# REVIEW OF *MOODLE 2.0*

| Title | Moodle 2.0 |
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| Platform | Mac OS X, Windows, Linux |
| Minimum hardware requirements | Disk Space: 160MB free (min) <br> Memory: 256MB (min), 1GB (recommended) |
| Publisher (with contact information) | http://moodle.org |
| Support offered | Context help, Moodle Docs, Moodle Tracker, Moodle.org Forum, Moodle Partners, self-help tutorials, and Moodle on social network sites |
| Target language | Multiple languages (more than 70 languages) |
| Target audience | Any level of students |
| Price | Free |

**Review by Tsun-Ju Lin, Washington State University**

## INTRODUCTION

With the rapid increase of digital technologies and the popularity of the Internet in recent years, a new definition of literacy has emerged. "New literacies" extend beyond traditionally held views of literacy as the ability to read and write to include an expanded definition, which includes a wide range of skills: the ability to locate and evaluate information effectively and efficiently; facility with making meaning by aligning new information with prior knowledge; and an ability to synthesize, critically analyze, and create new information within the context of larger social practices (Coiro, 2003; Coiro, Knobel, Lankshear, & Leu, 2008; Greenhow, Robelia, & Hughes, 2009). In order to help students acquire new literacies, it is essential to engage learners in developing deep cognitive processing, to activate their prior knowledge, to promote collaborative inquiry, and to encourage creativity in all language skills (Cummins, Brown, & Sayers, 2007). This review evaluates the potential of *Moodle 2.0* for helping students master such a wide range of abilities and competencies by examining *Moodle 2.0* using the following guiding criteria adapted from Cummins and his colleagues (2007):

1. Providing cognitive challenges and opportunities for deep processing of meaning

2. Relating instruction to prior knowledge and experiences

3. Promoting active self-regulated collaborative inquiry

4. Encouraging extensive involvement in all language skills

5. Developing multiple strategies for effective language learning

6. Promoting identity investment

## WHAT IS *MOODLE 2.0* ABOUT?

*Moodle* (Modular Object-Oriented Dynamic Learning Environment) is a free and open-source course management system based on the social constructionist model of pedagogy. The design of *Moodle* emphasizes creating collaborative interaction and student-centered online learning environments. The open network allows any interested users to contribute their ideas, information, and support, and also to create additional modules and features that allow unlimited innovation. *Moodle* has been described as software "created through participation rather than via publishing" (Lankshear & Knobel, 2006, p. 45). Due to the involvement of the community, a newer version of *Moodle* (*Moodle 2.0*) was released in 2010, and this revised version includes many new features. Although itemizing every change is beyond the scope of this review, the new features have resulted in a management system that is more personalized

(e.g., my private files, and an improved My Moodle page); more user-friendly (e.g., portfolio support, repository support file picker, and a new HTML editor); more organized (e.g., themes, quiz navigation, flagging questions, question bank, tagging, and blocks); more educationally challenging (e.g., course completion and prerequisites, rewritten Wiki and workshop modules, and enablement of conditional activities); and more collaborative (e.g., comments, ratings, and community hubs).

## EVALUATION OF MOODLE DESIGN

Examining *Moodle 2.0* with the six principles proposed by Cummins et al. (2007) reveals several positive strengths and some potential challenges.

### Providing Cognitive Challenges and Opportunities for Deep Processing of Meaning.

Opportunities for cognitively challenging activities can be provided in different *Moodle* modules and plug-ins that instruct language learners to think about and represent particular topics in multiple ways. To take just one example, the *glossary module* gives opportunities for participants to create and organize a list of definitions, such as an online word library. Individuals can determine how the information is organized (e.g., keywords and categories) and represented in post-typographic formats (e.g., videos, graphics, audios, texts, etc.) in order to make a shared sense or meaning for the community (see Figure 1 for an example of a glossary module). With *Moodle 2.0*, multiple glossary definitions can be rated and commented on by users to negotiate and evaluate each other's work. The active and in-depth processing of new or unfamiliar vocabulary promotes both "higher-order thinking" and "lower-order thinking" (Cummins et al., 2007). This instruction of vocabulary via the learners arguably helps them develop depth and breadth of vocabulary knowledge.
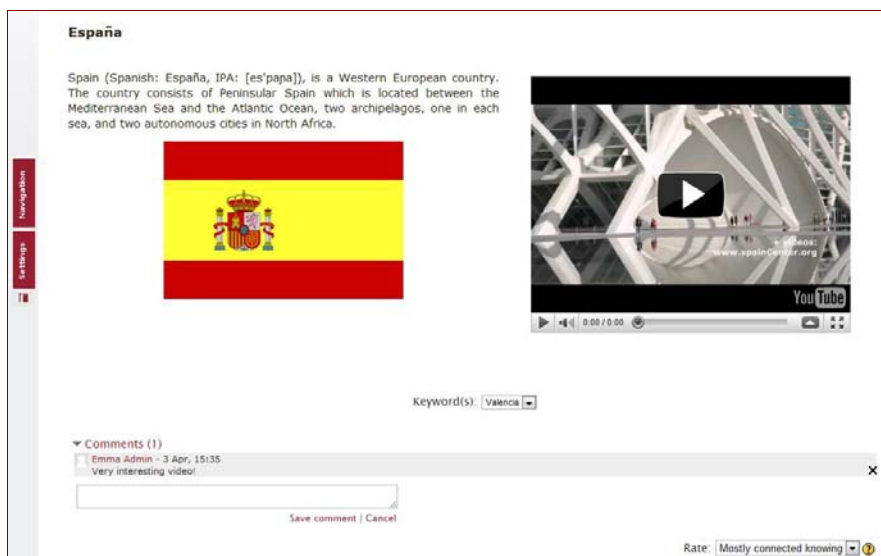


*Figure 1.* Example of a glossary module used in a Spanish class.

In another example, a *forum module* is a useful space for stimulating discussion by using post-typographical formats. The main contribution of this module is that learners get to decide the flow of the content, while the role of the instructor can be as facilitator rather than as primary information giver. This module can enable learners to bring different perspectives and knowledge to a theme, thus promoting the abilities of meaning negotiation and critical thinking.

Additionally, instructors can also have learners create questions to assess each other's comprehension by utilizing a *quiz module*, including a variety of question types (e.g., multiple-choice, matching, short answer, ordering, true/false, and more). The process of student creation provides an opportunity for

students to synthesize, critically analyze, and create new ways of transforming information. Notably, the activity not only allows students to decide what is important but also can potentially empower them as learners and thinkers by offering opportunity for greater autonomy. However, to create such a meaningful problem-solving activity is complicated, time-consuming, and may require technical support (e.g., basic HTML knowledge).

**Relating Instruction to Prior Knowledge and Experiences.**

Tools such as the *mindmap module* and *questionnaire module* can facilitate student brainstorming and prediction of content as students build background knowledge in a new area. A *mindmap module* is a type of mapping/graphic organizer that can be used by teachers to create warm-up activities for students to link new information with prior knowledge and for instructors to determine what additional knowledge needs to be developed before introducing the main topic. For example, the teacher may have students develop ideas relevant to Alzheimer's and then provide articles that discuss perspectives not/rarely mentioned in the activity. Instructors can also create a survey activity by utilizing the *questionnaire module* to set up specific connections for students to activate their prior knowledge (see Figure 2 for an example of a questionnaire module).

The examples above illustrate a reliance on the teachers' ability to provide clear instructions and to be aware of prior knowledge held by learners. A major challenge for *Moodle 2.0* might be the extra effort required by course designers to provide appropriate instructions, although *Moodle 2.0* offers a space for teachers to develop meaningful activities. The majority of participants in MoodleDocs are developers, administrators, or/and teachers. However, little support is designed specifically for language learners to ask related questions. Features that would enhance the learners' experience might include a list of frequently asked questions, technical support for students, or a set of instructions for various basic activities such as participating in a module, uploading files, or importing/exporting files from other sources.



*Figure 2*. Example of a questionnaire module.

In short, *Moodle* contains several useful tools for teachers to evaluate students' prior knowledge and experiences but the effort to provide clear instructions needs further consideration.

**Promoting Active Self-regulated Collaborative Inquiry**

Collaboration and social interaction can be embedded in almost every module and block via chat (e.g.,

chat room), discussion (e.g., forum and comment functions), or work with peers to get ideas (e.g., Wiki). The new *Wiki module* now is more consistent with other Wiki formats such as Wikipedia. It provides more administrative options to enable instructors to easily and effectively provide a "knowledge-building" environment for students to develop, create, and share information together while online (Scardamalia & Bereiter, 2006) (see Figure 3 for an example of an interactive Wiki module). The particular challenge for the Wiki type of tool is that it requires users to maintain it properly and for teachers to build a learning environment which recognizes it as a valuable source.
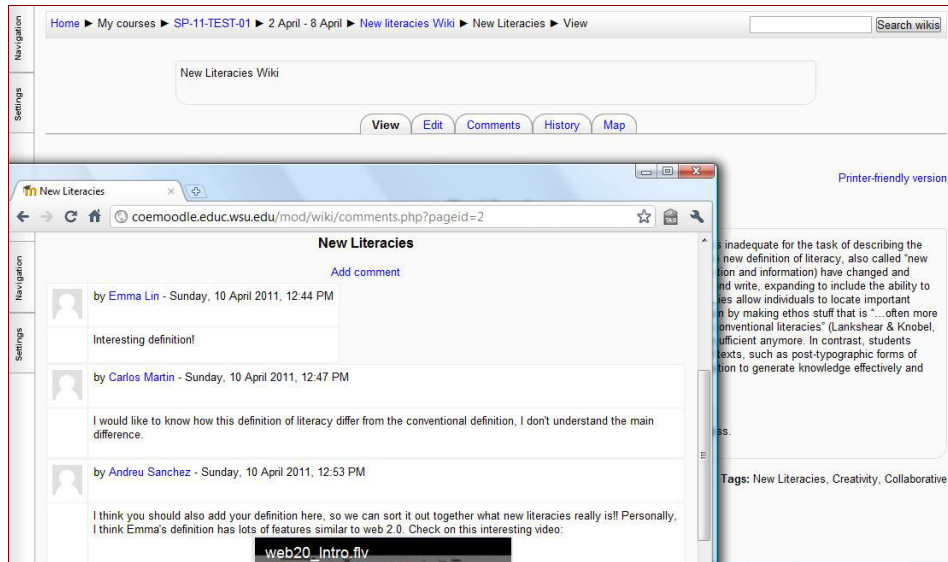


*Figure 3*. Example of a Wiki module.

## Encouraging Extensive Involvement in All Language Skills

According to Cummins et al. (2007), involvement is the key to the development of proficiency. Design that encourages active involvement in all language skills is elaborated in *Moodle 2.0*. For instance, the *RSS feeds block* enables instructors to link to authentic reading materials (e.g., online newspapers and articles) from external Websites. The voice device **NanoGong** (not yet compatible with *Moodle 2.0*) can be embedded in almost every module. Another audio and video recording device **PoodLL** Language Laboratory package (will be compatible with *Moodle 2.0* soon) includes two assignments, two activities and three questions types. This means that listening and speaking activities can be created anywhere to encourage practice of these language skills. Besides, with the new repository support in *Moodle 2.0*, authentic resources such as YouTube and Flickr can be easily integrated into a *Moodle* site. Writing opportunities can also be created in any of the following modules: *assignment module, lesson module*, *personal profile*, *journal module, blog module*, and *forum module*. All these features not only encourage students to practice language skills but also to make language learning happen in more "real-world" settings. Additionally, creating activities by incorporating different modules can be easily achieved, so different language skills can be linked; for example, a chat session transcript can be analyzed for grammar and spelling errors in a Wiki or forum module.

## Developing Multiple Strategies for Effective Language Learning

Language learners need to know how to use a range of strategies before, during, and after learning, such as self-management, self and peer evaluation, and the use of post-typographic materials to fit a variety of learning styles. Moodle 2.0 provides multiple opportunities for teachers to develop tasks during which students can practice such skills.

## *Organization*

The first feature that allows users to practice organizing effective information is page layout. A *Moodle* page is organized in blocks to enable users to track important information. In *Moodle 2.0*, however, all blocks are consistently implemented in every page and can be customized by users. Another change in *Moodle 2.0* from *Moodle 1.9* is in two settings of its interface: *navigation block* and *setting block*. A navigation block helps users quickly and easily access items, such as site pages, courses, my profile, etcetera. With the setting block, users can directly locate items they have permission to edit across the *Moodle* site. Second, the new development of *My Private File* provides opportunities for users to integrate personal or external documents and media (initial plug-ins include: Alfresco, Flickr, GoogleDocs, Picasa, and YouTube) (see Figure 4 for a sample of *My Private File*). In *My Private File*, students can easily arrange the appropriate materials to effectively represent information through post-typographic materials.

## *Evaluation Strategies*

*Moodle 2.0* supports a wide variety of evaluation strategies, providing built-in comment boxes for instructors to provide feedback, user ratings, a quiz module, and a workshop module.
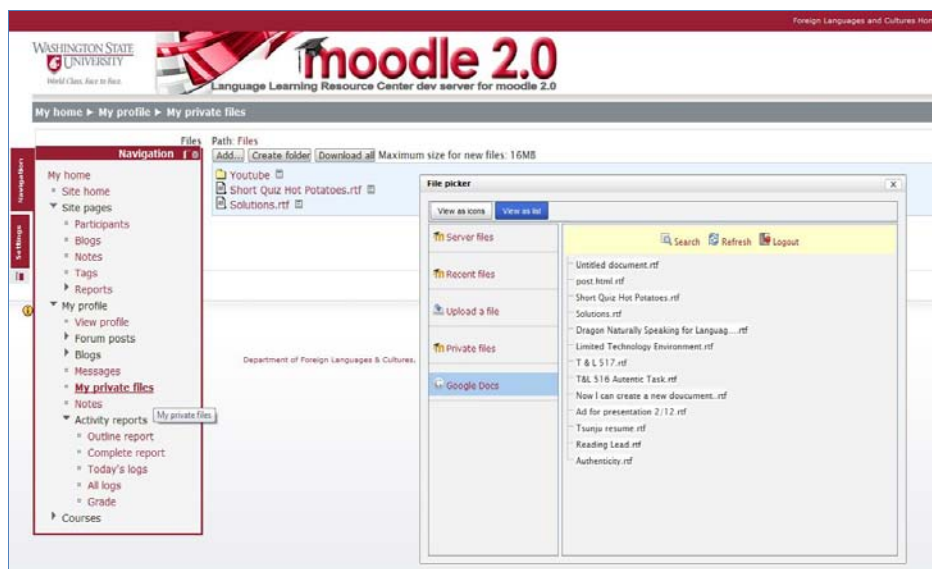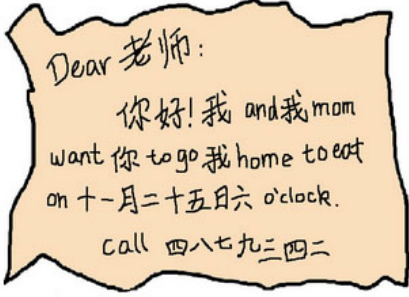


*Figure 4.* Sample of *My Private File*.

The *workshop module* has been completely redesigned for *Moodle 2.0* and emphasizes peer assessment activities. It contains multiple types of assessment forms and allows the learner, peers, and instructors to evaluate the quality of one's work. The *quiz module* allows users to design a variety of question types and store these in a question bank to be re-used or modified for multiple quizzes. It also includes quiz reports and statistics to give students instant feedback, so they can compare results to their own goals. Another major improvement from *Moodle 1.9* in the module is the possibility of flagging questions during a quiz attempt (see Figure 5 for the flagging example). This function allows students to go back to review answers they are unsure of. Thus, users can monitor what needs to be further understood. These functions allow easy access to both qualitative and quantitative assessments. With this function, users can easily track or arrange important or interesting information. According to this criterion, teachers can utilize *Moodle 2.0* to facilitate students' development of multiple learning strategies.

*Figure 5.* Example of flagging in a Chinese course.

**Promoting Identity Investment**

Tools to support involvement and identity are available in several blocks on *Moodle.* Cummins et al. (2007) state that it is critical to carry out "identity texts insofar as students invest their identities in these texts (written, spoken, visual, musical, or combination in multimodal form) that then hold a mirror up to students in which their identities are reflected back in a positive light" (p. 219). The *My Moodle* page outlines learner profiles, activity reports, tags, notes, and their private files, as well as records the user's way of thinking, responding, and acting in each task. Also, *Moodle 2.0* allows student identity to be represented in multiple ways, including visual or iconic images, letter identification, voice, videos, or a combination of these.

**CONCLUSION**

*Moodle 2.0* is a powerful software package that can be used for language learning. Its primary strength lies in its technical features. It is important to note here that the tools mentioned above are just some of *Moodle 2.0*'s capabilities, and more modules, blocks, and plug-ins can be added. Many of the technical issues mentioned in this review in need of improvement will undoubtedly become part of the next set of issues addressed by the many *Moodle* developers and users (often called "Moodlers"). In its current iteration, however, *Moodle 2.0* has strong pedagogical potential and allows instructors flexibility in creating activities based on the perceived needs, intentions, cognitive traits, and learning strategies of their students. *Moodle 2.0* has the power to enhance efforts by teachers to provide carefully designed learning environments so that their students can be successful.

**ABOUT THE REVIEWER**

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