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ARE YOU READY TO "*MOODLE*"?

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INTRODUCTION

With the rapidly increasing popularity of the Internet in recent years, the delivery of learning programs has gradually shifted from local desktop to online-based applications. While the XML programming environment has evolved as the new standard for the Internet, building customized learning programs requires the use of authoring systems such as Macromedia *Director*, *Authorware*, *Dreamweaver*, *Flash*, and Microsoft *Frontpage* (for a detailed review see Godwin-Jones, 2003), which places high demands on design, programming skills, and time. An alternative to using such applications is the deployment of course or learning management systems. One such system that has been gradually gaining worldwide popularity is known as *Moodle* (http://www.moodle.com).

What is *Moodle*?

Moodle is a course management system for online learning. The acronym *MOODLE* stands for *Modular Object-Oriented Dynamic Learning Environment.* Among its many users, however, *Moodle* has already become a term of its own synonymous with a software package designed to help educators create quality online instruction. It was the brainchild of Martin Dougiamas (http://dougiamas.com), a former WebCT administrator with postgraduate degrees in Computer Science and Education. The design of *Moodle* is based on socio-constructivist pedagogy. This means its goal is to provide a set of tools that support an inquiry- and discovery-based approach to online learning. Furthermore, it purports to create an environment that allows for collaborative interaction among students as a standalone or in addition to conventional classroom instruction.

One of the advantages of *Moodle* is that it has been developed as an OpenSource software project. It is entirely supported by a team of programmers and by the user community. This also means that *Moodle* is available free of charge under the terms of the General Public License (GNU) and has no licensing cost attached. As such, it is accessible to anybody in contrast to commercial software such as Blackboard (http://www.blackboard.com) and WebCT (http://www.webct.com), whose licensing fees have skyrocketed in recent years.

Deployment and Technical Background

Moodle runs without modification on Unix, Linux, Windows, Mac OS X, NetWare, and any other system that supports PHP (HTML-embedded scripting language), including most Web host providers. Data is stored in a single database: MySQL and PostgreSQL are best supported, but it can also be used with Oracle, IBM DB2, Microsoft SQL Server, Borland Interbase, Informix, Visual Foxpro, SAP DB, SQLite, Sybase, Microsoft Access, ADO, and generic ODBC database access, since it uses ADOdb (http://www.adodb.sourceforge.net).

MOODLE AND LANGUAGE LEARNING

Since the development of communicative skills in language learning requires social interaction between the teacher and the students and among the students themselves, the use of computers has for a long time been regarded only as a support tool with regard to certain skill areas. Rapid advances in technology (e.g., fast Internet connections, ample storage capacities, increase in bandwidth) and more compatible cross-platform applications now make the implementation of synchronous and asynchronous learning tasks, in oral and written modes, feasible from a pragmatic point of view (see Cziko & Park, 2003, for a review of computer-mediated audio communication [SCMAC] software). Furthermore, a growing body of research

is gradually emerging that provides concrete suggestions on how to exploit instructional online tools effectively or how to integrate the Internet for different language learning goals (Brandl, 2002; González-Lloret, 2003). As a courseware package and learning system, *Moodle* has great potential for supporting conventional classroom instruction, for example, to do additional work outside of class, to become the delivery system for blended (or hybrid) course formats, or even to be used as a standalone e-learning platform.

In the following section, I will provide an overview of *Moodle* features and point out those that are in particular useful for language learning. In addition, I will present some sample learning tasks and describe their implementation within a *Moodle* environment.

Layout and Organization

Moodle is a template-based system to which content must be is added. This makes *Moodle's* interface very intuitive and allows for easy navigation. The whole page is presented in a "flat view" format. It is laid out in small blocks and organized around sections following a topic or weekly outline. As Robb (2004) describes it, this is different from other systems that often make use of "Chinese boxes" with content inside folders at various levels. Each section has its own tools such as lessons, quizzes, assignments, and forums which are all linked to a built-in gradebook (see section on assessment below). All blocks on a page can be individually arranged, and the elements within each section can be easily moved around or be hidden. Figure 1 shows an example of a course setup in the topic format.

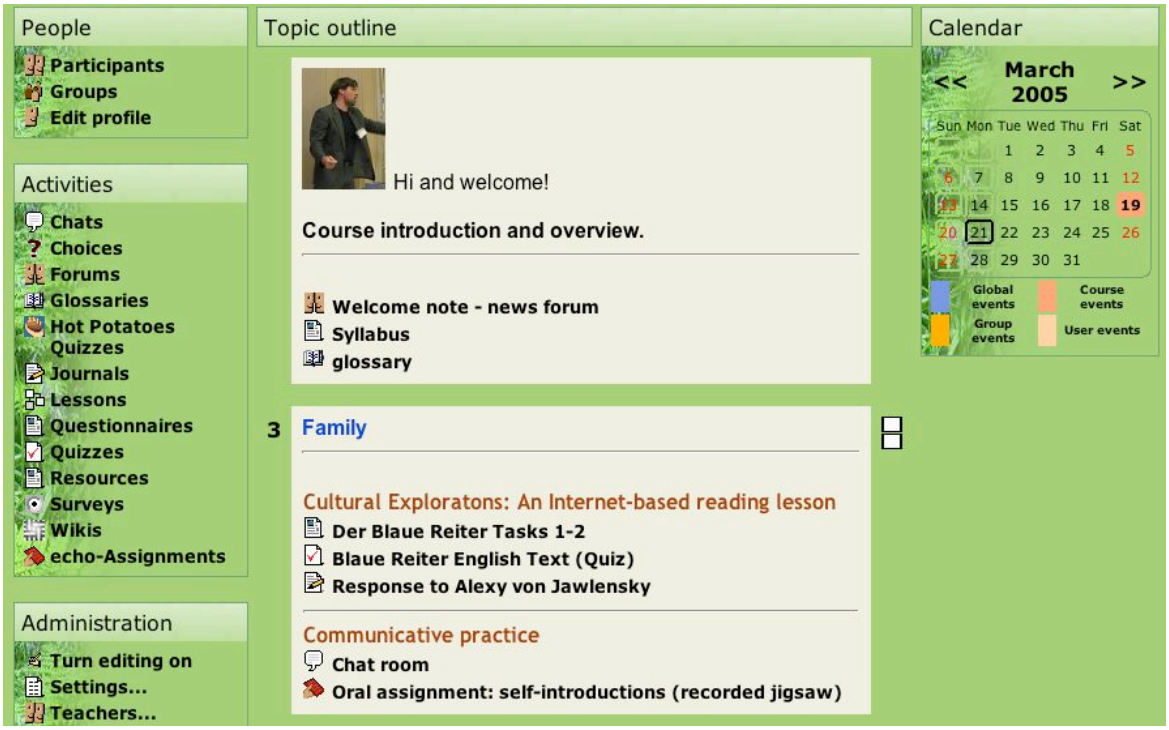
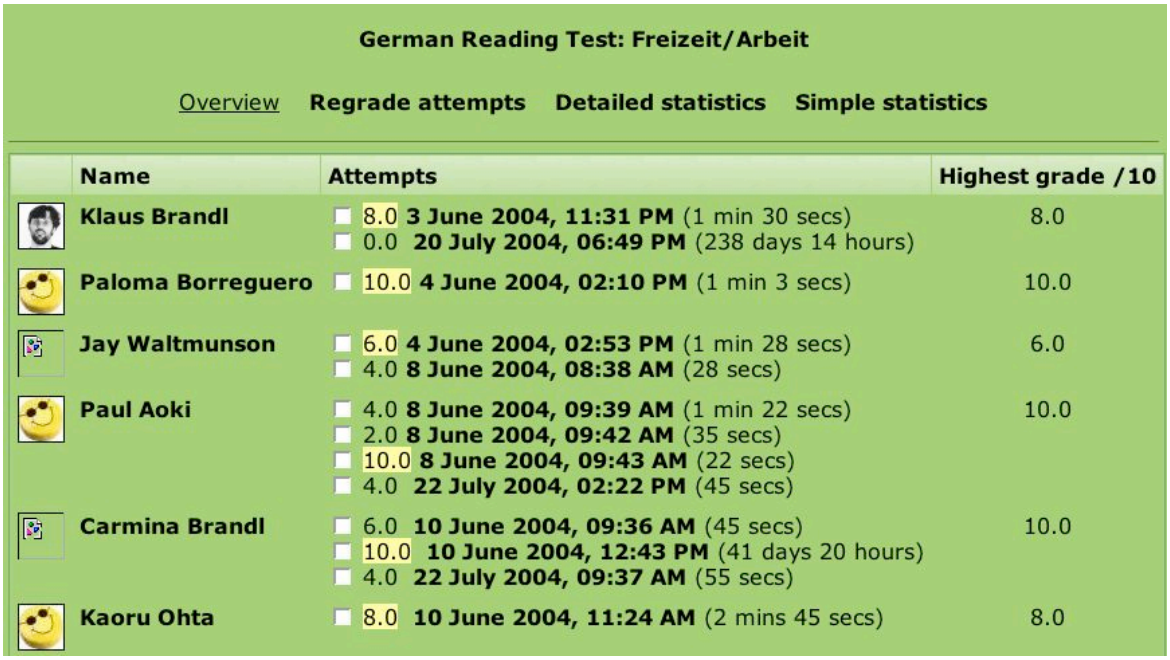


Figure 1. Sample of a course setup in the topic format

Course Management

Moodle is a teacher's dream in terms of course management features that it offers. Access to nearly all lesson assignments can be made time- or password-restricted, however, only quizzes can be password restricted at this point. *Moodle* also keeps automatic log reports of each student work (see Figure 2 for an example). This means that the teacher knows not only when students have completed or uploaded an assignment, but also how much time they spent on an assigned task or quiz. The teacher can also set deadlines or timeframes when assignments must be completed, and restrict access to learning tasks once

the deadline has passed. Students can look up their grades themselves. Teachers have also the option to download student grades in Excel format. Students can look up the assignments on a calendar by moving the cursor over a given day which will list all the assignments for that day. The calendar is optional and can be displayed on the front page.



German Reading Test: Freizeit/Arbeit

Overview | **Regrade attempts** | **Detailed statistics** | **Simple statistics**

	Name	Attempts	Highest grade /10
	Klaus Brandl	8.0 **3 June 2004, 11:31 PM** (1 min 30 secs) 0.0 **20 July 2004, 06:49 PM** (238 days 14 hours)	8.0
	Paloma Borreguero	10.0 **4 June 2004, 02:10 PM** (1 min 3 secs)	10.0
	Jay Waltmunson	6.0 **4 June 2004, 02:53 PM** (1 min 28 secs) 4.0 **8 June 2004, 08:38 AM** (28 secs)	6.0
	Paul Aoki	4.0 **8 June 2004, 09:39 AM** (1 min 22 secs) 2.0 **8 June 2004, 09:42 AM** (35 secs) 10.0 **8 June 2004, 09:43 AM** (22 secs) 4.0 **22 July 2004, 02:22 PM** (45 secs)	10.0
	Carmina Brandl	6.0 **10 June 2004, 09:36 AM** (45 secs) 10.0 **10 June 2004, 12:43 PM** (41 days 20 hours) 4.0 **22 July 2004, 09:37 AM** (55 secs)	10.0
	Kaoru Ohta	8.0 **10 June 2004, 11:24 AM** (2 mins 45 secs)	8.0

Figure 2. Sample log report of students' work

Content and Resources

Moodle allows for the integration of a wide range of resources. These include any kind of text-based or html-formatted documents, multimedia resources such as graphics, video or audio (e.g., MP3 files), SCORMs (Goodwin-Jones, 2004), *PowerPoint*, *Half-Baked* exercises (http://www.halfbakedsoftware.com), or *Flash*-based applications. Lesson tasks within *Moodle* can be linked to any resources that are uploaded to one's server or that are available on the Internet. The students' exploration of any of the content-based resources can be easily assessed by using any of the *Moodle*-based evaluation and feedback tools (see Example 1).

Moodle is quite powerful in content creation due to its built-in HTML editor. The degree of expertise required is essentially the same as for any word processor. More sophisticated presentations such as animations or text-specific feedback provisions need to be created by using outside multimedia authoring programs.

Moodle also has a built-in **glossary module**. This allows teachers, individually or in cooperation with their students, to create their own text-, course-, or site-specific dictionaries. In this way, texts integrated within *Moodle,* especially authentic texts or resources, can be tailored to a particular level of language proficiency and thus be made more easily accessible to learners.

Assessment and Testing Strategies

Moodle allows for a wide range of assessment strategies. The **quiz module** includes the following response types: fill-ins, multiple-choice, multi-choice (more than one answer can be selected), true-false, matching, short-answer (exact matching). All types are supported with automatic tallying and scoring, based on teacher or student-determined rating scales. The **essay module** allows open-ended questions with built-in comment boxes for instructors to provide feedback. Particularly noteworthy is the **workshop**

module, which is designed on the basis of peer assessment. All of these assessment types can be made time and password restricted, and can be set to allow for limited or multiple retakes.

Learning Management

Moodle is also a learning management system (LMS). LMSs differ from exclusive course management systems because they allow to present information to learners in small units, assess what they have learned, and based on the quality of their achievement branch out into additional review of material or move to the next level. In other words, the lesson module allows to design lessons that closely control the learning path guiding learners step-by-step, and allowing for advancement only if sufficient mastery has been achieved.

Figure 3 below demonstrates an example of the lesson module used in a beginning Spanish class at the University of Washington. Students are asked what their life was like in the last decade. They have the option to respond with true (*cierto*) or false (*falso*) to the following statement: "*Me acostaba y me levantaba más temprano que ahora.* [I used to wake up and get up much earlier than now]." A "false" response takes them to a card and asks a new question: "*Por qué te acuestas y te levantas más temprano hoy día*? [Why do you wake up and get up earlier these days?]" (see Figure 3a). A "true" response takes the learner to a card that says *"Es lógico. Los jovenes se acuestan y se levantan temprano* [It's logical. Young people wake up and get up early]" (see Figure 3b).

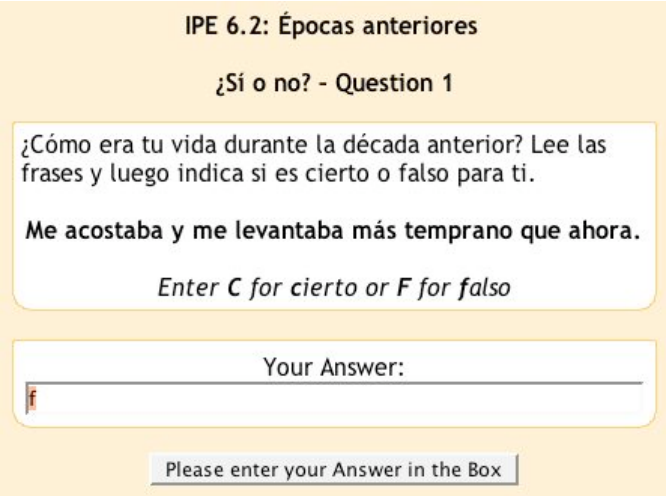


Figure 3. Example of the lesson module used in a Spanish class

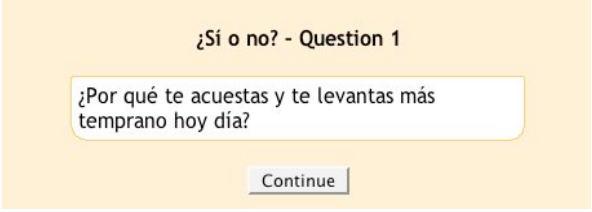


Figure 3a. Example of a card following a "false" response

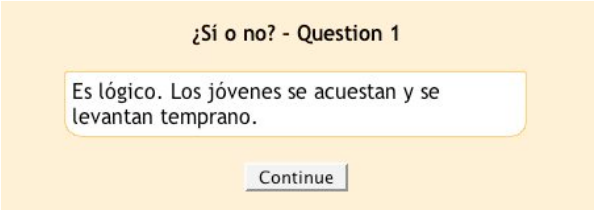


Figure 3b. Example of a card following a "true" response

Student-Based and Cooperative Learning

Moodle's design is grounded in a socio-constructivist theory of learning. Learning tasks or projects can be designed so as to allow for cooperation between the instructor and students or among students by using different formats of social interaction. Students can be divided into subgroups, interact with each other synchronously in chat rooms, or engage in asynchronous discussions in Wikis[1] and forums (see Example 2). The Wiki module in *Moodle* enables students to compose or work together on a text while online. Old versions are never deleted and can be restored. Forums can also be arranged in different ways. For example, they can be set so that only the teacher or any of the students can post content to a forum or start a new discussion topic (thread). Other options exist that let the teacher either restrict or allow for further discussions and replies within a thread.

Feedback

Students who participate in e-learning environments often complain about the lack of feedback that is available in conventional classroom settings (Brandl, 2004). In *Moodle*, almost all modules are designed to allow teachers or course participants to provide feedback in qualitative or quantitative form. For example, both the journal and assignment module give the instructor the option to provide their comments in a feedback box (see Figure 4). The assignment module, which is designed so that students can upload their assignments in any file format to the server, also allows the instructor to upload comments about the student's work in form of text- or audio-based (e.g., MP3) files. Feedback can be teacher-restricted or made accessible to all participants in both forums.

Figure 4. Example of a feedback box

Additional Modules

Numerous additional features and modules facilitate course management and the learning process. For example, *Moodle* has several built-in standardized questionnaires that allow teachers to collect qualitative and quantitative feedback on students' learning experiences. A **questionnaire module** allows teachers to create their own questionnaires.

SAMPLE LEARNING TASKS CREATED WITH *MOODLE* TOOLS

The following section presents several examples of learning tasks. Example 1 demonstrates the integration of the quiz module with an authentic Internet-based cultural resource used in a second-quarter German class at the University of Washington, Seattle. Examples 2 and 3 represent examples of asynchronous and cooperative learning tasks that can be used in any intermediate language class. The latter two examples, in particular, demonstrate how *Moodle* allows for the implementation of a socio-constructivist approach to language learning.

Example 1

Theme/context:	*Der Blaue Reiter* (name of a group of German artists)
Task:	exploring cultural information
Skills:	interpretive (reading) and presentational (writing)
Level/language:	low intermediate/German
Modules:	journal module, resource module

In this learning task, the students are asked to explore a member of the "*Der Blaue Reiter*" group of their choice. In particular, they are asked to collect detailed information about the writer's life from a Web-based resource and write about it in English in the journal module (see Figure 5).

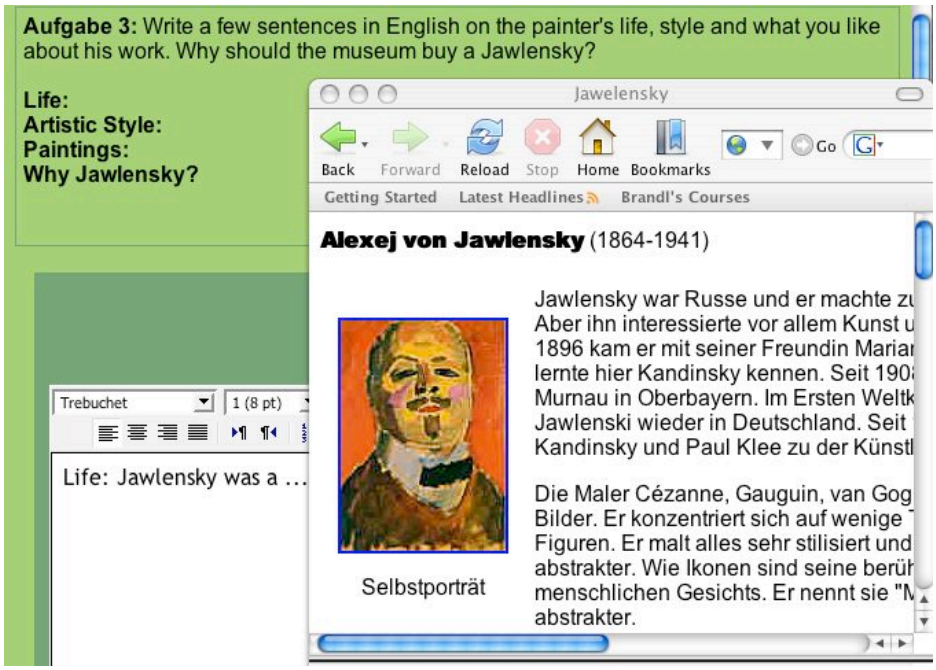


Figure 5. Sample of a journal module learning task based on an Internet resource

Example 2

Theme/context:	Use of media
Task:	establishing the sequence of a picture story in four acts
Skills:	interpretive (reading) and presentational (writing)
Level/language:	low intermediate (level may vary dependent on the complexity of picture story and the target language)
Modules:	lesson module, forum module, quiz module

The goal of this learning task is to find the correct sequence of a picture story (see Figure 6). Students are divided into groups of four. Each group is asked to describe one component (picture) of the story. The lesson consists of the following steps:

1) Students access pictures through the lesson module. Each student can look up only one picture, whose access is password protected.

2) Working individually, students describe one picture and post their answers to the forum.

3) As soon as a description of each of the four pictures of the story has been posted, students are asked to read the picture descriptions in the forum and establish the correct sequence of pictures.

4) Students take a multiple choice quiz to check their answers.

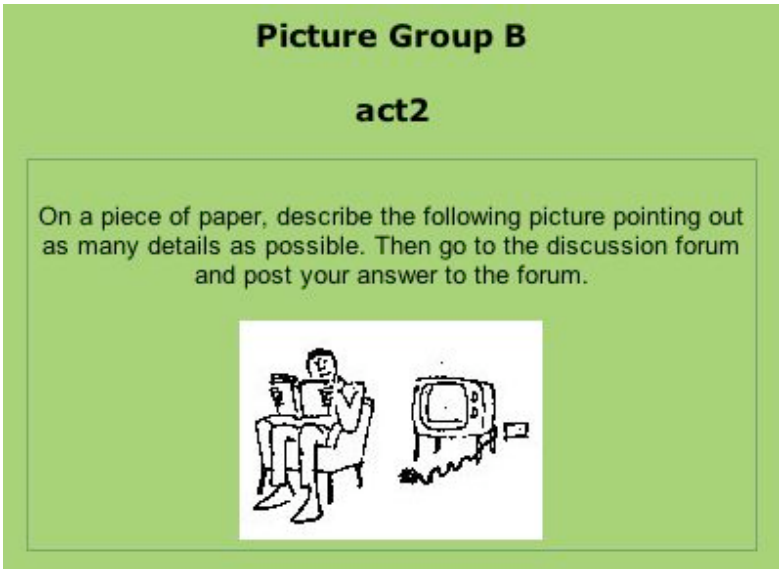


Figure 6. Sample of an asynchronous learning task -- describing a picture story

Example 3

Theme/context:	Family
Task:	Finding out commonalities
Skills:	interpretive (listening) and presentational (speaking)
Level/language:	low intermediate
Modules:	Assignment module, forum module

In this task, students are asked to find commonalities about their family structures.

1) Students are asked to briefly describe their families based on questions such as how many brothers and sisters they have, how old they are, what they do, what their names are. To do this, students record their answers with *Audacity* (http://audacity.sourceforge.net/), an open-source recorder, save their answers as MP3 files, and upload them through the assignment module.
2) Working in groups, students listen to each others' descriptions.
3) Students report their findings to the teacher through the essay module.

CONCLUSION

In the beginning, I asked what *Moodle* is. I would like to conclude by commenting on what *Moodle* is not. It is not a panacea for language learning. It is a course management and delivery system. As such, *Moodle* has great potential to create a successful e-learning experience by providing a plethora of excellent tools that can be used to enhance conventional classroom instruction, in hybrid courses, or any distance learning arrangements. In whatever form of instruction *Moodle* is used, the design of the learning tasks must be grounded in theories of second language acquisition.

To find out additional information about *Moodle*, how to download and install it, go to the official *Moodle* site at http://moodle.org.

NOTE

1. *Moodle*'s wiki is based on ErfurtWiki, which is an implementation of the WikiWikiWeb hypertext system. It allows simple collaborative editing and creation of Web pages.

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