Using the Moodle Book Feature for Student Collaboration in Resource Creation

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Abstract—Although Moodle is mostly known as a Course Management System for facilitating distance learning, this project describes its successful use as an in-class collaboration tool. The Moodle Book feature is typically a resource created by the instructor and distributed to the students. By changing the local permission roles, students can be designated as creators and editors for a Book reference resource that they can share as a class.

Index Terms — Moodle, Book, Collaboration, Constructivism.

I. INTRODUCTION

Collaboration has long been established as an effective approach for teaching and learning. With the growth of the Internet, tools for collaboration are more accessible, more varied, and more flexible than ever before. [1] The use of Course Management System technology with features such as forums and wikis can allow new collaborative opportunities for students. While CMS use is usually associated with distance learning, it also offers opportunities to enrich in-class group collaboration.

II. MOODLE AS COURSE MANAGEMENT SYSTEM

In the Fall of 2008 Louisiana State University adopted Moodle as its sole Course Management System. To assist faculty with their Moodle courses and other education technology issues, LSU created the Faculty Technology Center. The FTC has a full-time staff of five education technology specialists, of which the author is one. The FTC mission is to support and enhance the use of classroom technology through consultations, workshops, instructional publications, and demonstrational projects.

The CMS Moodle is structured to promote collaborative learning experiences. Based on the Social Constructivist learning model, Moodle includes such features as wikis and forums. These features allow students and teachers to work together in exploring and creating knowledge. [2]

III. CONSTRUCTIVISM AND COLLABORATION

Constructivism as a learning theory grew from the field of cognitive science, based largely on the work of Jean Piaget and Lev Vygotsky. [3] Piaget’s founding contribution was the idea of “Cognitive Equilibrium” in which a learner constructs their own understanding to balance previous knowledge and new information that is possibly contradictory. [3]

In Piaget’s description, learning is ongoing, dynamic, and created by the learner. [3] As Edith Ackermann explains, “To Piaget, knowledge is not information to be delivered at one end, and encoded, memorized, retrieved, and applied at the other end. Instead, knowledge is experience that is acquired through interaction with the world, people and things.” [4, p. 87]

Lev Vygotsky expanded this view to describe the way individuals interact with others to construct knowledge that is shared. His view grew to be known as Social Constructivism, describing learning as being “socially mediated.” [4, p. 292] This position is most relevant for situations of collaborative learning, where instructors and students work together to form new structures of knowledge.

Collaboration allows student to participate in a process of learning and creating knowledge in a way that is richer than what they could experience as an independent learner. Mary Wildner-Bassett describes collaboration as “an interactive and interdependent act of working together in order to generate new ideas, increase knowledge, and achieve common goals which could not be accomplished individually.” [6, p. 162]

Rena Palloff and Keith Pratt recommend the group creation of a web-based resource as a meaningful collaborative activity. They describe the benefits as the increased ability of research skills and “knowledge of how to use the Internet as the vast source of information that it is.” [5]
IV. COLLABORATIVE RESOURCE PROJECT

Dr. Ann Martin is a faculty member in the college of Humanities and Social Sciences. In the 2010 spring semester, she was scheduled to teach a special topics composition class, English 2000. Dr. Martin had already used Moodle for the previous three semesters. For the 2010 Spring semester, she wanted to make greater use of its more collaborative features.

Dr. Martin had an idea for a project in which the students would research a topic and then create a collaborative reference guide that the whole class could share. She thought that the Wiki feature in Moodle would allow students to do this, and contacted the FTC for help in setting it up.

As a topic for her students’ research paper, Dr. Martin designed a course module to discuss relationships between philanthropy and happiness. The exploration of the concept of happiness was based on seven elements, physical life, knowledge, aesthetics, achievement, self-constitution, relationships with others, and spiritual life.

The connection to philanthropy would be made through a study of nonprofit organizations and their contributions to the development of happiness. Dr. Martin points to a “whole other world” of nonprofit work in our country, operating nearly invisibly in our for-profit society. Before her students leave LSU for the business world, she wants them to learn about that “other world.”

Before students began their research, Dr. Martin instructed them to reflect on which elements of happiness were most important to them personally. Many college students, for example, value “achievement” as crucial to their own happiness. Other students believe that “relationships with others” are essential to happiness. In this first stage of the project, the students discussed and wrote about their own attitudes towards happiness.

Next, the students began to research nonprofits that actively supported the element of happiness that they considered most essential to their own lives. This research task was not a simple one. Thousands of non-profits exist, all doing various things to make people happy. A quick search on the Internet will locate numerous nonprofit websites aiming to present their organizations’ missions.

However, even the best nonprofit websites don’t usually directly state the organization’s attitude toward happiness. To connect any particular nonprofit to a particular aspect of happiness would require a good bit of thoughtful research. Dr. Martin realized that students would benefit from pooling this research before choosing a nonprofit to explore and evaluate in their final research paper.

In the third stage of the project, students were directed to combine their research results, constructing a resource that all students in the class could share. This pool of information would allow students to make a much more informed choice about their individual paper topics. By collaboratively combining and evaluating their research, students would have access to a wider and more thorough collection of resources.

When Dr. Martin approached me for help in developing the collaborative project, she expected that Moodle’s Wiki feature would be the best solution. It would allow students to create a small website with pages that they could all edit and share. I had experimented with the Wiki feature before, and had found that it was not very intuitive.

Students in other courses using this feature had trouble creating new pages, editing content, and navigating the site.

After further investigation, I suggested using Moodle’s Book feature. The Book feature allows creation of content which can be divided into chapters. It also has a print function that displays all of the content in simple HTML page, with none of the graphics and navigation icons associated with the regular Moodle page display. This allows for a more concise, simpler printout.

With the book feature, users can create new chapter pages through a simple process of clicking an icon and naming the new chapter. Editing pages is also simple. I demonstrated the Book feature to Dr. Martin, and she decided that this would suit the purpose for her class project.

V. CHANGING LOCAL PERMISSIONS

One complication in using the Book feature was that typically it is a resource that can only be
created and edited by the instructor. There is a process for giving student permission to edit the content for some items in a Moodle course. This is done through changing the local permissions for that item. (See figure 1) Changing the local role assignment can allow students to have the editing capabilities of an instructor or teaching assistant for just that resource or activity.

Once the proper permissions are set, students can add new chapters to the book and edit existing content. This setting only affects their access to the particular item. It does not change their role in the Moodle course, or their access to other activities/resources.

VI. CLASSROOM LOGISTICS

For the first class period of the collaborative project activity, students were instructed to bring in a printout of their research. They were tasked with gathering information on at least 5 non-profit organizations in at least 3 of the seven happiness categories. They were also instructed to write a short description of each of these non-profits, including website URLs when available. Along with the written work, students were asked to bring their laptop computers to the classroom.

Dr. Martin asked me to be present to help facilitate the activity and to demonstrate the process for editing the content of the Moodle Book feature. The students were familiar with using Moodle from the participant perspective, but not from the role as editors and creators of content. This new role required them to learn the functions of the six edit icons. (See figure 2) Dr. Martin also asked me to remain throughout the activity to help with any technical difficulties that might arise.

During the first 15 minutes of the class, students discussed the seven elements of happiness and their experience finding website resources for the non-profit organizations. After the discussion, Dr. Martin divided the students into seven groups. Each group contained 3 to 5 students. They had to move their desks to separate themselves physically into the seven groups. Each group was given one of the seven elements of happiness as its focus. For example, one group represented “physical life,” one represented “aesthetics,” and so on. Each group would input information about nonprofits working in that particular category.

The classroom was equipped with a multimedia podium computer for the instructor to make presentations. This computer linked to a projector, showing the computer’s monitor image on a screen at the front of the classroom. Using the instructor’s computer I demonstrated the process of accessing the Book feature, and editing the content. Since all students were assigned as editors for the entire book, one danger I had to warn the students about was the possibility of deleting chapters. Students were instructed to edit only their own group’s chapter, and to not delete any chapters.

In experimenting with the Book feature, I had found that the separate chapters could be edited and saved simultaneously by different people. If more than one person was editing the same chapter, however, there was a possibility of having the changes of one person being overwritten by the other. To prevent this, Dr. Martin had each group designate one data entry person for each group. This person used his or her laptop computer to type in all the information.

The other members of each group first read through the papers their group had brought to class. They discussed which items would be appropriate for their particular group’s chapter page. As the entry information was chosen, it was given to the student operating the laptop computer to type into the Moodle page.

Once a group was finished with its set of papers, the text would be passed on to the next group on the right. In this manner, all of the papers were circulated to all seven groups and the appropriate information was entered in each of the Moodle Book chapters. This process took about 30 minutes in the initial class period. In the following class period, each group had the opportunity to add to their chapter content and to work on their formatting.

Figure 2. Screen image of Moodle Book feature editing icons. NOTE – content is simulated for privacy.
VII. PROBLEMS ENCOUNTERED

Some of the students had Apple Macintosh laptops and were using the Internet browser Safari. There is a well-documented problem with using this browser for Moodle. [8] The Safari browser does not display the current Moodle WYSIWYG text editor. Although the Safari browser does display a text entry box, it does not show the buttons icons for formatting text or creating of hyper-links.

The text editor does allow a user to enter HTML code directly. For example “<b> text here</b>” can by typed for creating bolded text and “<a href="website URL here">Website name text here</a>” can be used to post hyper-links. I wrote some of these codes on the whiteboard at the front of the classroom for the students to use. This proved too cumbersome though, and was an unnecessary diversion from the real purpose of the activity.

Dr. Martin and I decided that the better solution was to have the students switch browsers or computers. One of the students working on a Macintosh laptop had Mozilla FireFox already installed and was able to switch to this browser, avoiding the problem. Another student was able to borrow a Windows-based PC computer from another student and work in the Internet Explorer browser.

Figure 3. Screen image of Moodle book with information, hypertext, and formatting. NOTE – content is simulated for privacy.

VIII. CONCLUSIONS

Using the Moodle Book feature proved to be a simple and effective solution for creating a collaborative resource. Changing the permissions to allow students to become editors is a simple process that gives them a higher level of participation with this feature. The students responded enthusiastically to being designated as creators and editors of content. They exhibited ownership of the project itself, and later expressed pride in the product that they had created. Although Dr. Martin did not specify a particular style of format for the information, one of the groups experimented with bolding the titles and using indentation to make the entries easier to distinguish. In the later class periods, a consensus developed and the other groups adopted the formatting style. (See figure 3)

Although the creation of the Book was a successful class activity, it was not an end to itself. Its broader purpose was to serve as a resource for an individual writing project. Another purpose was for students to develop collaborative writing skills in a way that would benefit them later in their academic and professional careers. Selecting, analyzing processing, and presenting information are often activities that professionals perform in a group setting. Dr. Martin often has former students come back and talk to her classes about their group writing projects and how these skills are essential to their job performance. From Christina, a software developer at Microsoft, to Michelle, a Human Resources specialist with the State of Louisiana, to Shannon, an elementary school teacher in Atlanta, everyone tells the same story: collaborative writing skills are essential in the workplace.

Yet another purpose of the Book activity in English 2000 was to increase students’ familiarity with writing for the Web. The kinds of rhetorical decisions students made in class – how to convey information in very few words, how to highlight important material, how to hyperlink, what kinds of audience expectations must you meet and surpass – these rhetorical decisions are crucial to good Web writing. Students who perform well in these areas will be competitive in the challenging work environment of the 21st century.

Finally, beyond pedagogical and vocational aspects, collaboration using the Book feature allows students to understand the very nature of knowledge differently. Pooling ideas and information creates a much broader shared field of knowledge. Dr. Martin often compares students sharing a pool of knowledge to a coral reef: every individual contributes to the overall wellbeing of the whole.

REFERENCES


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