

## Learning to Leverage: Using Moodle to Enhance F2F Interaction in One-Shots

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One of the biggest challenges in library instruction is making sure the limited class time we typically have with students is utilized in the most effective way. Previous to the use of tutorials, librarians at Purchase College, SUNY, had no way of ensuring that students in our one-shot freshman College Writing (CW) research sessions were all on the same page and sufficiently prepared for the hands-on research sessions that professors wanted, students needed, and librarians craved. Each year, we scheduled one-shot sessions with the CW classes; and, each year, the results of these sessions were highly variable depending upon the mix of student proficiency with basic research skills, the timing of the session, and student readiness to delve into research. Often more adept students complained about boredom while lower level students struggled to keep up. With only one hour and twenty minutes for both demonstration and hands-on learning, librarians and teaching faculty were left frustrated.

### Creating Solutions

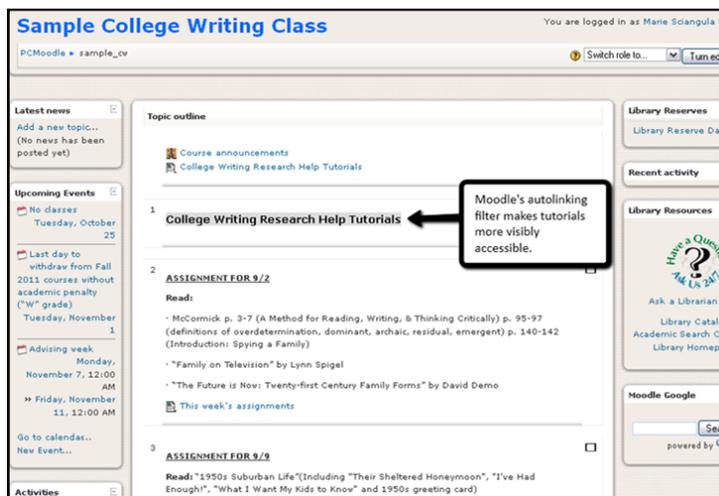
We needed an approach that would provide students with more meaningful face-to-face, hands-on class time to practice the concepts librarians needed to demonstrate. We determined that a targeted set of tutorials might lay the groundwork for this by allowing students to get some needed introduction to concepts before the class. Thus, in the fall of 2010, the Purchase College Library (PCL) in conjunction with our Teaching, Learning, and Technology Center (TLTC), implemented the first generation of College Writing-wide online tutorials within Moodle, our Learning Management System (LMS).

As a first step, we needed to ensure careful coordination between the librarians and the CW administration. Once we agreed on our overarching goals and objectives, we could then determine appropriate content for the sessions and for the tutorials, along with scheduling. There were four tutorials in all and each was paired with a series of assessment questions to ensure student exposure to basic concepts before arriving for their librarian-led workshop. The tutorials addressed common obstacles we saw students encountering such as how to distinguish the function of the catalog versus the databases. Three tutorials—1) Finding Books, 2) Choosing Search Terms, and 3) Finding Articles at the Purchase College—were written and produced by the Library Tutorials team using the screen-capture applications Camtasia and Jing. A final tutorial, 4) Scholarly vs. Popular Periodicals, was created by Vanderbilt's Peabody Library (<http://tinyurl.com/PeabodyScholarly>) and was adopted for its succinct (yet institutionally agnostic) approach. Assessment questions were developed to test basic knowledge and comprehension of topics covered. Each tutorial was under five minutes and each quiz was 4-7 questions.

This paper will not address the development of the tutorials themselves (a separate process), but rather will discuss how the tutorials, as “learning objects,” were implemented within this CW curriculum and Moodle. Learning objects are defined as “small (relative to the size of an entire course) instructional components that can be reused a number of times in different learning contexts” (Wiley, 2000, p. 3). Besides being useful in Moodle, the lessons learned and benefits of embedding such learning objects can be applied to training situations outside the traditional classroom and can be accomplished in most learning management systems.

### Leveraging the LMS: Technical Challenges and Considerations

Learning Management Systems are essentially web-based classrooms. More than static web pages, these course “shells” (see Figure 1) act not just as repositories for course handouts and readings, but also allow for the dynamic interaction of students with each other and with faculty. Interaction, such as discussion forums and live chat, can build a sense of community, allow faculty to take the pulse of the course at any moment and, in our case, provide opportunities to embed learning objects, such as tutorials, to ensure that precious face time spent with the students is more effective.



**Figure 1:** Sample College Writing Course in Moodle—includes announcements, assignments, readings and relevant resources like links to the library (on the right side). Note Moodle's autolinking filter function—anytime text associated with an existing resource/activity is displayed, a link to that content is automatically created.

So how do learning objects get into these course shells? Via Moodle's import process which involves selecting the checkbox next to each element, such as each of the four quizzes, that you want to bring in (something that can be achieved in other LMSs via creative use of course backups). In our case, trial and error taught us the best solution is to create a specific “dummy” Moodle course shell with content solely devoted to the tutorials. Having this dedicated “Sample Col-

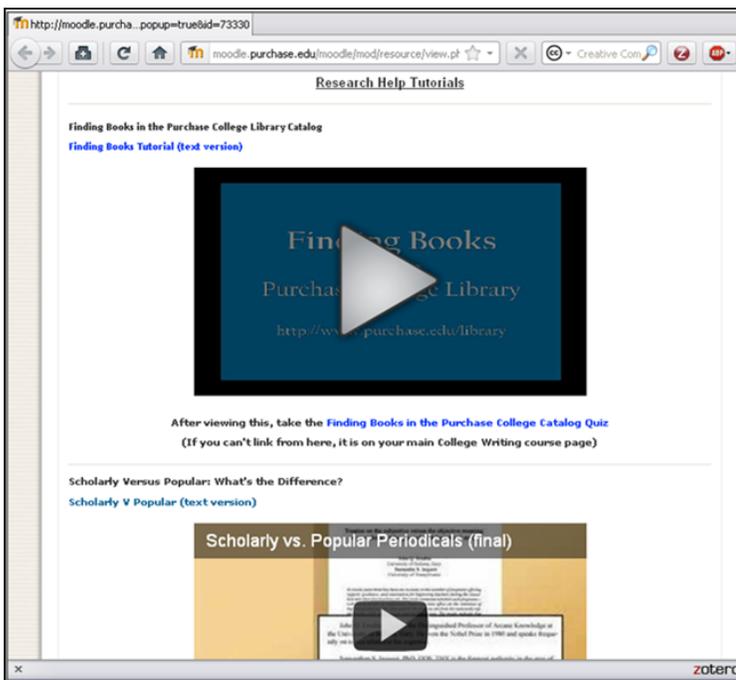
lege Writing Course” shell allowed us more control and ensured only content that was intended to be imported was, in fact, placed in each College Writing section shell.

Once we had the tutorials successfully loaded in all 31 sections of the course, students were tasked with taking the tutorials pre-class. Because each resource was listed individually, we encountered some students who had gotten lost—taking only two of the four tutorials or reading only the alternative text scripts (which were intended for students with special needs) and missing the video content altogether. Students needed one centralized place within their course to access all four tutorials. To address this, we created a simple web page on which all the learning objects and related content would be more clearly laid out. We then imported the web page resource into each CW Moodle. This allowed all tutorials as well as links to alternative text scripts and quizzes to be more seamlessly & intuitively presented (see Figure 2).

version)	To return to the tutorials, click on College Writing Research Help Tutorials.
Finding Books Tutorial (text version)	Alternative script text for the Finding Books Tutorial. To return to the tutorials, click on College Writing Research Help Tutorials.
College Writing Research Help Tutorials	Use these tutorials to gain the base knowledge you'll need to start poking around on your topic. That way, when you come to the research session with your librarian, you'll have specific and practical questions you can have answered.  To go back to the main page, click here --> <a href="#">College Writing Research Help Tutorials</a>

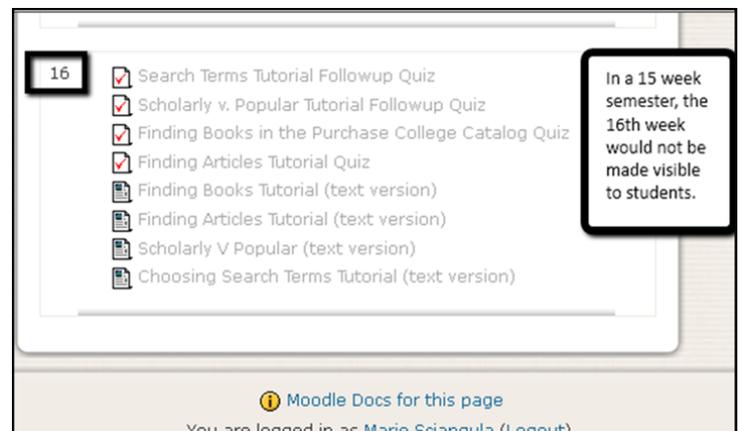
**Figure 3:** Students can view all the resources and activities associated with the course. Each resource description must include the exact title (i.e., same spelling) of the main learning object in order to take advantage of the Moodle’s auto-linking filter. This allows students to get back to the main page should they get misdirected or close windows unexpectedly

Our TLTC came up with the idea of creating a hidden virtual week of the course within which we could bury these alternate text resources. The resources themselves would no longer be visible to course participants on their course’s main page, which lists each week’s topics and their corresponding activities and resources (see Figure 4). For example, if the normal course schedule was 15 weeks, we created a 16th week/topic where we deposited these resources, but only allowed 15 of the course weeks to be visible to students. That way, the content was **there**, but was not visible except where we wanted it to be so students could not, for example, accidentally choose only the alternate text script after taking a quiz and ignore the video tutorial. Rather, they could access all the discrete learning objects in the order we preferred on the main tutorials page, reducing the possibility that their decision to, say, click on an alternative text script, was arbitrary.



**Figure 2:** Top of the Tutorials page. This scrollable page opens in a new window with an embedded video for each tutorial, with links to the text version as well as a link to the related quiz. In the future, ideally, alternate text will be directly included in video closed captions for those needing it.

While having this centralized web page helped orient students in first accessing tutorials and quizzes, there still was confusion driven by poor descriptions of the discrete learning objects (e.g., Finding Books) so that when a student had clicked on a quiz, for example, they had no clear way to navigate back to that main page. We remedied this by making better use both of Moodle’s autolinking feature and resource descriptions so that when they finished a quiz and were presented with any links, the most prominent ones would enable students to easily return to the tutorials page. (see Figure 3; partial screenshot of a couple of the learning objects and description with autolinking in grey highlighting).

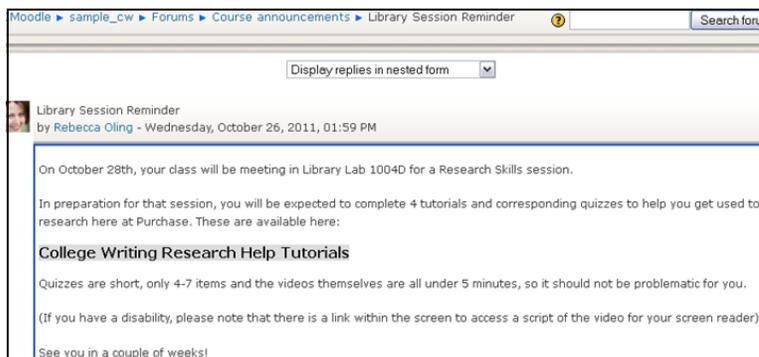


**Figure 4:** Only the instructor (in this case Marie) see this. Using a ‘hidden’ topic/week to deploy content that does not appear to students on their course’s main page. In this particular example, the instructor designated a topics-based course format so we used the 16th topic to populate the tutorials; only making 15 of them available to students. This may be one trick for which you must be using Moodle.

The ability to create this virtual “week that isn’t a week” of the course was crucial. It allowed us to control what the participants experienced when accessing course content. In this case, they saw the page we wanted them to see rather than the discrete learning objects that were contained therein.

## Successes and Thoughts for Future Implementations

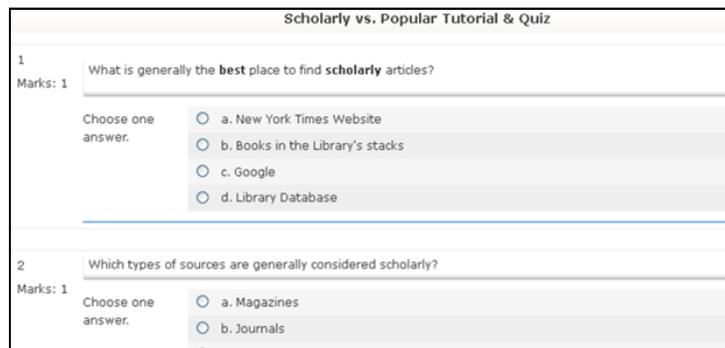
The most successful implementation instances were in courses where the librarian did the heavy lifting regarding networking with the course professor and the students. In these cases, the librarian was proactively communicating with students rather than depending on the faculty to do so alone. The librarian sent reminders via Moodle and checked quiz participation and grades. It was notable, thought not surprising, that course instructor and librarian reminders directly affected participation on the quizzes (and presumably the tutorials leading to those). See Figure 5 for an announcement example.



**Figure 5:** Be sure to give the exact name of the resource (because Moodle cares about exact spelling; only way to autolink) so that students can click directly from the announcement to the resource.

Out of the 596 students in the 31 College Writing sections in which the four librarians were involved, an overall average of 43% participated in doing at least one of the quizzes (See Figure 6 for a snapshot example of one quiz). Sections in which a librarian or the course professor sent a reminder were dramatically higher in participation, as expected. If at least one reminder was sent to students via Moodle's news/course announcements forum and messaging system, the highest participation rate achieved was 57%. If two reminders were sent, that average participation number jumps to 76%. On the flip side, with no reminders sent via Moodle (perhaps save for a few verbal reminders given), the average participation drops to 13%. Based on this, for future implementations, targeted and intentional communication with the students will be a clear priority for course faculty and librarian training, as Moodle allows you to run participation reports so that we could target reminders to those not participating.

The results became a valid tool for us to quickly review before entering our one-shot face-to-face sessions and determine which concepts stumped students most. This enabled us to create "buy in" with the students during the session by giving us a vehicle to say "50% of the class (who took the quiz) were confused about this particular concept." Just knowing that others in class struggled with the same concept allowed us to avoid the game of seeming to assume what they knew and what they didn't know. It gave the librarians an opportunity to quickly review concepts covered in the tutorial and free up time to focus on more advanced topics and allow for hands-on practice during the session.



**Figure 6:** Snapshot of one of the quizzes. Each quiz is automatically graded and has full feedback included for incorrect and even reinforcement for correct answers.

Proper implementation also seemed to have an effect on the College Writing faculty, who according to the Coordinator of the College Writing program on campus, received positive feedback and felt that the tutorials "allowed the library session to be more focused." All teaching faculty were given a best practices for implementation document as well. See (Oling, n.d.-b) <http://tinyurl.com/CWInstructorHandout>. One professor even commented that the "session seemed less frenetic," a function of the higher order skills the students were able to practice, like actually getting past the execution of searches to focus on limiting and evaluating the relevancy of results.

## Conclusions

Best practices for this kind of tutorial and quiz implementation includes basic and obvious tips such as perfecting content and confirming its descriptions match before importing. Additionally, we learned to provide a universal access point with robust descriptions and clear navigation to and from the learning objects that cannot be misconstrued by students.

We have found that the most important implementation factors are buy in—both programmatically (in this case with the College Writing Coordinator and faculty) as well as with the faculty librarians who would be teaching the one-shot sessions. The College Writing faculty's understanding of the process was integral and cannot be stressed enough.

The approach detailed here for leveraging your LMS can be applied to any discipline or department needing to better integrate a lesson, idea or tutorial with a defined group (staff, faculty, advisees, staff/faculty development, etc.). Using the features of Moodle to house quiz content and offer access to the tutorials enabled us to give our students a virtual platform for learning basic concepts without taking up valuable face-to-face time in class. It aided our efforts to elevate the focus of our library instruction beyond the "click here and type that." In effect, we were also able to reduce librarian burnout, student boredom, and faculty frustration. Finally, it gave us the opportunity to jump more quickly into the hands-on portion of the library session, enabling us to focus on the practice of information literacy concepts.

## References

See reference list here, <http://bit.ly/PYVcr2>