

Moodling at Sophia

Francis BRITTO

Japanese Abstract

上智大学では、MOODLEというCMS（コース管理ソフト）が2006年の四月から一般に使えるようになった。ずっと前からMOODLEに興味を持っていた著者は、すぐMOODLEをテストし自分が2006年の前期に教えた科目二つに使うことにした。MOODLEのインストールや管理を上智大学メディアセンターがやってくれるので、MOODLEを教員誰でも簡単にウェブ上で使えるようになっている。フリーウェアであっても機能豊かなソフトで、授業に役に立つ様々なことができる。学生に渡したいハンドアウト、時間表、ノート、文献、宿題、などを簡単にアップロードできるし、学生も自分の都合に合わせて大学内でも大学外でも資料を見たり、印刷したり、ダウンロードしたりすることができる。資料の配分のためだけではなく、テストや試験の実施、採点、点数の計算、成績のまとめなど、様々な目的のためにも利用できる。学生と教員が交流できるようなチャットやフォーラムなども使えるし、他にもたくさんの機能を持っている。この論文では、著者はMOODLEを紹介し、自分の授業で得た経験の元でMOODLEの教育上の利用方法を述べる。

0 Introduction

It was a pleasant surprise for me to find, when I returned in September 2005, after my sabbatical in Sydney, Australia, that Sophia University had Moodle available for testing. I had known about Moodle almost since its launching, since I had been involved in CALL for nearly 20 years and had attended several workshops and presentations on Moodle at conferences held by such organizations as JALTCALL and TESOL CALL-IS. The Moodle software demands, for effective and realistic use, installation on a server, whereas I was not actively engaged in managing servers; so I had no way of experimenting with it

until the Sophia University Media Center had installed it on a university server. Although for the first few months the Sophia Moodle was available mainly for the purpose of testing the software, since April 2006, it has been available to all those who want to conduct courses with it. Currently, there are more than 40 professors who are listed as offering courses on Moodle (see <http://nakama.cc.sophia.ac.jp/course/index.php>), though the extent of their use varies. Apparently, many are still experimenting with it, while some are using it extensively. I myself began Moodle experiments towards the end of 2005, and have been using it regularly since April 2006.

The aim of this article is to introduce Moodle, partly based on my own experiences, to those who may be considering using it. There is hardly any manual intended for Moodle beginners at Sophia. The World Wide Web, of course, has an abundance of materials in many languages, including English and Japanese, but it's often hard for beginners to apply general-purpose guides or literature meant for some other institutions to meet their needs at Sophia. The Sophia University Media Center offers sometimes introductory sessions on Moodle, each lasting for about an hour, and taking part in them may be a good beginning to get an overview of Moodle. At least the sessions I attended, however, seemed a quick demonstration of certain Moodle features rather than a workshop on teaching professors how to Moodle. The presenters were technicians who didn't personally use Moodle in any academic courses. This little article, therefore, may fill a void by presenting the experiences of someone who actually uses Moodle in his courses and thus be of interest to professors who may be thinking of using it.

1 All about Moodle

1.1 About CMS, LMS, VLE, etc.

Moodle belongs to a category of software called variously, with subtle differences in meaning, as CMS (Course Management System), LMS (Learning Management System), LCMS (Learning Content Management System), VLE (Virtual Learning Environment), MLE (Managed Learning Environment), OLE (Online Learning Environment), LSS (Learning Support System), LP (Learning Platform), ELS (e-learning system), and so on. CMS and LMS are perhaps the most common terms in USA, and VLE, the most common in Europe.

A “Management System” type of software helps organizations to manage their traditional office chores, once handled on reams of paper, more efficiently on a computer. A CMS is geared especially to meet the needs of teachers, for instance, by helping them conduct exams online, and an LMS, to meet the needs of learners, for instance, by helping them communicate with their peers and instructors. The difference is simply one of focus, as the functions of both CMS and LMS overlap. Experts might consider Moodle primarily an LMS with CMS features, in contrast to Blackboard, a similar product, which they might consider primarily a CMS with LMS features. There are scores of products similar to Moodle and Blackboard, such as WebCT, Sakai, Desire2Learn, Learning Manager, Edventure, Educator, and so on, though the most prominent ones today are only Blackboard, Moodle, and WebCT (merged recently with Blackboard Company, while remaining a separate product). Most academic institutions have started using programs such as these since they help not only teachers and students, facilitating teaching and learning, but also the institutions themselves, facilitating personnel, financial, and information management.

A CMS is not something entirely new to Sophia University, for the CMS Blackboard was introduced a few years ago, but its users were mostly from the Faculty of Liberal Arts (FLA). It was available on

demand even to members of the other faculties, but very few non-FLA members actually used it. Founded in 1997, Blackboard became, together with WebCT, one of the most popular CMSes in many American, British, Canadian, and Australian universities and schools. Sophia University, however, has phased out Blackboard, terminating the contract with Blackboard at the end of the first semester of 2006. Sophia's move from Blackboard to Moodle does not affect those who have never used Blackboard—the features and functions of Moodle are substantially the same as or even better than those of Blackboard (see 1.4 below)—but those who have been using Blackboard may find the move inconvenient.

1.2 Evolution of Moodle

Moodle is the brainchild of Martin Dougiamas, a Ph.D. candidate at Curtin University, Perth, Western Australia, still aspiring to complete his doctoral dissertation under the direction of Peter C. Taylor, Associate Professor of Transformative Education at Curtin. His thesis is entitled “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” (see Dougiamas, n.d.). With postgraduate degrees in both Computer Science and Education, Dougiamas spent several years supporting university teachers and students in the use of technology for education, and for a period he also served as the administrator of WebCT, a commercial CMS, at Curtin. It is such academic experiences that led him to create Moodle as a novel and open source CMS that won't have the drawbacks of a rigidly controlled commercial package. Moodle began as a simple project connected with Dougiamas' dissertation (cf. Dougiamas, 1999), but it has grown to be a world-wide phenomenon far beyond its creator's own dreams. Besides continuing to be the lead developer of Moodle, Dougiamas heads the Moodle Pty

Ltd Company, the commercial arm of Moodle, which also oversees the maintenance, design, and quality of Moodle.

Moodle is an acronym for “Modular Object-Oriented Dynamic Learning Environment,” though originally the *M* seems to have stood for the given name, *Martin*, of its creator. The word “Modular” suggests that Moodle is like an extensible and contractible structure that can be freely modified by the addition or removal of independent modules. Since Moodle is open source software, anyone from any part of the world can write modules and make Moodle more potent (see e.g., Zenha-Rela & Carvalho, 2006). In fact, new modules are constantly being written, and with the addition of each module, Moodle gets more functional and more elaborate like the International Space Station (see *Modules and Plugins*, 2006). Since its origin, Moodle has added and modified numerous modules, making it even superior to comparable commercial products on many features.

Some of the modules in the recent version of Moodle are called Attendance, Book, Chat, Choice, Database, Dialogue, Exercise, Flash, Forum, Glossary, Hotpot, Journal, Lesson, Questionnaire and Feedback, Quiz, Resource, SCORM, Survey, WebQuest, Wiki, and Workshop. As the names suggest, these modules enable Moodle to handle attendance, chat, exercises, Flash movies, quizzes, and so on. Moodle also has features and tools like Blogs (for blogging), Calendar (e.g., to highlight important dates and deadlines), Gradebook (to check the grades of all students), Groups (to assign students taking the same course to different groups), HTML editor (to make web pages), Mathematical tools (e.g., to bring in math formulae), text filters (e.g., to import quizzes), etc.

Moodle’s impressive statistics can be seen on the official Moodle site (*Moodle statistics*, 2006). Among the numerous CMSes competing for market share, Moodle is currently ranked second only to Blackboard (cf. Stites, 2006; Long, 2006; *Moodle*, 2006b). That it is not the first may be partly due to the fact that it is a relative newcomer. Many

institutions find it hard to wean professors away from Blackboard and WebCT, which professors are already used to. As of November 28, 2006, there were 18,673 Moodle sites around the world in 167 countries, and there were nearly 7.5 million users and 1.3 million teachers. The number of courses offered was close to 745,000 and the number of enrollments over 11.3 million. Moodle has been translated into more than 75 languages. The programming team includes not only Dougiamas, but also more than 20 core programmers and many volunteers from around the world to create modules and extensions, test new versions, write documents, translate materials, handle the help desk, and so on.

Moodle was first copyrighted in 1999, and the first Moodle Release (1.0) appeared on August 20, 2002. The latest release, Moodle 1.8, is expected in January 2007 (*Release notes*, 2006), and a substantially refurbished Moodle 2.0, perhaps later in 2007. As of September 2006, the Moodle version at Sophia University was 1.5, but according to Sophia Moodle administrators, Moodle 1.6 was to be installed by October, 2006, ready for the second semester. Officially released versions may take some time before they are installed at Sophia due to various reasons such as translation delays or testing delays.

1.3 Moodle Functionality

With all the modules, plugins, and numerous other extensions constantly being created, Moodle has more than enough features to satisfy the needs of most teachers and students. Perhaps the average teacher's primary concerns when teaching a course are: (1) to communicate with students, especially outside the classrooms, (2) to pass on to students course-related texts (like the schedule, readings, handouts, and study questions) or multimedia materials (like graphics, audio or video segments), (3) to conduct tests (e.g., quizzes, essays) or have other means of assessment (e.g., reports, reaction papers, or discussions with peers), (4) to create an atmosphere for students and

the teacher to interact; (5) to grade students and keep track of their performances, and (6) to maintain an address-book or student profiles for a quick recovery of each student's profile. Moodle will surely be able to address all these concerns and many others as well. There are numerous web pages on the Internet narrating how different teachers use Moodle for different purposes (see e.g., Baskerville & Robb, 2005; EFL Geek, 2006).

Since Moodle is accessible through the World Wide Web, students and teachers can interact even if they are in different continents: a teacher can give homework from one continent and students can do it and submit it from another, as long as both parties are able to access the Web. The communication can be synchronous or asynchronous. Moodle, moreover, is maintained by the Sophia University Media Center, which means users are completely free from the arduous task of having to install the software and of having to maintain it with bug-fixes and updates. Users do not even have to worry about viruses or adware invading their personal computers because of Moodle. Nor do they have to feel anxious about privacy. Every course that a teacher creates can be password-protected assuring that only enrolled students will have access to the materials.

There is no need for a teacher to conduct a Moodle-based course in a computer classroom. Moodle is not a language-lab program; it does not require any teacher intervention while students use it. It *can* be used in a computer classroom with a teacher's supervision if the class demands such supervision. Otherwise, even when classes are conducted in computer-less classrooms, Moodle can be used as a web-based repository (e.g., for dispensing information 24 hours a day), as a cyber-assistant (e.g., for conducting quizzes with the severity or leniency pre-set by the teacher), as a communication tool (e.g., for connecting people who are separated by distance), and so on.

A fear that most teachers have about any new software is the learning curve. How much time will I have to spend before I can start

using it? Given the popularity of Moodle around the world and the fact that more than a million teachers are already using it, Moodle may be said to be very easy to learn. In fact, one can start using it even without knowing much, and then learn its numerous features little by little as one goes along. In other words, even technologically challenged teachers can use Moodle to the extent they can, for Moodle does not require extensive preparations or complete course planning. Moodle won't in any way affect the personal computers of users or hang arbitrarily even if users make careless errors or fail to maintain a course they once started.

The easiest things to do in Moodle are putting up course-related documents, links, and web pages, and making them available to students. Creating web pages, forums, and chat rooms too are easy. A diffident teacher, therefore, may begin with such basic activities. Creating quizzes, adding RSS and Podcast feeds, importing and exporting quizzes, creating and adding Flash movies, and managing scores are likely to be more challenging. Such activities can be postponed until a teacher feels more comfortable with Moodle.

Perhaps teachers will have to spend much more time in preparing course materials than in learning Moodle. If they have only printed but no digital data, they will have to spend time in digitizing the materials. If they want to make multimedia content—such as PowerPoint presentations, Flash animations, movies, and audio segments—available to students, they will have to prepare it in proper format. In spring 2006, Sophia University offered special financial assistance to several teachers who wanted to hire part-timers to help them prepare course materials. It's likely that such assistance will be offered in the following years as well. Contact the Media Center for the availability of such funds and related information.

Several studies have shown that students like using a CMS (see e.g., Pearson, 2005), mostly because of the freedom it gives them. Students can always get their handouts or assignments even if they

miss getting them during class, and they can take tests and submit assignments even from their home or anywhere else at their own convenient time!

1.4 Freeware is not Junkware

Moodle has many claims to fame, not the least of which is that it is completely free. It is also open source software, which means its *code* (the set of programming instructions that constitute the software) is public and available to all. Commercial firms like Microsoft and Just Systems usually keep the code of their software secret, just as Coca-Cola and Kentucky Fried Chicken keep their recipes secret. Of course, even as open source freeware, Moodle is copyrighted and protected by various laws, and its development is planned and focused. Currently there are numerous open source freeware programs around the world, such as the highly popular *LAMP* platform, consisting of *Linux*, *Apache*, *MySQL*, and *PHP/Python/Perl*, which are challenging the domination of commercial firms (see Lyons 2004; Rand 2005; CRMchump 2006). Since Moodle is freeware, users, such as teachers and students, and site owners, such as Sophia University, are not obliged to pay any money for the software; and since Moodle is open source, any computer whiz can modify it for specific institutional or personal needs, though in a context like that of Sophia University, only the Moodle administrators—not users like teachers and students—will have the privileges to modify the program.

When they hear that Moodle is freeware, some tend to dismiss it as worthless, defective, unreliable, or not deserving any investment of time. No doubt, there is much of what techies call junkware and crapware going under the label of freeware, but there is also fantastic freeware that even money cannot buy. Currently, open source freeware is becoming increasingly popular even among commercial firms, which, with all their concerns for profit and customer satisfaction, judge freeware not only good enough but, on certain points, even superior to

equivalent commercial software (see e.g., Lyons, 2004; Rand, 2005; *What is cheapware*, 2004). In an article in *Linux Journal*, Chavan (2005) points out that open-source freeware is popular not only because it is free, but also because it gives more options than commercial products. As other advantages, he points out, “Unlike proprietary products, the source code for open-source CMSes is freely available so it is possible to customize the CMS to match your project’s requirements. Customized versions also can be redistributed according to the terms of their licenses. In addition, the benefit of free technical support provided by the Open Source community cannot be discounted.”

Moodle has been scrutinized by numerous experts and educators around the world, and it has come out with flying colors (see e.g., LMS News, 2006; Long, 2006). It has established a solid reputation, and thousands of illustrious universities and schools around the world use it (see *Moodle sites*, 2006, for a selected list). As of November 2006, there were at least 34 sites that had more than 20,000 users each, and Universite de Nantes in France offered 13,878 courses through Moodle. Moodle can cater to even a site with 50,000 users. The Open University in UK, Europe’s largest distance learning provider, has adopted Moodle as its primary CMS, and when fully operational, in February 2007, it is expected to be “the largest use of Moodle in the world” (see Open University, 2005).

There are many tributes to Moodle from Institutions, administrators, developers, and educators (cf. Koziankain 2006). A typical example is the following from Humboldt State University (*What is Moodle?* n.d.):

Blackboard Enterprise costs over \$60,000/year and would require \$130,000 to set up (based on a 2003 estimate), and would still not give us the same feature set we are able to achieve with Moodle. Moodle provides more instructional tools than Blackboard and new tools can be and are being built by faculty and technology staff at HSU, San Francisco State University, and many other educational institutions in

the US and around the world. Lastly, the open source philosophy that Moodle is built on is a good fit with the academic principles of open research, open science, and open access.

Munoz and Van Duzer (2005), two researchers at Humboldt State University, made a comparison of satisfaction with the CMSes Blackboard and Moodle. Their research question was: “Can free software satisfactorily meet the needs of students, faculty, and instructional technologists for online teaching and learning?” Their project randomly assigned a group of students to Moodle (v 1.3.2) and another to Blackboard (v 6.0 Basic), Moodle being an entirely new experience for both the instructors and students. The following features were used in the course: “Electronic assignment submissions, Virtual areas for group work, Self-assessment quizzes and online testing, Sequential learning objects (Moodle only), Embedded Shockwave Flash (.swf) files, Tracked specific student activity (Moodle only), Poll (Moodle only), Glossary (Moodle only), Survey, Discussion forums and Links to external web pages.” The results of their survey showed the relative strengths and weaknesses of each program as perceived by instructors and students, with Moodle edging out Blackboard on several significant features. The decisive final question to students “Which do you prefer, Moodle or Blackboard?” produced the following answers: No preference 42.9%, Moodle 35.7%, and Blackboard 21.4%. A similar survey by Pearson (2005) too showed students’ preference for Moodle over other comparable products.

As in the heyday of Windows vs. Macintosh wars, there are debates today over which CMS is superior. Obviously, such debates are sure to surface because of various subjective variables involved. For ordinary users, who tend to use only a few functions of any software, however, the debates may be too technical or irrelevant (cf. Britto, 2003). Regardless of the outcome of such debates, teachers can be confident that Moodle does offer most of the basic tools necessary for them and

lots of other tools useful to them. Since software products change rapidly with every version, comparing their functions at any given time may only be of limited value. Software makers learn from each other, and continually aspire to make their products comparable or superior to competing products. So it's only natural that at any given time one product, for example, Moodle or Blackboard, looks superior or inferior to the other (see e.g., *Read Reviews: Moodle*, n.d.). As far as Moodle is concerned, it is not only freeware—thus beating all commercial products in terms of price—but also open source—thus possessing greater vitality, as educators and volunteers from around the world constantly rejuvenate it and renovate it (cf. Berggren et al., 2005).

Open source freeware also helps customers to escape vendor lock-in, “a situation in which a customer is so dependent on a vendor for products and services that he or she cannot move to another vendor without substantial switching costs, real and/or perceived” (McMullin & Munro, 2004). Commercial software imposes a large financial burden not only in initial stages but also in subsequent stages as the software makers always find innovative ways of charging customers with new releases and updates. Freeware, on the other hand, imposes no such burden, though it too may require some inevitable expenses related to hardware and professional support.

1.5 Required Hardware, Software, and Computer Skills

Since the Sophia University Media Center personnel run and maintain Moodle, ordinary users do not need to add any hardware or software solely for the purpose of accessing it or using it. A relatively recent personal computer (laptop or desktop) with a web browser (such as Internet Explorer or Firefox) and Internet access is all that is required. Users can access Moodle from a variety of platforms, including Apple and Windows, and they can conduct all Moodle activities using the World Wide Web. Naturally, the more powerful a computer, the better its performance will be in displaying web pages

and running web-based programs like Moodle. Browser 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) may be required for specific purposes, but most recent computers come along with all these or equivalent plugins. Other software programs such as MS Word (for word-processing), Adobe Acrobat (for making PDF files), Excel (for working with spreadsheets), PowerPoint (for making slideshows), and Paint Shop Pro or the more expensive Photoshop (for editing or creating graphics) are optional and are required only if users plan to create files generated by these programs. Most busy teachers these days hire part-time helpers to prepare these special files and simply ignore learning these programs themselves.

Since all Moodle transactions are electronic, potential users must have at least elementary computing skills. No advanced skills are required, but users must know the basics of Windows or Apple and the basics of web-browsing and word-processing. Moodle is not meant for those who are reluctant to use computers or for those who prefer working with printed materials.

2 Using Moodle

2.1 Knowing your Privileges and Limits

There are five major categories of Moodle users depending on the role or status they are assigned: Administrators, Course Creators, Teachers, Students, and Guests. It's good to be aware of your role/status since the answer to certain mysteries such as why you cannot access certain features or change certain settings may be related to the privileges and limits assigned to your role.

The most powerful and most privileged user is the *administrator*, who has free access to and complete control over all the contents of a Moodle server. The administrator can assign privileges and set limits to all those who register; can create courses for others, and can enroll

students to courses. At Sophia University, the Media Center personnel act as administrators, and so the faculty and students have nothing to do with Moodle administration. The next in the hierarchy are *course creators*, with privileges for creating and managing the courses they will teach and for controlling the Moodle activities of enrollees to the courses. The course creators can decide whether the course content is visible or invisible to enrollees; can teach in courses assigned by administrators; can edit existing courses; and can add/remove teaching assistants and students. Most professors at Sophia are given this status of course creators and equivalent privileges. The next in the hierarchy are *teachers*, enjoying the same privileges as course creators except a few like the privilege to create new courses. This status is ideal for teaching assistants (TAs) used by professors so that the TAs can work in cooperation with the professors but not too independently or against the wishes of the professors. Teachers can teach in assigned courses, can assign/remove students, and can edit existing courses. Their editing privileges may be controlled by the course creator with whom they work. The next in the hierarchy are *students*. They can attend courses, can upload their assignments, and can make entries in the discussion forum, chat session, etc. Obviously, what they will see and what they will have access to are controlled by the teacher.

There is a final category of users, called *guests*. The guests can only have reading or lurking privileges, so that they can view most of the information available, but cannot actively take part in the regular courses, for example, by leaving messages that interfere with the work of the enrollees. Guests can be admitted with or without an enrollment key. Guests who are to be admitted with an enrolment key will have to enter the key every time they log in to a course (unlike regular students, who need to enter the key only once when they register). Guests permitted to enter without an enrolment key can enter the course more easily with only a Moodle login. As there is no enrolment key, in this setup, the course will be freely available to anyone who is

able to log in to Moodle. At present, no guest outside the university can enter the Sophia Moodle; so the guest privilege only enables those with a Sophia login and password to access the resources.

2.2 Getting Documentation and Support

One of the major advantages of using Moodle is that you have access to an abundance of documents that you can rarely get for a commercial product. Since Moodle is free and open source, many Moodle veterans feel impelled to share freely with others what they have discovered and what can help others. Any Internet search will reveal a large volume of manuals, guides, and tips, including even book-length guides and video clips, most of them freely downloadable and usable. So anyone can take a plunge into Moodle without any worry at all!

Here I refer to a few major resources for your convenience. There is no better place to learn about Moodle than Moodle's own homepage (*Moodle*, 2006a). The *Moodle Docs* (2006) serves as a gateway to a large number of documents, guides, and help files, in several major languages such as French, German, Japanese, Portuguese, Russian, and Spanish. If you'd like to have a general orientation to Moodle, start with the *About Moodle* (2006) section, where among the many topics, the following are especially worth reading: Background, Philosophy, Features, and Case for Moodle.

Perhaps the best online resource for a teacher is the *Teacher's Manual* created by the Kemi-Tornio University of Applied Sciences eLearning Centre (n.d.) and made freely available. This manual, with rich illustrations and annotations, is for Moodle version 1.5.3 and most useful to Sophia Moodlers. Every teacher new to Moodle may benefit by the short *Teacher Documentation* (2006), which is also worth printing. This manual deals with the following six sections: *Getting started* [explanation of the Course Homepage], *Editing course section* [hints for turning the editing switch on and using various editing tools],

Activity modules [tips on adding a new activity like a chat room, forum, or a quiz], *Resources* [tips on adding a resource like a web page, a link to a file or a web site], *Blocks* [tips for adding or removing any of the 16 different blocks built into Moodle, like Blog and Calendar], and *General advice*. This is a very informative document, with screen shots and icons to help you understand how you can manipulate Moodle.

Another excellent step-by-step instruction for constructing a Moodle course is the *Moodle Instructor's Guide* (Aurora University, 2006). Although this lacks screenshots, it covers more ground and is quite short. A page worth adding to "My Favorites" of your web browser is <http://docs.moodle.org/en/Category:Teacher>, which gives an alphabetized index of numerous documents useful for teachers. This page may be very convenient for teachers to look up how to do certain tasks in Moodle, for instance, how to add quizzes, how to manage grades, and so on. For a long list of manuals you can download or print, see *Moodle Manuals* (2006). Most of these manuals are written by experienced professionals. They are available in several languages, and most of them are free. There are at least two major books on using Moodle, Cole (2005) and Rice (2006), which may be convenient for those who prefer printed publications. Matt Riordan's (n.d.) book *Moodle: An Electronic Classroom* and Bryan Williams' (2005) book *Moodle for teachers, trainers, and administrators* are freely available on the net for download.

Even while you are using Moodle, you can get online support since Moodle is very extensively annotated with contextual help messages and relevant links. For example, after you have logged in to Moodle and selected a course you have created, you can easily call up *Teacher documentation* (2006) by clicking *Help* in the *Administration* Block of the Course Homepage.

The Moodle documentation resources try to meet the needs of all categories of users, and so be sure to pick and choose only what concerns your own user-status. In particular, note that you won't be

able to execute the privileged commands that are available only to Administrators.

2.3 A Quick Guide to Starting a Moodle Course

2.3.1 Getting a Moodle User Account

Assuming that you already have a Sophia email account, the very first thing for you to do is to register yourself with Moodle and thus create a new Moodle user account. If you already have a Moodle user account, skip to 2.3.2. If you don't even have a Sophia email account, contact the Media Center. Without a Sophia email account, you cannot get a Sophia Moodle user account.

The Sophia University Media Center (2006) has prepared a 3-page English pamphlet entitled *Using Moodle for the first time* to help Sophians register with Moodle. You can read, print, or download it from http://ccweb.cc.sophia.ac.jp/call/Man_S/moodle_start_E.pdf. A Japanese version of the same file is available at http://ccweb.cc.sophia.ac.jp/call/Man_S/moodle_start.pdf.

This 3-page pamphlet is intended for students. If you are a professor, follow the instructions only up to the end of page 2 and discard page 3. If you have difficulties in logging in despite inputting correct Sophia email login and password, check the security setup of your PC, and enable cookies (small data files that are kept in your personal computer). You cannot log in to Moodle if you fail to accept cookies (cf. Cookie Central, 2005). Make sure also that your PC shows correct date and time, since several Moodle operations rely on the accuracy of the clock.

Although the Moodle screenshots on this pamphlet show messages in Japanese, when you access the Moodle server, you can switch to English by selecting the desired language on the top right corner of the screen. Page 3, intended for students, tells them how to register for any of the Moodle-based courses currently offered at Sophia. When you complete your profile at the end of page 2, you will have been properly

registered and a user account will have been created for you, but by default your privileges will be limited to those of students.

The *profile*, described on page 2 of the pamphlet, is an important part of Moodle, and so be sure to enter your *true* name, *true* email address, and so on. All users of Moodle, teachers as well as students, must enter their profile at least once, for the profile data will be used for various purposes such as keeping track of quiz performances, forum postings, and such Moodle-based activities. The profile data can even be modified later on, and so when you register, you may only give the most important pieces of information, such as name, status within Sophia, and email address, and later on add your photograph, detailed self-introduction, and so on.

2.3.2 Getting Course Creator Privileges

This simple step is only required of faculty members, not of students. All you have to do is to contact the Sophia University Moodle administrators at the Media Center (by email or phone) and inform them of your faculty status and of the fact that you have registered with Moodle for a user account. Then they will ‘empower’ you, possibly in a day or two, with Course Creator privileges by assigning you the appropriate user role. If you are not so empowered, you won’t be able to create courses or conduct classes using Moodle.

2.3.3 Creating a Course

There is no printed manual or instructions given by the Sophia University Media Center for exploiting the riches of Moodle, so you’ll have to get your own manuals from the sources mentioned earlier (see 2.2). A printout of the following may be recommended: *Course Settings* (2005) or *Course Administration Settings* (n.d.). The former is quite detailed, but without any screenshot; whereas the latter is well-illustrated, but compact. It may be difficult to follow the following

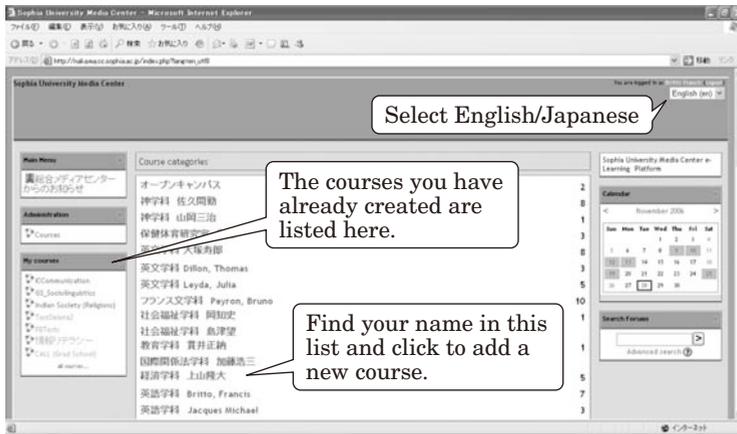


Figure 1. After logging into Moodle–Course Categories Page.

steps without having a printout of one of these resources or without actually executing the actions described.

- (1) Login to Sophia Moodle by going to <http://nakama.cc.sophia.ac.jp> and entering your Sophia University email login ID and password. If you are logging in for the first time, you'll be asked to create your profile (see 2.3.1).

If you have not created any course yet, you are likely to see the [Sophia » Course categories] page showing all the courses currently offered by Sophia University professors through Moodle. You'll find there your department's name followed by your own name, like: “英語学科 Taro, Jochi.” If you don't find your name in the list, go through steps 2.3.1 and 2.3.2 or contact the Media Center. If you'd prefer Moodle messages in English, select “English (en)” from the dropdown menu at the top right corner (Figure 1).

- (2) Click on the link with your department's name and your name on it (e.g., “英語学科 Taro, Jochi.”), to open a course creation page, with the Moodle *navigation bar* showing [Sophia >> Course categories >> 英語学科 Taro, Jochi]. This new page will show your department's

name and your name in a dropdown box entitled “Course categories.” You’ll see below, towards the bottom of the page, a button marked “Add a new course.”

- (3) Click the button marked “Add a new course.”

Now you’ll see the page [Sophia » Administration » Course categories » Add a new course].

- (4) On this page, entitled “Edit course settings,” you’ll have to enter various pieces of information concerning the course you plan to offer. Here are a few hints; for details consult the printouts recommended above in 2.3.3.

■ Leave the “Category” box showing your department’s name and your name untouched. If it doesn’t show your department’s name and your name, click the dropdown menu and select the line showing these names.

■ As for the rest, enter the requested information as appropriate. *Click on the question mark icon (❓), found after each box, anytime you need help.*

■ The most important settings to be made are Summary (give a description of the course for potential students), Format (Social, Topical, Weekly, etc. *Weekly* may be ideal for beginners), Course Start Date, Total Number of Weeks or Topics, Availability (hide a course if you don’t want students to see it yet, or make it available), and the Course Enrollment Key (enter a key to prevent unwelcome visitors). The enrolment key, which you may make up as you like, will serve as the “password.” *Make a note of it, for you’ll have to give it to students taking the course.*

■ If you are in doubt about any entry, simply leave it with the default value, for you can change the settings (including the enrolment key) even later on!

- (5) When you have filled out the course settings, be sure to click the button “Save changes” at the bottom of the page.

Moodle will automatically validate your input and ask you to revise certain fields if there are any major conflicts. Otherwise, the new course will be saved under the name you have given, and the Course Homepage will open in the format you have specified.

You have now created a course (equivalent to getting a classroom, furniture, and some office space), but you have not populated it with any content (i.e., course materials like readings, notices, etc.). In other words, the course you have created is simply a blank containing no information useful to students. To populate this office space with content is the next task.

2.3.4 Populating a Course with Content

At this stage again, it is advisable to consult a Moodle book (Cole, 2005; Rice, 2006) or the *Teacher Documentation* (2006). Earlham College has two fine pages entitled *Using Moodle: Organisation and layout* and *Moodle How To: display syllabus* with images and Flash movies (see Pearson, 2004a & 2004b). Pearson 2004a is good for beginners since it shows screenshots and points out what each box and button is for, but unfortunately the Moodle version shown is slightly older than the one at Sophia. Perhaps the best guide with detailed instructions and annotated screenshots of a more recent version of Moodle is *Course Building (n.d.)*.

- (1) First, if you are not continuing from the step of “Creating a Course” (2.3.3. above), log in to Moodle, select the language (if you want English messages), and then click the name of the new course you have created, which is listed in a block entitled “My courses,” in the left column of blocks.

A new window opens and you see the unpopulated course contents page, officially called the *course homepage*, with the name of your course stated at the top left corner.

- (2) Here the first thing to do is to click the “Turn editing on” button found near the top right corner.

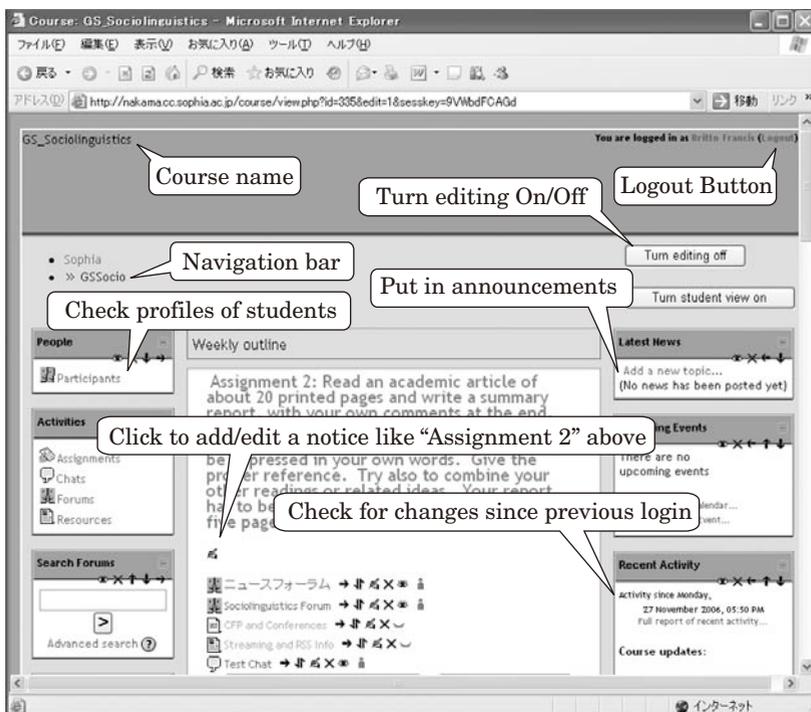


Figure 2. Course Homepage

	the edit icon.	Lets you edit whatever entry it is next to. Click this whenever you want to make changes in the entry close to it.
	the help icon	Provides you with a popup help window. Click this whenever you need help!
	the open-eye icon	Lets you hide something from students. "Open eye" means the content is visible to students.
	the closed-eye icon	Lets you make a hidden item visible. "Closed eye" means the content is hidden or invisible.

Table 1. List of editing icons

This click reveals numerous buttons, boxes, and icons, making it possible for you to populate the page with a variety of content items. Note especially the icons shown in Table 1, which are the most useful at early stages.

- (3) There are two major types of content, *Resource* and *Activity*, which can be added by selecting an appropriate choice from the dropdown box labeled “Add a resource” or “Add an activity.” You’ll find these dropdown boxes for each unit/week of your course. Among the “Add a resource” list, “Compose a text page,” “Compose a web page,” and “Link to a file or website” are very easy commands even for beginners. Click, for example, the “Compose a web page” option, and a new interactive window will appear with a WYSIWYG web page editor. You can then compose a web page as if you are typing a document in MS Word. Among the “Add an activity” list, “Forum” and “Chat” can be created easily even by a beginner.

Try creating a text page or web page with some information for students, and try adding a Forum for students to discuss topics related to class. There is no need to fill all the fourteen or so weeks of a course with a “resource” or “activity” content in one sitting! You can close the session even after adding content for only the next week or the next few weeks, and then continue later on. If you don’t want students to see ahead of time what you’ll deal with in class, you can hide—clicking the open eye icon—the content you’ve already created.

- (4) In the left column of blocks, the *People/Participants* link will open up a list of all those who have registered for the course. Here you can conveniently check the personal data, like name and email address, of your students—after they have registered for the course. You can also check your own profile and modify it if necessary.

To move back from the *Participants* page to the Course Homepage, click on the appropriate link (here it will be the name of

the course) on the ever-present Moodle navigation bar, near the top left corner (See Figure 2).

- (5) The *Administration* block, in the left column, contains numerous options to help you change your course *settings*, *import* data from any other course, and upload *files* required for your course, etc.

If you set up a course in a hurry, open the *settings* and modify the course settings as required. If you have already prepared resource files like PDF files or Word files, you can upload them by clicking the *Files* link here. The files you upload here will be kept in a special folder for you to use in your course.

If you conduct quizzes and tests, you'll be able to examine the scores of all students by clicking on the *Grades* link. You'll also be able to export the data as an Excel file or a text file for use outside Moodle.

- (6) The *My Courses* block, in the left column, lists all the courses you have created. By clicking the *All Courses* link, you can view all the Moodle-based courses offered at Sophia by all the professors and you may also add a new course of your own.
- (7) The blocks in the right column help you add the *Latest news*, information about *Upcoming Events*, and so on. The *Recent Activity* block, in the right column, contains a message from Moodle about the latest actions that your students or you completed in Moodle. For example, if a student posted a message in one of the forums since you last logged in, it will be reported here so that you may examine it.
- (8) The *Blocks* dropdown menu, in the right column, gives you a list of blocks that you can add at your own discretion. If, for example, you click the Calendar option from the Blocks menu, you'll see a new Calendar block showing a dynamic calendar, which can be used to inform students of major forthcoming events.
- (9) When you finish your Moodle session, it is advisable to “logout” by clicking the logout button, found on the top right corner. *Note that*

if you keep Moodle idle, doing nothing, for a long time, the session will automatically close—even though the screen may show where you left off. You won't be able to continue the work unless you log in once more.

I have given only the basic hints for creating a Moodle course. With the help of the documentation listed in 2.2, it is relatively easy to master most of the skills required for starting and conducting a course.

2.3.5 Managing a Course

2.3.5.1 Enrolment Key Distribution

Once you have populated the course with content, incomplete though it may be, you'll have to advise students to register for the course. This you can do by giving your students, during a regular class, the “name of the course” and the “enrolment key” you have created for the course. Each course can be assigned its own unique enrolment key, so that those who do not know the key may be denied access to the course. Since there is only one key for all the enrollees of a course (not a different key for each enrollee), the key can be written on the blackboard or given out orally for all students to take down.

2.3.5.2 Course Registration by Students

In order for students to benefit from a Moodle course, first each one of them will have to get a Moodle user account, by logging on to Moodle and completing their profile (see above 2.3.1). In the case of students, the Moodle user account is set to expire at the end of each academic year—unlike the user account of tenured professors, which will remain as long as they have their faculty status. Students, therefore, will have to get a fresh Moodle user account even if they used Moodle the previous year. If they are currently taking another Moodle-based course, however, they won't have to register a second time since they already have a Moodle account for the current year.

Next, each student will have to register as a “participant” or “student” of *your* course by selecting the course name and entering the enrolment key you have given them (see Sophia University Media Center, 2006, p.3). Students will have to make such a course registration for each course they are taking. There is a remote possibility that your students give out the enrolment key to those who are not actually taking your course. Usually, though, you can find out who has registered for the course by examining the list of *participants* [in the Moodle block entitled *People*], and then you can take the necessary steps to remove the intruders. You may also feel relieved to know that nobody can log in to Sophia Moodle without a Sophia login and password. So even if there were to be intruders, they would not be from outside Sophia.

If the students are not sufficiently computer-literate, as they tend to be in their freshman year, they will have to be introduced to Moodle in a computer classroom at least once. It is likely that from 2007 on the compulsory freshmen course *Information Literacy* will include at least one session on Moodle, freeing individual teachers from the burden of having to teach Moodle to their students. I have already started introducing Moodle to students who take the *Information Literacy* course that I teach. Teachers may also ask students to attend the free Moodle guidance that the Media Center offers sometimes.

2.3.5.3 Course Management

After the students have registered for a course in Moodle, the burden will be on the teacher to run and manage the course. The teacher may have to supply daily, weekly, or monthly ‘fodder’ for the course, create forums and chat rooms, add links and web pages, build a set of questions and quizzes—all at the teacher’s own discretion. The teacher may also have to work out strategies, like conducting Moodle-based forums, chat sessions, assignments, and quizzes, to entice students to open Moodle at least once a week or even more frequently.

Moodle's potentials will remain untapped if students do not access the course pages! Finally, the teacher may exploit Moodle tools such as *Calendar* and *Upcoming Events* to facilitate course planning, tools such as *Quiz*, *Activity Reports*, and *Assignment* to assess students' performance, and tools such as *Grades* to tally scores and grade. By using other tools such as *Backup*, *Restore*, *Files*, and *Import*, the teacher will be able to save all the course materials, and reuse them in different courses either during the same semester or at a later semester. The manner of managing a course is entirely up to each teacher. Moodle will not in anyway be a hindrance even if the teacher does nothing but store a few files in Moodle and then forgets all about it—though such use of Moodle will be like keeping your luxurious Mercedes-Benz in the garage without ever daring to take it out for a spin.

3 Moodle Experiences

I used Moodle during the first semester of 2006 for two courses, namely, *Information Literacy* and *Computer-Assisted Language Learning*. I am using it now, during the second semester of 2006, for three courses, namely, *Indian Society*, *Sociolinguistics*, and *Intercultural Communication*. Given my own teaching style, the nature of the courses, and the novelty of Moodle, I have been using Moodle only for specific purposes rather than as a complete Course Management System. Students were initiated into Moodle in a computer classroom, but then they were left to access it on their own accord either on or off campus.

In brief, I have resorted to Moodle for the following purposes: (1) to post general information to students about the course and expectations; (2) to encourage students to discuss, share information, and peer-review; (3) to get to know the students, especially through their profiles; (4) to make periodic announcements regarding changes in schedule or give specific instructions regarding research papers,

quizzes, and exams; (5) to conduct quizzes and score them automatically; (6) to give assignments to students and get their submissions online; (7) to make available to students various course materials such as essays, audiovisual files (images, sound segments, slide-shows), PDF files, and web pages; and (8) to have synchronous chat sessions with students; (9) to respond to student queries and react to their opinions, and thus be in touch with them even outside the classroom, and (10) to make dynamic Web content available, with the help of Podcast and RSS feeders, so that students can keep in touch with the latest blogs, podcast, and news related to their subject.

I have used the Internet and personal computer for many years to do many of these course-related chores, but I never found them easy to do. None of the isolated programs I had used was as efficient or integrated as Moodle. Moodle made both the job of preparing course materials and that of managing different courses and students much simpler and easier. Since accessing Moodle immediately enables one to do most of the things related to a course, there is no hassle of opening a Web-editing program, a text-editing program, an FTP program, an email program, and so on for various frequently used purposes. Also Moodle makes it very convenient to conduct online discussions, both synchronously and asynchronously, and to upload a variety of content files, including movie clips and web pages made by others. Overall, therefore, I found Moodle a highly satisfactory and useful product.

Instead of elaborating on all the individual uses I made of Moodle—which will require far too many pages—let me deal below with just one important use, namely, conducting quizzes. At least when I asked around during the first semester, hardly any Sophian seemed to be using Moodle for running quizzes. In fact, I was recommended to use *Terra* (see <http://terra.cc.sophia.ac.jp/>) instead of Moodle for running quizzes. Moodle, however, has an excellent quiz module, and learning to exploit it will be a great asset to any professor.

3.1 On the Use of Quizzes

One of the best uses I made of Moodle was to conduct quizzes in different courses, including one in which there were 60 students. I have used for many years pc-based programs and web-based programs, some of them developed by myself (see Britto, 1991; 1993), to conduct quizzes and to keep track of student scores, with varying degrees of success. None of the programs was entirely satisfactory. There were problems of conducting quizzes in a secure environment, of administering them with varying degrees of severity, of presenting a variety of quiz formats, and of calculating the scores and collating them. Moodle, however, solved all those problems.

Moodle makes it possible to create easily a variety of quizzes (like Multiple Choice, True/False, Short Answer, HotPot, Numerical, Calculated, Matching Description, Random Short-Answer Matching, Cloze), and to administer them in a variety of ways. For example, you can fix the number of times students may take each quiz, can set a deadline after which the quiz will automatically ‘disappear’ from students’ view, can shuffle the display order of quiz questions and of choices within each question, can display or hide student responses during review, can display or hide the correct answers, and so on. The flexibility enabled me to conduct practice quizzes, self-learning quizzes, and graded exam-like quizzes. Scoring the quizzes too was entirely automatic, and Moodle gives all the names of students, and their individual scores in a neat table format, and so it’s relatively easy to export, modify, and work out the final grade.

An interesting feature of Moodle quizzes is that you can control the kind of feedback given to students: give no feedback at all, give feedback only at the end of the quiz, or give feedback as soon as a question has been answered. When I wanted to grade students with some consideration for their determination to do well, I set the quiz in such a way that they got only their final score at the end of the quiz, but not any suggestion as to which questions they got wrong. They

could retake the quiz several times to better their scores. As can be imagined, the determined students took the quiz several times until they improved their score. Since they had no idea which of their answers were wrong, they were forced to examine each question carefully even when they retook the quiz.

Another major advantage of the quiz section is that Moodle keeps the quiz as a distinct entity from questions that make up the quiz, allowing you to recycle the same questions in different quizzes. Supposing you have created a data bank of 50 questions, you can select any twenty from the data bank to make a large number of quizzes, with different combinations of questions! This is very useful, for example, to conduct a final quiz based on all previous quizzes. Moodle also makes it very easy to weight questions and weight answers and to include images, sound bytes, and video segments within questions.

Initially I was inputting the quiz elements like the stem and distractors within Moodle itself, but that task proved time-consuming and cumbersome. Then I discovered that Paul Tsuchido Shew, inspired by Martin Dougiamas and Thomas Robb, had produced an import filter, appropriately named GIFT (General Import Format Template), to help users import quiz questions written in ordinary word-processing programs like Word or Notepad. Shew, a Chaplain and Assistant Professor at Aoyama Gakuin University, contributes to Moodle development and has distributed GIFT as a gift to all Moodle users. Using GIFT was rather difficult at first, especially since I had to make questions in Japanese and the Sophia Moodle support team was not familiar with GIFT. After a few initial setbacks, however, everything worked fine, and I found it extremely easy to import questions into Moodle after composing them in a text editor. If you use quizzes frequently in class, GIFT will prove to be an extraordinary help. For instructions on making a GIFT file and importing it into Moodle, see Shew, 2004. For complete guidance on how to use the quiz module, see *Quiz module* (2006). For various guidelines and tips, see *Effective quiz practices* (2006).

Although I took no formal survey, the comments students made at the end of the course suggested that they liked the quizzes, especially because Moodle permitted them to take the quizzes at their own convenience, from home or elsewhere, even allowing them for interruptions. Some students challenged each quiz as they did a computer game, taking the quiz five or six times in order to get the maximum score.

3.2 Major Challenges

Since I used Moodle only as an auxiliary tool—not as the main Course Management System—overall, things went smooth. I used Moodle only to the extent I needed it and to the extent students were capable of handling it. Since there was no pressure on students or on me regarding Moodle use, even when things didn’t work out well, the course could go on without any major problem. There were, however, several challenges in using Moodle effectively, some of which I mention below.

- (1) At least until the end of July 2006, the Moodle at Sophia was extremely slow, making it practically impossible to use it during class, for instance, to conduct tests. This problem was brought to the notice of the Media Center, and it’s very likely that the problem has already been fixed. As of November, 2006, Moodle seemed to move slightly faster when I used it alone (outside the classroom, without a whole class clogging the server), but sometimes it was quite slow. It’s not clear if the speed problem is temporary, perhaps due to network congestion, or permanent.
- (2) In spite of the voluminous manuals and guides online, I did encounter initial hurdles in handling some advanced features of Moodle, like GIFT and WYSIWYG html editor, partly because nobody else had tested such features at Sophia. Unfortunately, there seems to be no human resource at Sophia to troubleshoot Moodle problems with authority and expertise. Maybe after a few years, as the Moodle support team becomes more familiar with the

software, such problems will be more easily and more expertly resolved. Meanwhile, teachers who are eager to exploit the advanced features of Moodle may seek guidance in international or national Moodle forums or look for appropriate guidance on the Internet.

- (3) There were and there are *mojibake* ‘garbled or corrupted text’ problems, for example, when importing and exporting certain files (e.g., XLS grades or GIFT files) and when displaying certain messages (e.g., the ‘Rate’ dropdown messages in a Forum post). It’s likely that these problems will be resolved if Moodle users bring them to the attention of the Sophia Moodle support team. Some of these problems may be Moodle bugs—in which case the resolution will have to wait until the Moodle organization issues a bug-fix—but some may be simply due to setup errors which could be easily corrected.
- (4) At least in the classes I taught, many students failed to access Moodle periodically, although they seemed interested in Moodle and attracted by its functionality. They seemed to log in to Moodle only when I absolutely demanded its use, for instance, by giving an assignment or quiz that they had to do on Moodle. The forums I created were ignored by the majority—since I didn’t make forum postings compulsory. Even when new content was added everyday, both created by myself and supplied by RSS feeders, most students didn’t login or care to examine it. Such indifference, I believe, is not likely to surface in language courses, since such courses may stimulate voluntary and frequent online interaction. Language courses may also be conducted in a computer classroom or in an environment where Moodle use is made compulsory. In content courses like the ones I taught, students didn’t seem to have any voluntary motivation, and compelling them to access Moodle seemed uncalled for. The novelty of Moodle and the tendency of students to use hand-held devices rather than personal computers too might be

reasons for their reluctance. Possibly, after a few years, when Moodle will be more widely used, students may feel more confident to access Moodle. Meanwhile, teachers may have to take steps to initiate students properly into Moodle and to entice them in different ways to log in regularly (e.g., by giving them assignments and quizzes, or by demanding that they participate in forums).

- (5) There is no professional IT Help Desk for professors at Sophia University. As a result, faculty members not only have to solve most of the IT problems by themselves but also have to find the latest developments and applications by themselves. The need for an IT Help Desk catering to the faculty may be felt all the more sharply as regards Moodle since some significant advances, such as GIFT, the “feedback module,” and the “questionnaire module,” may go unnoticed. Moodle is a very dynamic program, and unless a professional educator monitors it constantly, many of its developments may remain ignored and unexploited.

4 Conclusion

No introduction of Moodle will be complete without a reference to “social constructivism” the educational philosophy that has guided Dougiamas to create and develop Moodle. He himself has explained it in several speeches and writings (see e.g., Dougiamas, 1998; *Philosophy*, 2006). Some of the major principles of Social Constructivism as highlighted by Dougiamas are: (1) All of us are both teachers and learners, especially in a collaborative environment; (2) we learn especially by creating or expressing something for others; (3) we learn by observing others, especially peers; (4) we can teach better by understanding the contexts of others; and (5) a learning environment has to be flexible so as to cope with the needs of participants. After some familiarity with Moodle, one can see that Moodle in fact offers tools for realizing these principles. Whether one follows social

constructivism or not, by understanding the principles, one can appreciate Moodle better and exploit its resources to the full.

Given its philosophy, Moodle is an ideal environment for peers to interact among themselves, and for teachers to dialog with students. Moodle is an excellent tool for courses in which student participation is strongly required, such as those taught in the Faculty of Foreign Languages. Language teachers engaged in “Skills” classes, “Conversation” classes, and “Writing/Composition” classes will find in Moodle a fantastic ally.

References

- About Moodle*. (2006). Retrieved November 25, 2006, from http://docs.moodle.org/en/About_Moodle
- Aurora University Information Services. (2006). *Moodle instructor's guide*. Retrieved November 14, 2006, from <http://www.aurora.edu/is/tb/47moodle-instructor.htm>
- Baskerville, B., & Robb, T. (2005, Summer). Using Moodle for teaching Business English in a CALL environment. *PacCALL Journal* 1(1), 138-151. Retrieved November 21, 2006, from www.paccall.org/Journal/V-1-1-papers/Baskerville-Robb-moodle-teaching.pdf
- Berggren, A., Burgos, D., Fontana, J. M., Hinkelman, D., Hung, V., Hursh, A., & Tielemans, G. (2005, February). Practical and pedagogical issues for teacher adoption of IMS learning design standards in Moodle LMS. *Journal of Interactive Media in Education*. Retrieved November 21, 2006, from <http://www-jime.open.ac.uk/2005/02/>
- Britto, F. (1991, March). QuizMaster: An experiment in computer-assisted instruction. *Sophia University Bulletin of the Faculty of Foreign Studies*. 26, 1-16.
- Britto, F. (1993, March). Computer-assisted reading with ReadMaster. *Sophia University Bulletin of the Faculty of Foreign Studies*. 28, 1-18.

- Britto, F. (2003). Ordinary applications and extraordinary uses. *Sophia Linguistica* 50, 237-252.
- Chavan, A. (2005, May 10). Seven criteria for evaluating open-source content management systems. *Linux Journal*. Retrieved November 21, 2006, from <http://www.linuxjournal.com/article/8301>
- Cole, J. (2005). *Using Moodle: Teaching with the popular open source course management system*. Cambridge, MA.: O'Reilly/Community Press.
- Cookie Central. (2005). *Cookies and privacy FAQ*. Retrieved November 26, 2006, from http://www.cookiecentral.com/n_cookie_faq.htm
- Course administration settings. (n.d.). In Kemi-Tornio University of Applied Sciences, eLearning Centre. *Teacher's manual* 1.5.4.
- Course building. (n.d.) In Kemi-Tornio University of Applied Sciences, eLearning Centre. *Teacher's manual* 1.5.4.
- Course settings*. (2006). Retrieved November 26, 2006, from http://docs.moodle.org/en/Course_settings
- CRMchump. (2006). *50 Open source success stories in business, education, and government*. Retrieved 12 November 2006, from http://www.crmchump.org/2006/10/in_a_world_wher.html
- Dougiamas, M. (1998). *A journey into constructivism*. Retrieved November 21, 2006, from <http://dougiamas.com/writing/constructivism.html>
- Dougiamas, M. (1999). *Improving the effectiveness of tools for Internet based education*. Retrieved November 21, 2006, from <http://dougiamas.com/writing/masters/>
- Dougiamas, M. (n.d.). *Martin Dougiamas - PhD Thesis*. Retrieved November 14, 2006, from <http://dougiamas.com/thesis/>
- Effective quiz practices*. (2006). Retrieved November 27, 2006, from http://docs.moodle.org/en/Effective_quiz_practices
- EFL Geek. (2006). *How I use Moodle*. Retrieved November 14, 2006, from <http://eflgeek.com/index.php/eflgeek/comments/how-i-use-moodle/>

- Kemi-Tornio University of Applied Sciences, eLearning Centre. (n.d.). *Teacher's manual 1.5.4*. Retrieved November 18, 2006, from <http://moodle.tokem.fi/mod/book/view.php?id=5116>
- Koziankain, C. (2006). *Why Moodle has become such a big success*. Retrieved November 21, 2006, from <http://project.bazaar.org/2006/10/13/why-moodle-has-become-such-a-big-success/>
- LMS News. (2006, August 10) *Moodle 1.5.3 review*. Retrieved November 12, 2006, from <http://www.lmsnews.com/modules/content/index.php?id=34>
- Long, V. (2006, Fall). Online education with Moodle. *MCCE [Montana Council for Computers and Technology in Education] News*. 19 (1), 7. Retrieved November 20, 2006, from <http://senior.billings.k12.mt.us/mcce/mccenews/06-oct-print.pdf>
- Lyons, D. (2004, September). Cheapware. *Forbes Magazine*. Retrieved September 5, 2006, from <http://www.forbes.com/forbes/2004/0906/161.html>
- McMullin, B., & Munro, M. (2004). *Moodle at DCU [Dublin City University]*. Retrieved October 18, 2006, from <http://odtl.dcu.ie/wp/2004/odtl-2004-01.html>
- Modules and plugins*. (2006) Retrieved November 23, 2006, from <http://moodle.org/mod/data/view.php?d=13>
- Moodle*. (2006a). Retrieved September 1, 2006, from <http://moodle.org/>
- Moodle*. (2006b, November 16). *Wikipedia, the free encyclopedia*. Retrieved November 21, 2006, from <http://en.wikipedia.org/wiki/Moodle>
- Moodle docs*. (2006). Retrieved November 25, 2006, from <http://docs.moodle.org/>
- Moodle manuals*. (2006). Retrieved November 25, 2006, from http://docs.moodle.org/en/Moodle_manuals
- Moodle sites*. (2006). Retrieved November 23, 2006, from <http://moodle.org/sites/>
- Moodle statistics*. (2006). Retrieved November 28, 2006, from <http://moodle.org/stats/>

- Munoz, K. D., & Van Duzer, J. (2005). *Blackboard vs. Moodle: A comparison of satisfaction with online teaching and learning tools*. Retrieved August 29, 2006, <http://www.humboldt.edu/~jdv1/moodle/all.htm>
- Open University, The. (2005). *The Open University builds student online environment with Moodle and more*. Retrieved November 14, 2006, from <http://www3.open.ac.uk/media/fullstory.aspx?id=7354>
- Pearson, M. H. (2004a). *Using Moodle: Organisation and layout*. Retrieved November 21, 2006 from http://www.earlham.edu/~markp/cms/user_guides/moodle/using_moodle.php
- Pearson, M. H. (2004b). *Moodle how to: display syllabus*. [with Flash movies] Retrieved November 21, 2006 from http://www.earlham.edu/~markp/cms/user_guides/moodle/ht_display_syllabus.php
- Pearson, M. H. (2005). *Survey of student opinions of Moodle*. Retrieved November 23, 2006, from http://www.earlham.edu/~markp/cms/evaluations/moodle_fall_04/results.php
- Philosophy*. (2006). Retrieved November 23, 2006, from <http://docs.moodle.org/en/Philosophy>
- Quiz module*. (2006). Retrieved November 27, 2006, from http://docs.moodle.org/en/Quiz_module
- Rand, M. (2005, November). Open source invades the enterprise. *Forbes Magazine*. http://www.forbes.com/2005/11/01/bow051101011_print.html
- Read reviews: Moodle*. (n.d.). Retrieved July 29, 2006, from <http://www.macupdate.com/reviews.php?id=12048>
- Release notes*. (2006). Retrieved November 23, 2006, from http://docs.moodle.org/en/Release_Notes
- Rice, W. (2006). *Moodle e-learning course development*. Birmingham, UK: Packt Publishing.
- Riordan, M. (n.d.) *Moodle: An electronic classroom*. Retrieved September 1, 2006, <http://download.moodle.org/docs/teacher-manual.pdf>

- Robb, T. (2004). Moodle: A virtual learning environment for the rest of us. *TESL-EJ*, 8:2. Retrieved November 21, 2006, from <http://tesl-ej.org/ej30/m2.html>
- Shew, P.T. (2004). Importing 'GIFT' format files. Retrieved December 4, 2006, from <http://hituzi.net/help.php?module=quiz&file=formatgift.html>
- Sophia University Media Center. (2006). *Using Moodle for the first time*. Retrieved on July 28, 2006, from http://ccweb.cc.sophia.ac.jp/call/Man_S/moodle_start_E.pdf
- Stites, B. (2006). Spotlight on Montclair Kimberley Academy. The New Jersey Educational Computing Cooperative, Inc. Newsletter *Tech Exchange*. October 2006. Retrieved November 19, 2006, from http://www.njecc.org/pdfs/2006_Newsletters/2006_October_Issue.pdf
- Teacher Documentation*. (2006). Retrieved November 23, 2006, from http://docs.moodle.org/en/Teacher_documentation
- What is Cheapware?* (2004). Retrieved August 28, 2006, from http://www.bucksfreepress.co.uk/leisure/webwatch2/techonotalk/display.var.536184.0.what_is_cheapware.php
- What is Moodle?* (n.d.) Retrieved November 14, 2006, from <http://cdc.humboldt.edu/lms/whatis.html>
- Williams, Bryan. (2005). *Moodle for teachers, trainers, and administrators*. Retrieved September 4, 2006, from <http://www.technion.ac.il/moodle/support/moodleguide.pdf>
- Zenha-Rela, M., & Carvalho, R. (2006, October 28-31). Work in progress: Self evaluation through monitored peer review using the Moodle platform. *36th Annual Frontiers in Education Conference, Borders: International, Social and Cultural*. Sheraton San Diego Hotel and Marina, San Diego, California. Retrieved October 18, 2006, from <http://fie.engrng.pitt.edu/fie2006/papers/1421.pdf>