

# **Learner-centered Do-it-yourself Learning Management Systems**

**Vance Stevens**

*This paper addresses situations where teachers are expected to develop viable courses quickly as well as make use of available technological resources, often on minimal budgets. Flexibility and creativity are achieved with DIYLMS (do-it-yourself LMS) using a mashup of Web 2.0 tools such as a wiki portal for course information and links, Google Docs for student writing and feedback, Google Hangout for live sessions, Skype group chat for synchronous and asynchronous communication, and blogging as a means for students to showcase their work and enter into conversations about it.*

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## What are Learning Management Systems (LMS)?

Learning management systems (LMS) are often used by teachers to help manage student learning. *Blackboard (Bb)* is an expensive but effective means of allowing teachers to set up courses, populate them with content, forums, and links to resources, and allow input of student work and record marks according to a specified assessment strategy. *Moodle*, a free and open source LMS, includes many of the same features as Blackboard.

## Why Do-it-yourself LMS (DIYLMS)?

Even when teachers have free access to LMS tools, such as *Moodle* or *Blackboard (Bb)*, they sometimes find these complicated and constraining. Teachers often learn just enough of a subset of these programs to be able to house their courses on *Moodle* or *Bb*, but they might not learn enough of the advanced features to break free from a template that makes such courses appear redundantly similar.

Both LMS programs can store content and allow students to upload assignments and will help manage learning by weighting marks according to an assessment strategy. Since *Moodle* is open source, it is free and allows developers to download content for easy restoration on other *Moodle* servers.

But there can be pedagogical ramifications in reliance on one-stop LMS. To varying degrees both *Bb* and *Moodle* tend to constrain course developers when they call into play the same features repeatedly. This is not to say that neither program allows imaginative development, but it's difficult for lay teachers to break away from templates that look alike and do exactly what they purport to do, manage learning. The problem is that too often it's the LMS that manages the learning and not the course designer. Lane (2009) calls this "insidious pedagogy".

Fortunately, there are Web 2.0 antidotes. The most used features of LMS programs, storage of content, interaction in forums and handling submission of student work and providing appropriate feedback, can be accomplished in a variety of freely available Web 2.0 programs that

can do these jobs with greater flexibility for learners than what Siemens (2004) calls “‘locked-down, do-it-our-way’ platforms”.

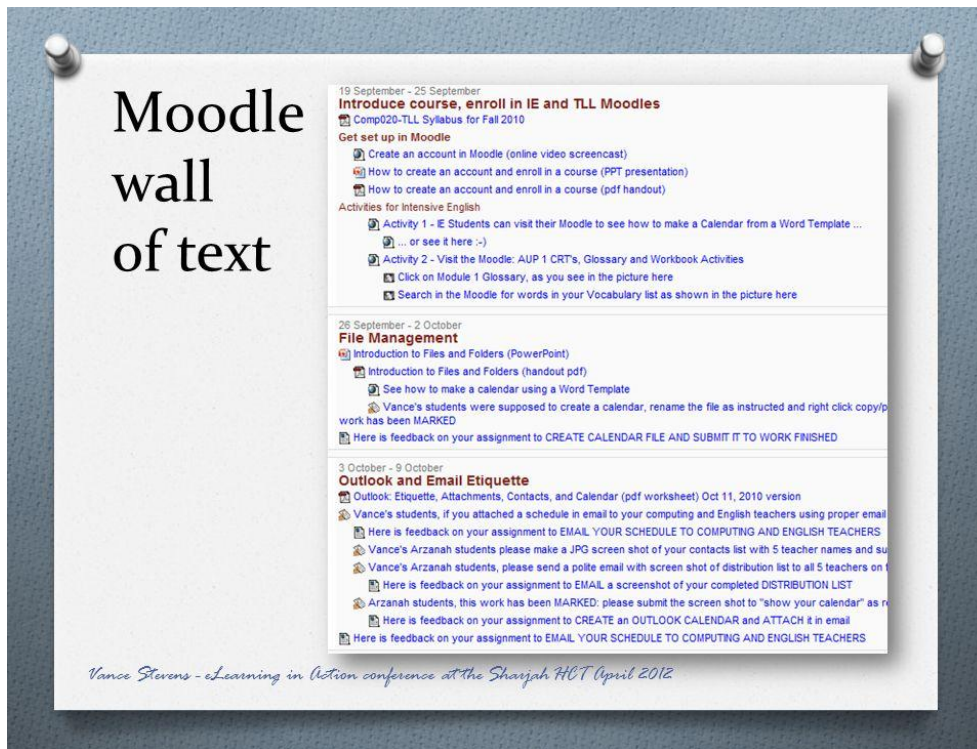


Figure 1. Moodle wall of text.

*Moodle* and *Bb* both constrain where (and what) users can upload and display. *Moodle* courses tend to appear as one long page arranged in topical or chronological order (see figure 1 above). A wiki can be more easily divided into less cluttered and more easily navigable pages. It can have a sidebar with links to other course elements including separate sections for past or future content. Access to past content, and the communities of learners who went before, is often denied users of lock-down LMS, but is on Siemens’s (2004) wish-list for what is needed in a learning environment. Siemens continues, “Modularized approaches give the instructor or learner (not the administrator or organization) the control to follow the meandering paths of rich learning. Selecting specialized tools to achieve specific tasks, and being able to add them to the learning environment quickly, are critical to rich learning ecologies.” This approach is also taken by Dowling (2011).

Nowadays, attitudes toward sharing and creating content on the internet are changing rapidly. There are movements toward open source and away from proprietary software; educators are eager to share and there is greater awareness among teachers and their new generation of students of how social media can contribute to collaborative language learning. Using wikis and blogs for learning management exposes teachers and students alike to mindsets online that expand their awareness of how these tools can accommodate their learning goals; see Stevens (2012) for elaboration on such paradigm shifts.

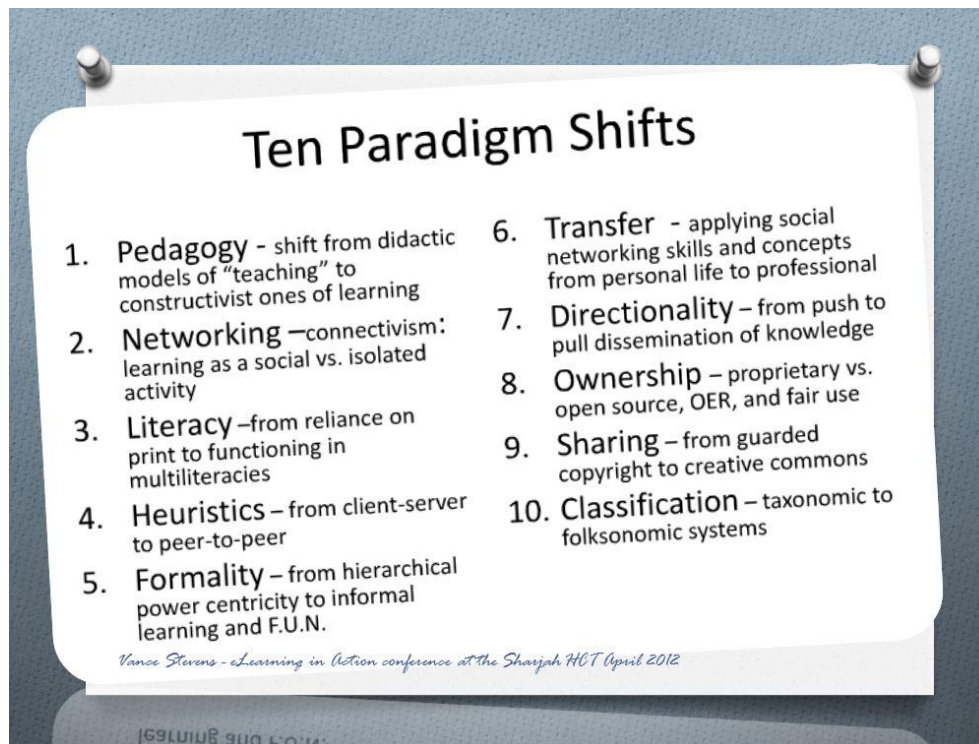


Figure 2. Ten Paradigm Shifts.

I coined the phrase “do-it-yourself learning management systems” (DIYLMS) to describe where Web 2.0 tools are used to accomplish learning management in a way that is more open, more flexible, and potentially more powerful, than systems developed by programmers working on the same set of code. Both *Moodle* and *Bb* are exemplary, but I feel that use of a variety of tools teaches 21st-century skill sets and gives teachers more control and flexibility over how they design and create learning environments for their students. DIYLMS also allows sharing of work publicly with teachers and students from around the world, something neither so convenient nor encouraged, nor even always possible, by *Moodle* and *Bb*.

## What do DIYLMS look like?

Components in my conception of DIYLMS include the following:

- A wiki portal for course information and organization, with links pertinent to course content and management, and other relevant resources;
- *Google Docs* for student submission of assignments, and teacher feedback on student creativity
- Blogging, to showcase student work;
- *Etherpad* clones for group collaboration tasks;
- *Jing* and *Screenr* to create and annotate screen-capture and screencast tutorials;
- Back-channel tools such as *Twitter*, *Skype* group chat, or *Edmodo*;
- *Google Hangout* (see figure 3 below) or *WiZiQ* for live webcam and voice-enabled interaction.



Figure 3. Google Hangout.



## DIYLMS portals

It's easier to start a course in a blog or wiki than to develop one in *Moodle* or *Bb*. In the big LMS systems, you tediously add components by means of pull-down menus, whereas with a wiki you start writing out your materials as you would a handout. Navigation is enhanced in blogs (e.g. tabs in *Blogger*, the sidebar in wikis and blogs). A *Pbworks* wiki page itself can also have a table of contents automatically created according to H1, H2, H3 headings, etc., in such a way that users can hyperlink to each heading (see figure 4 below). Thus navigation in a wiki can be much more fluid than in *Moodle* or *Bb*, where users must sometimes scroll through a wall of text to find what they are looking for.

Wikis and blogs not only allow easy embed of a variety of media content, but also enable upload of PDF and sound files to the wiki in such a way that any such media stored in that wiki space will then have a unique URL and can be linked to or embedded from elsewhere online. This might be impossible in *Moodle* or *Bb*.



Figure 4. Wiki portal layout.

## Student submissions in DIY LMS

In my classes I use two genres of online collaborative sites for working with students in class in real time or asynchronously: *Etherpad* clones and *Google Docs*.

### *Etherpad* clones

*Etherpad* was an open-source product which allowed users to write either synchronously or asynchronously to shared online writing spaces. Anyone can start a pad, distribute its URL, and anyone with the URL can write on the pad. Anyone can slide the pad's timeline backwards or forwards and see any keystroke version of the document. Any such version has a unique URL, so any particular version can be shared with others. The pad can also be saved by any user at any time and any of these saved versions can be recalled and shared. *Etherpad* clones can be used effectively with students who are with you in the classroom, each student contributing from his/her own computer to the document projected at the front of the room, or used effectively asynchronously in an online or blended-learning environment. *Etherpad* software is available at a number of host servers as clones of the original service (Lowenson, 2010).

### *Google Docs*

With Google Docs, in a writing class I can work closely with the students both in and between classes. Teacher feedback can be given in class interactively in real-time via an in-class projector, with individual students following along on their laptops. Asynchronously, effective feedback can be given in such a way that it can be immediately seen whenever and wherever students sit down to revise their work. Recently, I was reviewing a student's work in my office and I noticed that the student was following my cursor and responding to my feedback in real time from elsewhere on campus, corroborating my impression that the system works well.

## Showcasing student work in DIY LMS

Web 2.0 makes it quite easy to set up showcases of student work. Students can join and contribute to class blogs or alternatively keep their own blogs. These can be linked from the wiki portal and updates to them tracked through *Google Reader*, allowing the teacher to see in one

place when any blog has been updated (no need to open all the students' blogs to see which have in fact been updated).

I currently use *Posterous* with my students (see figure 5 below). They subscribe to the blog and I promote them to contributing writers and encourage them to blog there. Students like being able to create posts by email, as well as online through a browser, when email is already a part of their workflow. If you attach a picture or media file, it becomes a part of the post. *Posterous* specializes in providing plugins for most media, so if the attachment is a picture, it displays in the post, or if it's other media, it appears in an appropriate player.

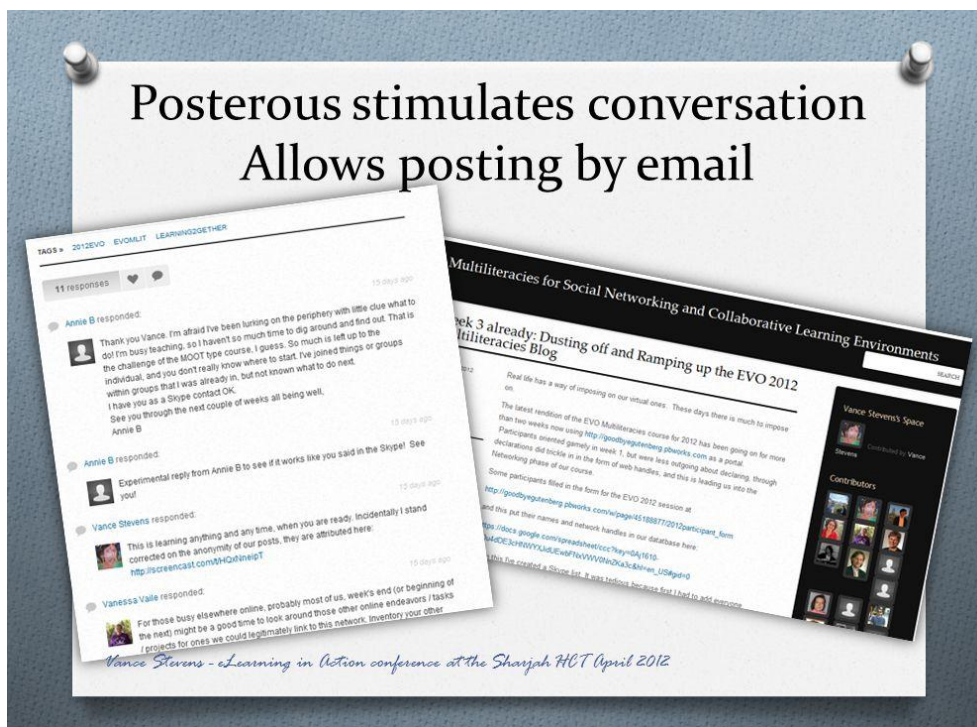


Figure 5. Samples of *Posterous* work.

## Forum conversations in DYLMs

Forums or some means of participants having conversations on class topics is a common feature of LMS. *Posterous* is particularly suited to emulating forums. When a post is made, all subscribers receive an email. If they reply, their replies appear as comments in the blog. All subscribers in turn receive an email with this comment. If they reply, more comments again appear in the blog. Because this can happen in email, the result feels more conversational than



with comments to other blogs and wikis, yet the appearance of these responses in the *Posterous* blog is just as attractively presented.

Threaded discussion forums will prompt and prolong in-depth discussions, but unlike comments to blogs, posts to such forums tend to get buried and forgotten. Still, forum and listserv discussions have their viable moments and Web 2.0 services sometimes provide good forum options. *Yahoo Groups* has run reliably for the past decade and allows you to set up a portal with links to messages, files storage, polls, and a calendar. More recently, *Google* has fielded its own groups site which integrates with its many other offerings for educators.

## **Backchannels**

Another effective forum alternative is *Skype* group chat (see figure 6 below). Anyone can invite his or her contacts to form a *Skype* group which can then engage in chat over time. The group members can access the ongoing chat through their contacts list, but they don't all need to be on *Skype* at the same time. When someone posts to the chat, other group members online at the same time might answer or comment right then, or later when they log into *Skype*, and a thread is built up. Such discussions can go on for years. For example, the annual *April 22 Earth Day* webcast is organized year after year in a perpetual *Skype* group chat where the back channeling heats up as the event approaches (<http://earthbridges.net/>).

Another backchannel option is *Twitter*. *Twitter* allows users to post using a common #hashtag, so all users following that tag see the latest group posts. You can use this feature with your class by creating a unique tag for it and using it consistently across social media sites. Also, you can group users in lists, even without following them; so the tweets of everyone in a particular list can be seen by simply visiting its URL. *Twitter* lists are a good way to monitor a backchannel of student users without any of those listed having to follow anyone else on the list.

The big advantage of both *Skype* and *Twitter* is that so many people use them in everyday life. As with *Facebook*, you are most likely to see messages from contacts in online spaces you follow in the course of computing every day, as a normal part of your work and social flow. I find this to be the main disadvantage of *Edmodo* and *Yammer*, which sport *Facebook/Twitter*-like interfaces in environments supposedly conducive to relationships between teachers and

students. However, since I don't use *Edmodo* in my normal workflow, I might miss some of these messages until I think to check there.



Figure 6. Skype interactions.

## Online spaces for live interaction and replay

*Skype* also makes a space where live chat can occur augmented with both voice and video. These chats can be recorded using third-party software, either software specifically designed to record *Skype* calls, or screencast software that can capture video. There are also tools costing money, for example *Blackboard Collaborate* and *Adobe Connect*, which can capture voice, web cam and facilitate use of collaborative web browsing, screensharing, polls, text chat, and interactive graphics via a shared whiteboard, among other features, and preserve recordings of the session stored on cloud servers.

These tools are fairly robust but there are free alternatives as well. *WiZiQ* allows people to meet in spaces with many of these same features and get a recording of the session. Also *Google+* allows users to enter a shared space where voice and web cams are activated, but recording must

be done by someone who captures the interaction using third-party software (see Elliot, 2011, for some examples of such software).

## Conclusion

Existing LMS or learning management system packages can assist teachers in laying out and managing courses of learning for their students where students can know at one Web address what that course of learning is and what their next step should be; however, they expose the learning environment to “insidious pedagogy” (Lane, 2009) and can constrain creativity in course design. Creating LMS mashups from freely available Web 2.0 tools can achieve similar learning objectives plus model for learners ways that they might approach problem solving in their own learning and project management situations. The DIY approach offers optimal flexibility for both learners and facilitators since its components are adapted according to need. This applies critical thinking skills appropriate to knowledge workers in a world where new problems must be addressed with novel solutions at an ever-accelerating pace.

(Note from the editor: A more detailed version of this paper can be found at TESL-EJ, Volume 15, Number 4, pp. 1-14: <http://tesl-ej.org/pdf/ej60/int.pdf>. Also at <http://www.tesl-ej.org/wordpress/issues/volume15/ej60/ej60int/>)

## About the Author



*Vance Stevens* career includes ESL lecturer, CALL coordinator, software developer, and teacher coordinator at the Naval College, CERT/HCT. Founder of CALL-IS in TESOL and Webheads, he facilitates TESOL/EVO online sessions and serves on editorial boards of teacher professional journals.

[vance.stevens@hct.ac.ae](mailto:vance.stevens@hct.ac.ae)

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