# Moodle 2.x Status Report, June 2012

Credits **Summary Issues Update** Accessibility <u>Grades</u> Blocks Modules **Upgrading User Interface** Performance **Outstanding Issues** Changes and Improvements Navigation interface overhaul for administrators and faculty **Enrollments and Roles** File Repositories **Course Management** Gradebook **Cohorts Mobile Quick Hits** 

## **Credits**

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# **Summary**

After extensive review, CLAMP is pleased to recommend the use of Moodle 2.x for the 2012-13 academic year. In our initial report on Moodle 2.0, CLAMP's member schools found a number of major issues with the 2.x iteration of the open source learning management system. While some reservations remain, we find that most of these issues have been addressed in in the current Moodle 2.x releases.

There are two major branches of Moodle which will be be available during Summer 2012:

- Moodle 2.2, which we reviewed at Tulane University in January 2012.
- **Moodle 2.3**, which is scheduled for release on June 18, 2013, and which we will be working on at Kalamazoo College in June 2012.

Our recommendation is that colleges use Moodle 2.3 for Fall 2012. Although its late June release date may make this difficult for some colleges, the enhancements to Moodle 2.3 are compelling:

- Drag-and-drop file uploading, along with other enhancements to the file interface.
- An updated assignment module (mod/assign) that allows for text fields when entering grades.
- "Traffic cone" to alert faculty when they are surfing away from a file upload page without saving.
- File size limit overrides for repositories.
- Conditional settings for topics/weeks.

Colleges looking to deploy Moodle 2.x in June or early July 2012 should use Moodle 2.2, which offers a number of notable enhancements:

- Advanced grading techniques, such as rubrics.
- <u>Conditional activities</u>, which restrict access to an activity based on date, grades, or activity completion (e.g. finishing a guiz).
- Built-in mobile theme and mobile app support
- Cohorts, which make it easier to organize installation-wide groups of people.
- Assignment zipping, which allows for the bulk downloading of assignment submissions.

There is a Moodle: Liberal Arts Edition for Moodle 2.x. While many of the bugs and interface

issues we encountered under Moodle 1.9 have been resolved, we still feel there is a need for a liberal arts-specific edition of Moodle 2.x that addresses the needs and concerns of our cohort. Features for Liberal Arts Edition 2.x include:

- Anonymous Forums: A core Moodle change that allows for the posting of anonymous forum entries.
- Filtered Course List: A block that lets colleges display term-specific lists of courses in a block.
- Quickmail: The popular mail-sending block, based off of LSU's Quickmail.
- LAE Grader: This grader report, which offers a number of user interface enhancements, has been ported from Moodle 1.9 to Moodle 2.x.
- Upgrade support for single file uploads: The 1.9 edition of the LAE included a "single file upload" option; this is no longer needed in Moodle 2.x, but because our feature required a database change, we need to include an upgrade path to convert the old "single file" resources to Moodle 2.x file resources.
- An LAE version of the core Moodle "traffic cone" specific to Moodle 2.2.

A Moodle 2.2 LAE 2.0 Beta was released in January 2012 and a security release for 2.2 was released in early June 2012. We intend to release LAE versions for 2.2 and 2.3 after this summer's Hack/Doc Fest at Kalamazoo.

#### CLAMP's evaluation of Moodle 2.x is based on:

- Extensive testing at the Moodle Hack/Doc Fests held at Furman University (January 2011), Hampshire College (June 2011), and Tulane University (January 2012)
- Pilots conducted at member colleges (Lafayette College, Kenyon College, etc.)
- Usability tests with faculty conducted in Spring 2012 at Lafayette College

**Ongoing Support for Moodle 1.9:** A third party has taken on security updates for Moodle 1.9, and will continue to support this branch through July 2013. Read the support thread in the Moodle forums.

CLAMP will release a new version of Moodle 1.9 Liberal Arts Edition after Moodle Hack/Doc Fest Summer 2012. This release will include:

- Upgrading TinyMCE to the latest version, to fix a text fields issue with Firefox 11.
- LAE-specific bug fixes.
- The latest Moodle 1.9 release, Moodle 1.9.18.

The Development Committee is evaluating whether to recommend providing ongoing security fixes for LAE 1.9 after June 2012.

**CLAMP Moodle Adoption Plans:** In Spring 2012 CLAMP conducted a survey of member institutions to determine their plans for deploying Moodle 2.x. Twenty-one colleges responded to the survey. View the survey on the CLAMP web site.

# **Issues Update**

In our last status report, we noted several issues with Moodle 2.0 that would prevent adoption by CLAMP schools. Almost all of these have been resolved.

## Accessibility

CLAMP will be reviewing how accessible Moodle 2.x is at the Summer 2012 Moodle Hack/Doc Fest.

#### **Grades**

**Retention of Student Grade Information:** In Moodle 2.0's initial release, when a student is unenrolled from a course, their grade data was deleted. This was a major departure from Moodle 1.9, where the student data remains, and becomes available again if the student is reenrolled in the course. This was a problem because sometimes students are unenrolled from the course accidentally, or change their mind and want to re-enroll after leaving the course. Moodle core has created a solution (MDL-25718) in which there are two options for unenrolling students:

- "Disable this enrolment but retain all grades"
- "Remove this enrolment completely and delete all grades"

When a student is unenrolled from a course in Moodle 2, her grades are removed from the gradebook. When she is re-enrolled, instructors must check a checkbox to restore the student's grades. The checkbox is hidden behind an expandable options link, making it difficult to find (or even realize it's there). CLAMP believes that a majority of instructors would want grades to be restored automatically when students are re-enrolled, especially since this was the default behavior in 1.9.

Moodle core agreed and is including a site-level admin setting to allow admins to set the default state of this checkbox in Moodle 2.3 (see <u>MDL-31158</u>).

#### **Blocks**

**Restoring Blocks from Moodle 1.9 to 2.3:** See the "Upgrading" section" for a discussion of Moodle blocks.

**Quickmail:** The third-party block Quickmail allows faculty to easily send emails to students enrolled in their class, bypassing the Moodle messaging system and replicating similar functionality in Blackboard. CLAMP has adopted LSU Quickmail as the basis of Quickmail in LAE 2.2.

Although Quickmail can be recommended for use in production, a patch has been written to resolve issues with upgrading from LAE 1.9 Quickmail to the LAE 2.2 version based on LSU Quickmail. Non-LAE 1.9 Quickmail users will not encounter these issues upgrading to LAE 2.2. In addition, the LSU version also has a significant bug affecting student use of the block due to duplicate, conflicting settings and a fix is being developed to remove the duplication and the consequent conflict. See <a href="CLAMP #369">CLAMP #369</a> and <a href="CONTRIB-3341">CONTRIB-3341</a>.

#### Modules

Anonymous Forums: Anonymous Forums allows users to make anonymous posts to Moodle's

discussion forums. This is a patch against core, not a module, but it has been ported to Moodle 2.x and is part of the Moodle LAE 2.x release.

**Banner/Luminis Message Broker Plugin:** The LMB plugin allows for the bulk creation of user accounts, courses, and enrollments by way of Banner's IMS export. It also allows for real-time updating using Banner's Luminis Message Broker system. The Moodle 2.x plugin is now available.

**Feedback module:** Feedback is a module use for running course-level surveys. <u>It is included in Moodle 2.x</u>, but is disabled by default and <u>a successor "Survey 2" module</u> is planned that will combine the best features of Feedback, Survey, and Questionnaire.

**Lightbox module:** Lightbox is an image gallery module. A version for Moodle 2.x <u>has been published on Github</u> but not evaluated by CLAMP.

**Questionnaire module:** Questionnaire is an alternative survey module used by a number of CLAMP schools. It is available for Moodle 2.x. <u>Learn more via the Questionnaire module page</u>.

**Quiz module:** It is now possible to add questions directly in a new quiz without having to interact with the Question Bank. Questions added directly to a quiz are put into the question bank, however. The question bank can be hidden on an Edit Quiz page so that interface can be simplified. In general, edit questions pages have new features and some preview interfaces have been improved for greater usability. GIFT imports still work fine.

**Scheduler module:** Scheduler allows students to sign up for appointment slots with faculty, writing assistants, etc. <u>It has been ported to Moodle 2.x</u>.

**Sharing Cart module:** Sharing cart is a tool for sharing resources between courses. <u>Sharing Cart 2.2 was released in April 26, 2012</u>.

**Wiki:** The initial Moodle 2.0 wiki had a number of issues associated with it, many of which have been fixed.

- **Table of Contents links:** The links for the automatically-generated table of contents in the Moodle 2.0 wiki were broken. Fixed in Moodle 2.2. (see MDL-25695).
- In collaborative wiki, with separate groups, teacher cannot view group wikis: Not a bug; the issue was an Apache configuration (see MDL-25732)
- Wiki HTML Comments Editor Broken: The HTML editor for wiki comments doesn't work. If you highlight text and click on any of the editor buttons, nothing happens. Fixed in Moodle 2.2. (see MDL-25883)
- The name of the first page in the wiki can not be changed: This could be a feature or a bug, but our sense is that you should be able to change the page name. Unresolved. (see MDL-6488)

**Other Modules:** Potential blockers indicate problems that could prevent some schools who rely on a particular feature, plugin or block from upgrading to Moodle 2.0. A list of the most popular Moodle blocks and modules, and their current 2.0 status, can be found in Moodle Tracker:

Moodle Tracker: http://tracker.moodle.org/browse/CONTRIB-1988.

CLAMP has created a Google Doc that inventories all of the modules and blocks that CLAMP schools use, and their current upgrade status. View the inventory.

Additional information about converting Moodle modules from 1.9 to 2.x can be found in this Moodle Forums discussion: Moodle 1.9 to 2.x: Missing activities when trying to restore in 2.x.

## **Upgrading**

A major concern for CLAMP colleges considering upgrading to Moodle 2.x has been the upgrade path. This takes on two forms: upgrading a Moodle instance from 1.9.x to 2.x and importing Moodle 1.9.x course backups to 2.x.

**Moodle 1.9.x course backup and restore:** This process works well, allowing Moodle 1.9 backups to be restored to Moodle 2.2. and 2.3 instance (this wasn't the case with Moodle 2.0, which could not restore 1.9 courses - see MDL-22414)

There are a few caveats:

- You cannot presently restore users from a 1.9 backup to a 2.x course.
- Legacy course files do not always appear in new courses: If you merge a course backup into an existing Moodle 2.x course, rather than importing it into a new course, the Legacy Files folder will not be created. <u>CLAMP #382 / MDL-32598</u>
- Unlinked files in a course are not restored to Moodle 2.x courses: Files that are not associated with a resource (which are just floating loose in the course's file system) are not restored to Moodle 2.x courses. The quick-fix workaround for this is to include a link to the "Files" folder in the Moodle 1.9 course before backing it up; after doing this Moodle 2.x will see the "Files" folder as a resource and restore the unlinked files. <a href="CME">CME</a> discussion
- Moodle 1.9 blocks do not restore to Moodle 2.x courses: When a Moodle 1.9 backup is restored to Moodle 2.x, the old blocks are not recreated. This means that blocks need to be manually recreated from the 1.9 course. <u>MDL-32880</u>
- **Simple File Upload Deprecated in LAE:** Moodle 1.9 LAE included a "simple file upload" option that allowed faculty to bypass Moodle's normal file interface. This created a new "simple file" file type that Moodle 2.x doesn't recognize, causing imports/upgrades including these files to fail. This is fixed in Moodle 2.x LAE which includes a patch that converts the simple files to Moodle's new file scheme. <a href="CLAMP#343">CLAMP#343</a>

**Moodle 1.9 to Moodle 2.x system upgrades:** This process works, but only for Moodle 1.9.x to Moodle 2.2. Moodle core made a conscious decision not to support direct upgrades from 1.9. to 2.3 in order to eliminate legacy code from the 2.3 code base. The recommended upgrade path is 1.9 -> 2.2 -> 2.3.

Early problems with system upgrades failing because of the wiki have been fixed (see MDL-25501). That said, CLAMP colleges have reported mixed results with upgrades of their systems. Some have no problems, others run into issues that prevent the process from completing (e.g. upgrading the legacy log files to the current log file format was an issue at Reed College). CLAMP recommends doing test upgrades of your Moodle instances in a development environment in order to determine how well the upgrade will work for you.

Some schools may encounter problems with collations when upgrading an existing MySQL database. This is not a Moodle bug per se (see <u>MDL-24845</u> for discussion) but has several workarounds in the <u>Moodle forums</u>.

#### **User Interface**

**File Uploads by Administrators:** Moodle 1.9 used a series of course-related folders to store data. This meant that if a faculty member had a file that exceeded Moodle's file size limit, the administrator could upload it using SFTP to the server and simply drop it into the files folder for that course. The same was true when administrators needed to mass upload a number of files.

Moodle 2.0 fundamentally changed this behavior; all files must now go through the database, leaving admins with no way to mass-upload files into the system. Potentially worse is that Moodle 2.0 through 2.2 imposed the file upload limit system wide, meaning that admins simply could not upload very large files into Moodle.

The multiple file upload issue has been partially addressed through a combination of the dragand-drop interface (Moodle 2.3) and judicious use of the private file repository system, but may still remain difficult for some colleges depending on their use cases.

The max file size issue has been dealt with by a <u>new capability is being added to Moodle 2.3</u> that can override the file size limit. This in turn provides administrators with a way of importing large files via Moodle 2.x repositories (see <u>MDL-27156</u>).

**Interface Changes:** There have also been significant interface changes to the administration and faculty navigation menus. This necessitates reworking or rewriting existing documentation and will likely require retraining faculty and staff as well. CLAMP has created extensive documentation for the new Moodle features, and made it available via <u>a shared folder in Google Docs</u>. See "Navigation interface overhaul for administrators and faculty" in the "Changes and Improvements" section for more information.

#### **Performance**

JMeter load tests of Moodle 1.9 and 2.0 have revealed that Moodle 2.0 can be significantly slower at the same tasks than its 1.9 counterpart. A discussion of this issue, with JMeter test plans, graphs and in-depth analysis, can be found in this forum thread. Martin Dougiamas reports from the last developer meeting that large sites are reporting a 25% drop in performance moving from 1.9 to 2.x (see: discussion and audio here).

During the Spring 2012 pilots, Kenyon College saw performance issues with Moodle that were resolved by enabling a PHP optimizer/cacher. Lafayette College, which ran a pilot with 12 courses and several hundred students, did not encounter any performance issues.

There have been reports of Moodle 2.x performance on very large instances being 25% slower relative to Moodle 1.9. A discussion of Moodle 2.x performance can be found in the Moodle forums.

## **Outstanding Issues**

These issues aren't deal breakers -- most are minor bugs or interface revisions aimed at making Moodle easier to use.

**AuthSub** (see MDL-32425): There are boatload of issues related to using Authsub (instead of OAuth) for Google repository including inability to setup if using Google Apps for Ed and Google domain is same as Moodle domain. This may go into integration soon but based on the Authsub code it's either not likely to pass integration very quickly or it will be crappy code.

**Course meta link (metacourse) interface** (see MDL-32161): The meta course interface is time consuming to use on Moodle installations with hundreds of courses. From Tracker: "1) it has to be done individually by searching the pulldown menu for the relevant course, 2) only one can be selected at a time and 3) the pulldown menu has several hundred items!!"

Course Reset does not remove students enrolled via Flat File CVS (see MDL-27533): From Tracker: "If a course has students who have enrolled to a course via Flat file (CVS), they can not be un-enrolled by Course Reset. They also cannot be removed manually. A new Flat file has to be uploaded to remove the students."

**Download all assignments as zip link displays inconsistently** (see MDL-33349): From Tracker: "All 2.2 assignments (mod/assignment) include a link in the upper right corner of the screen labeled, "Download all assignments as a zip." This link does not display consistently across all browsers in all window sizes."

Students unable to see assignment feedback unless a grade is assigned (see MDL-29689)

**Sticky block functionality does not match Moodle 1.9.** (see this discussion): Sticky block preferences must be set site-wide, rather than at the course level.

In Advanced upload of files students can delete files even if the activity is marked that they cannot delete them (See MDL-28357) This is not slated for 2.3 at this point though it is listed as a blocker.

**Gradebook export fields** (see MDL-21572): From Tracker: "At present, GB allows teacher or admin to export data with grade items and following user related fields: firstname, surname, ID, institution, department and email. It would be useful to be able to export data from other profile fields including city/town and country. The default export contains optional profile fields, yet omits mandatory fields."

Login as user automatically logs you out upon returning to your original self (see MDL-24120): Under Moodle 1.9, admins always returned to their account after logging out as another user; now they are dumped out of the system.

Include bulk course create and remove with Moodle through the use of CSV files (see MDL-13114): A request to create a method to bulk create and remove courses. Kalamazoo and Lafayette Colleges developed an implementation of this tool which is currently <u>published on Github</u>.

**Moodle handles images added via rich-text drag/drop inconsistently** (see MDL-32558) From Tracker: "TinyMCE allows users to drag-and-drop images directly into a textarea, bypassing the filepicker. Our faculty and students are consistently adding images to various parts of Moodle in this fashion. This works inconsistently based on the source of the image and

the browser in question." The practical result of this is that if someone tries to drag-and-drop an image file into a text field in TinyMCE using Firefox, Moodle 2.2 will throw an error when the text is saved, and the changes will not be stored in the database.

**Purging cache can create massive log file output** (see MDL-27559) From Tracker: "When permissions were configured incorrectly, clicking the "purge all caches" button generated 400 MB of log file output."

# **Changes and Improvements**

## Navigation interface overhaul for administrators and faculty

The user interface in Moodle has been overhauled, consolidating most of the administrative navigation menus into the lefthand navigation. This is good (it's more up-to-date and one never loses sight of certain essential material) and bad (everything is moved and it can become quite confusing).

A good example of this is the "Login as student" option. Once a link under the student's profile, this link has now been moved to the lefthand menu. However, because of the size of the newly-expanded menu, the link often appears off screen when looking at student information.

As a result of these changes, much of the existing documentation for faculty, particularly those that rely on the administration menus, will need to be reworked or rewritten.

As of Moodle 2.2.x, the **Navigation Block** now links to topic/weekly sections and includes an additional setting for enabling course section links in the navigation. It is recommended that you do not use the Back and Forward buttons on your web browser when using Moodle. Using the Navigation links provided will ensure you always see the latest version of a page (eg a forum with all posts). Be careful to update, save or post any changes you make before moving on to another page to avoid losing your work. <u>Learn more about Moodle 2.2's navigation scheme</u>.

#### **Enrollments and Roles**

The enrollment interface is changed; the left-right box is gone in favor of a drop menu. Once a student is enrolled, you can remove all roles from them, but we're not sure what they become. We assume they become the equivalent of an authenticated user.

We verified that course enrollment via CSV works, and discovered you can now create groups via CSV. There is now an "other user" capability. You can use this to add people as managers, who are like power users, but do not have as many capabilities as administrators. Faculty can set their own enrollment options for a course, allowing in guests to just that course. They can restrict access based on a password.

Enrollments can be a challenge as teachers can't override an enrollment method. For example, students added to a course using Moodle's Flat File enrollment method can not be unenrolled by a faculty member (or even an administrator); they need to be unenrolled by the same method that added them. Administrators should take special note as this is likely to break most automated enrollment maintenance systems because it now requires a delete record rather than just "not there anymore" and get automatically pruned.

### **File Repositories**

#### Internal Files

Everything works and works well as long as you don't try to do more with it. For example, you can upload multiple files, which can be accessed via the same link. This would be useful for uploading a web archive (e.g. a collection of web pages and images with an index page linking them together) but if you uploaded 3 word files, only the main file will be accessible.

You can have a global file quota for users.

 Moodle 2.3 roadmap promises improved support for external file content in hopes to correct the following: It's not currently easy to use a file in multiple places throughout Moodle and update them all at once and it is not easy to create a simple shared "course repository" for teachers to use. <u>Learn more at Moodle.org</u>.

#### **Private Files**

Moodle 2.0 allows you to have private files accessible by the user. The interface is confusing however, because although it looks as though it's saving each file as you upload them, it doesn't save any of your work until the entire collection is saved.

Private files must be enabled to use the mobile uploads. Mobile uploads **only** go to a user's Private files area. Uploaded files may only be added at the course level once that user accesses a course using a computer. But, some mobile phones may display TinyMCE (and the file picker) which could be a problem. We anticipate needing changes to the Mobile theme for 2.2/2.3.

#### **External Repositories**

Moodle 2.0 supports external repositories, such as Flickr and Google Docs. These file repositories can be configured via the following menu:

• Site Administration > Plugins > Repository

If you're adding a file, you'll see repositories (including private files) and you'll be able to authenticate to the various services. Once you pick a file, Moodle will copy the file into its file system. It is not possible to point to an external file resource using this tool; Moodle will always copy the data to its local file system.

The testers found this to be a significant drawback, as there are many times when we might like Moodle to point to an external file resource and not copy the data over (e.g. GIS data sets).

**Note:** The File Upload Limit for Moodle is also the maximum size limit for copying files over from an external repository. e.g. if you limit file uploads to 50 MB, then the biggest file you can copy over will be 50 MB. Moodle 2.3 will add a new capability that will allow select roles to ignore this file size limit, which should fix the problem.

#### **Internal Repositories**

You can set up repositories in Moodle that allow certain users to copy files to their own private files folder or individual courses. This is done by creating subfolders for each repository within Moodle's moddata folder. Potentially, these folders could be SMB mounts or symlinks to other folders containing larger files. As such, it could provide administrators with a work around for getting large files into Moodle, but it is not a mass upload tool. In addition, as with other

repositories, a copy of the file is made into Moodle's database structure; it's not possible to link to an external location for a file.

We tested block level file and folder access for a number of <u>scenarios</u> that we frequently see at liberal arts colleges:

- A co-taught course collaborative developed.
- A course developed by one faculty member is taken over by another.
- A course developed by one faculty member is backed-up for another.

As of Moodle 2.2 there may be some bugs to work through as we assure that the files one faculty member places in a course (using file upload, private files, and server files) can be accessed as well as edited by another instructor (see <a href="MDL-31156">MDL-31156</a>). We are particularly interested in ensuring that files from Internal Repositories, or External Repositories, Private Files, or Server Files and placed in a hidden "faculty development" folder can be accessed by all faculty enrolled in one course. We should revisit these scenarios under Moodle 2.3 at the Summer 2012 Hack/Doc Fest.

### **Course Management**

#### **Restrict Access**

The "Restrict Access" feature allows faculty to prevent students from accessing a particular resource or activity until a certain start/stop date or until a grade is achieved. It is enabled in the site admin in Advanced Features > Restrict availability. This feature enabled faculty to schedule when materials appear by setting conditions for release in the resource or activity. Some of the options are "Select to hide until the condition is met" or "Display in grey w/the condition listed" until a specific condition is met.

#### **Conditional Activities**

Can be used to restrict access to resources or activities based on certain criteria/conditions, and you can cascade these conditions. It is enabled in the site admin in Advanced Features > Activity completion, but while this enables it for use in Moodle, it's not enabled at the course level by default.

Teachers can enable it by selecting "Enabled, control via completion and activity settings" from the "Completion tracking" drop down in the "Student Progress" section in the course settings.

<u>Documentation is available in Google Docs.</u>

#### **Course completion**

Did not look at thoroughly, but is supposed to give a snapshot view of the status of where students are in their completion of activities. <u>Documentation is available in Google Docs.</u>

## Assignments in Moodle 2.2

Moodle 2.2 allows teachers to download ALL assignments at once as a zip file. This replaces the "Assignment Zip" modification available in the Moodle 1.9 Liberal Arts Edition.

The assignment description box can also be displayed on the front page of the course by checking a box underneath the **Description** box. There is also new gradebook features in Assignment that includes the possibility of using a grading rubric.

Finally, there are new ways to restrict access to an Assignment including dates that will control when it will be displayed and conditions that limit access based on the completion of other activities. <u>Documentation is available in Google Docs for online text assignment</u>.

#### Gradebook

The gradebook itself hasn't changed significantly from Moodle 1.9 to 2.2, but menu locations have. Outcomes worked with scaling, but seemed like an afterthought.

**Advanced grading methods** is a new subsystem introduced in Moodle 2.2. It allows to use various assessment forms like <u>rubrics</u> to calculate the grade for students' work. At the moment, only the <u>Assignment module</u> supports them. More activity modules (like Glossary and Database) are supposed to be supported in future Moodle versions. Also, more grading methods can be implemented as independent plugins (including custom ones fitting your particular need). <u>Learn more through Moodle's documentation</u>.

#### **Cohorts**

Cohorts are site-wide groups that can be added on the system level or to a particular category. Once an Admin has activated the cohort enrollment method for the system, cohorts can be enrolled in a course one-time or synced so changes carry over similar to the way metacourse enrollments work -- people get added or removed from the cohort and they are removed from all the courses that use cohort sync as an enrollment method.

Users can be added to a cohort manually one-by-one, uploaded with a CSV, or added in bulk using the batch user filters (a little limited, but very cool). The batch user filter lets you use different attributes to locate a subset of the system's users then do things with them like add them to a cohort.

Lafayette College uses cohorts to drive enrollments in particular courses. For example, the "Class of 2016" cohort is used to enroll first year students in placement testing courses. The cohorts could also be useful in creating cohorts for engineering students, faculty, etc. If you ever received a request to add all of the faculty at the college to a particular course, then cohorts are something you should consider using.

#### **Mobile**

Moodle 2.2 introduced support for mobile access to the LMS: a MyMoodle app and a mobile theme.

**MyMoodle App:** The app can be used to view content and communicate with other participants. It allows uploading pictures and audio to the "myPrivate files area" of Moodle, but only if that feature is enabled. It also provides links to the mobile web version of certain pages (again, assuming the mobile theme is enabled).

**Mobile Theme:** Moodle 2.2 introduced support for different themes depending on the user's mobile context. These include the traditional desktop themes, tablet themes, and mobile themes. As of 2.2, there was no tablet theme, but there was a mobile theme that does provide better site accessibility. In addition to being able to view content, the Forums, Choice Activity and Quizzes were also successfully tested. The only major problem was using TinyMCE editor in forum posts on the iPhone; the editor worked inconsistently but this was fixed in later versions

#### **Quick Hits**

- The ability to create "cohorts" that can be imported into multiple courses; cohorts can be broken down and assigned quickly to groups in courses.
- "Other users" in a course that are not participants. Someone with the default "Manager" role is assigned as an "other user" and can develop the course without showing up as a participant (in assignments, gradebook, etc.) More investigation needed.
- File repositories: Users can now add files from a suite of repositories called the "file bank"
  - http://docs.moodle.org/en/File\_bank
- External files: External repositories currently include Flickr (both public and private),
  YouTube, Google Docs, DropBox, WebDAV, and more. Success varied. An interesting
  option is called "File System Repository." There is an area in the Moodle file space
  where an admin can store files, create a symlink to another drive, mount a drive, etc. All
  of the Repositories are file- rather than folder-driven, and they typically copy files from
  the repository.
- Option to "suspend" student's involvement in a course, suspending their active participation and access, but retaining their course records.
- Conditional and timed release of activities and documents.
- AJAX is required for Moodle 2.0; disabling JavaScript causes serious problems with the user interface.