if you are looking to create an open repository of information that anyone can browse and engage with. Although Moodle is open source software, most installations of Moodle initially require registration, with courses requiring course passwords (enrolment keys) for any potential user.

3, **Maturity** - Moodle is still maturing, and there have been many significant changes, since its inception. Whilst the continual evolution of this technology is to users' benefit in the long term, navigation of Moodle can become difficult when looking for programme-specific help.

4, **Grading** - There is no easy way to run a site-wide report on any students you might have on multiple Moodle courses you are running. In order to run a report on a student, you have to go into each course site to view each of their course grades, one course at a time, and one user at a time.

5, **Specific Guiding** - As an open source system, there are a vast array of freely available guidance materials online, many of them affiliated to Moodle. However, Moodle itself does not currently provide a good standard independent student guide. Whilst the Internet does provide support materials on Moodle, it is challenging to apply such generic literature to specific university servers hosting Moodle.

III. Thoughts on Moodle Advantages

1 , **Customizable** - Moodle's wide ranging availability provides ample plugins (such as Acrobat Reader (for reading PDF files), Flash player (for playing Flash and Shockwave files), MS Media Player or Real Audio Player (for playing various multimedia files) and other add-ons, (such as MS Word (for word processing), Adobe Acrobat (for making PDF files), Excel (for working with spreadsheets), PowerPoint (for making slideshows), and Photoshop (for editing or creating graphics)) are freely available for users to customize Moodle specific to their needs.

2 , **Support** - There is a lot of in-context help available on Moodle; the help icon button next to an input or a menu bar, provides a popup window with an explanation of what is required and how it works. However, the easy accessibility of Moodle and subsequent swath of online Moodlers, provides a vast community of extra online peer support, able to assist in solving problems, when navigation of Moodle itself proves challenging.

3 , **Functionality** - New modules (for example, *Attendance, Blog, Chat, Forum, Gradebook, Journal, Questionnaire and Feedback*) are constantly being written. With the addition of each module, Moodle gets increasingly more user friendly and more functional. Some of these functionalities enable Moodle to be used as:

- (1), as an online information dispenser (providing course information outside of class)
- (2), an extra teaching assistant (for setting quizzes, monitoring required contribution to course discussions or forums)
- (3), a 24/7 communicative vehicle between students absent from class and teacher.

4 , **Privacy** - When Moodle is hosted on a university server, this allows students access to the benefits of Moodle without risking their own personal computers. Each created course is password-protected, allowing only enrolled students to have access to course materials. Teachers have wide-ranging control over the features within

each course. Students have reasonable control over their view via student profile options.

IV. Using Moodle

Moodle has proved to be a highly dynamic, flexible and convenient teaching tool. For instance, with universities hosting Moodle, the IT department, as administrators, take care of the general running of Moodle, freeing the instructor of the worry of having to fix programme bugs, and of having to keep up to date on the latest developments and applications, thus leaving them free to implement Moodle specific for their course requirements and class needs.

Student feedback on using Moodle has proven to be overwhelmingly positive, although initially met with some caution and suspicion. Some of the main benefits perceived by students, being that Moodle is user friendly, a valuable resource, interactive and convenient. Negative points centre on the perception that the initial start up process is inconvenient, with Moodle's interface proving difficult to navigate - a problem that Media Centres, IT departments and teaching staff might wish to address in collaboration in order to find a practical solution. Perhaps, it would be beneficial for university IT departments or Media Centres to clearly advertise who is the appropriate Moodle "go to" source, to ensure efficiency and timeliness when trouble shooting problems occur for teaching staff. It would also be prudent for such personnel to advise teaching staff of any recent new Moodle applications that could be utilised to enrich classes, which might otherwise go undetected due to busy schedules.

Using Moodle as a tool to deliver more Composition and Communicative English classes more effectively, enables the instructor to:

1. provide access to audio or visual resources that would consolidate and enrich classroom centred learning
2. and links that where set deadlines for and decide the maximum number (and timing) of assignment submissions and re-submissions
3. refuse late submissions past a specific deadline

4. use inline comments and highlight content errors
5. grade assignments and represent the class average using anonymous graphs
6. chart students' grades online and show students an anonymous representation of the class progress in graph form - proving to be a powerful motivational tool.
7. ensure questionnaire participation and topic specific forum contribution
8. ensure students understood what is required of them, via an open but timed weekly chat room session with the instructor, and a unit specific weekly chat room where they could express any thoughts or questions with each other
9. control what information students were able to see, and when

Making contributions to forums and chat rooms, as well as specific assignment requirements a compulsory course component is helpful in ensuring students regularly access their Moodle accounts. Possibly making regular access to Moodle a compulsory course component, ensures greater student participation and interaction with classes, as well as enabling students to become more familiar and more comfortable with using Moodle. Whilst obtaining proficiency in Moodle may prove to be a time consuming 'trial by error' learning process for both students and teacher, it is a process that enhances and enriches the learning experience. Investing in Moodle as a teaching tool and learning resource, will equip both teaching staff and students with skills that will prove advantageous in consideration of the probability of VLE's such as Moodle becoming an increasingly utilised teaching tool in the future of Composition and Communicative English programmes of study.

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Moodle. (2006b, November 16). *Wikipedia, the free encyclopedia*. Retrieved July 17th 2010 from <http://en.wikipedia.org/wiki/Moodle>

Recommended resources

On Moodle in general: http://moodle.org/?lang=en_utf8

On Moodle news: <http://moodle.org/news/>

Moodle support: <http://moodle.org/support/>

The Moodle community: <http://moodle.org/community/>

Ongoing new add ons and plug ins development: <http://moodle.org/development/>

Specific package Moodle downloads: <http://moodle.org/downloads/>

Recommended reading

Cole, J. & Foster, H. (2007) *Using Moodle: Teaching with the popular open source course management system* O Reilly, Community Press

Hillar, S. P. (2010) *Moodle 1.9: The English Teacher's Cookbook* PACKT Plc

Rice, W. (2007) *Moodle Teaching Techniques: addressStreetCreative Ways to Use Moodle for Constructing Online Learning Solutions*. PACKT Plc

Stanford, J. (2009) *Moodle 1.9. for Second Language Learning* PACKT Plc

Wild, I. (2010) *Moodle Course Conversion: Beginners Guide* PACKT Plc