

## **Pedagogical Considerations of Using Moodle in Course Development**

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To facilitate the description of the pedagogical process associated with Moodle course design, the design of a 15 week, second year on-line First Nations course on Education and Politics is described. This approach includes an explanation of how this course was designed to ensure that the content could easily be taught using workshop or traditional in-class “face to face” modalities of instruction.

The pedagogical considerations incorporated within this developed course included unique approaches fostered by using the course management system itself; attending to instructional technology considerations; and the incorporation of First Nations pedagogy throughout the content.

### **Process of Developing a New Course for On-line Delivery using Moodle**

FNPA 200: Education and Politics is a new 15 week, semester long course that was created from September to December, 2005 intended for on-line delivery with a Spring 2006 launch.

The curriculum development process including the following steps:

1. A module approach was chosen to organize the content for ease of delivery using either on-line; time compressed workshop; or in-class formats. The content was divided into 13 distinct modules.
2. Planned how First Nations pedagogy would be incorporated into both the on-line content and the curriculum structure. This included curriculum development strategies to incorporate respectful relations, visual learning activities such as creating models using the Four Directions, building on experiential learning, story-telling and story-making, supporting quaternary, dialogue, positionality, listening well, allowing space, using a holistic perspective (body, mind, heart, spirit), relevance, reflectivity, and reciprocity within a self-governed and ecological context as the structure of the course.
3. Created the Course Outline and Learning Outcomes which were selected with the intention to provide both theory and practical application of First Nations educational planning throughout the 13 modules.
4. Identified the content, learning outcomes, and main title focus for the 13 modules.
5. On-line readings and resources were selected to support the module content. On-line resources were used to provide readily accessible, up-to-date tools and readings for web based delivery. It was reasoned that these resources could be effectively used even if the course was taught using a workshop or in-class mode of delivery, as well.
6. Created learning activities (using First Nation pedagogy) for each module that drew on the activity capabilities of Moodle. These built-in applications included journals, forums, lessons, linked resources, WIKI, SCORM, glossary development, worksheets, quizzes, Powerpoint

presentations, viewing on-line videos, group debates, visual creative activities, and accessing on-line software and other tools.

7. Created assignments that capitalized on the capabilities of Moodle:
  - a. Participation – in journals, forums, worksheets, debates, etc.
  - b. Digital Presentation related to First Nations Education and relevant Politics
  - c. Electronic Educational Plan for selected community
  - d. On-line Final Examination programmed using Moodle's Quiz developing capability.

It was reasoned that these forms of assessment could be quite easily modified to be used in workshops or for in-class instruction. Moodle can also be used as an Academic On-line Resource where students who do attend classes on campus or by workshop could still participate in on-line forums, journal, and other activities provided in Moodle. The major assignments could be done either digitally or manually. The final examination could easily be formatted to be done in person within an in-class or workshop delivered course.

8. A word-processed guide for each module was developed which created a comprehensive syllabus for the course. This was created on a module by module basis: initially as a guide for writing the on-line activities in Moodle, but also would be beneficial as course materials for in-class and workshop teaching.
9. All worksheets, Power Point presentations, and handouts were replicated as pdf files for ease of downloading.
10. An assessment of the time taken to create the on-line course using this inclusive approach to ensure generalizability to in-class and workshop delivery modes was done. It was concluded that for faculty and course developers who are oriented to the Moodle interface and know how to work effectively with uploading/downloading documents and applications would find preparation for a course in Moodle on par for time and effort with the development of a strictly in-class or workshop course material preparation.

### **Comparison of Learning Activity Development Time/Effort for Moodle vs Class Delivery**

**These first examples illustrate curriculum and course development activities that are easily delivered using either an on-line or in-class mode delivery.**

*Example 1: Forum Development vs In-Class/Workshop Dialogue*

**Moodle Course:** Forum on First Nations Pedagogy and Educational Planning

The following paragraph was typed into the Forum Activity area:

“Marie Battiste outlines several ways that First Nations pedagogy, epistemology, and knowledge need to be applied to develop curriculum that meets the needs of First Nations learners. In this forum, dialogue about how you plan to incorporate these fundamentals into

Assignment Two – your educational planning work.”

By typing this directive into the special forum software, the instructor easily set up a reflective and constructivist space for students to add their participatory response after they have read the assigned readings, which can be done at their leisure at any time of the day or night. Moodle provides the capacity for each student to respond to the discussion at a click of a button, and allows the instructor to see a record of when each student responds.

### **In-class/Workshop Dialogue:**

An instructor would likely type up the above scenario in a course package or on a worksheet to guide in-class or workshop student discussion. Class time would then be allotted for the actual discussion.

### **Example 1 Summary:**

Time needed for preparation appears quite equal for both activity preparation modes. Students would have more time to think about their responses though using the on-line approach, and could add both initial and further comments as they think more about the topic. Instructors can also view the resultant on-line dialogue at their leisure to assess knowledge, threads, and so on. These advantages also favour the use of Moodle as an on-line resource even for in-class modes of delivery.

*Example 2: Journal Entry: On-line vs Print Entry*

### **Journal Entry in Moodle on Critical Grassroots Awareness**

The following guidelines were typed into the Journal area of Moodle:

“Write down your thoughts about the following quote from the Bressette (2005) reading (p. 6 – 7).

“Indigenous nations have struggled to re-create and retain the successes enjoyed prior to colonial rule via self-government. Progress in this area has been controversial and slow. ... the answer lies in the degree of input, critical awareness, and empowerment of native people over control in all areas of life at the local level and... the need to encourage capacity development and increased participation of all people at the community level.”

### **Journal Entry in Book**

An instructor could also type the above guideline into course materials or on a worksheet, then instruct students to write their response in a journal for the instructor to comment on.

### **Example 2 Summary:**

Time needed for preparation for both on-line and in-class delivery again appear equal. Advantages to using an on-line journal primarily relates to reciprocal ease: the journal is accessible from the web by both students and instructor which helps a dialogue to evolve from the student's reflective journal entry and the subsequent dialogic responses from the instructor. Again, these capabilities support the use of

Moodle as a resource, even for in-class courses.

*Example 3: On-line vs Print Reading Selection*

At the beginning of any course, the selection of readings takes a fair amount of time and energy to find high quality and relevant resources for any of the course modalities being presented, whether on-line, workshop, or in-class.

**On-line Reading Selections for Moodle**

The focus of this course was Education and Politics, which proved to be fortunate, since the on-line availability of high quality resources and readings related to these topics was ample. Plenty of high quality, expertly written materials were available free of charge, from a number of expert and reliable web sources. These included such sites as the Aboriginal Healing Foundation, Assembly of First Nations, Federal and Provincial government sites such as Indian and Northern Affairs Canada, the Ministry of Aboriginal Relations and Reconciliation, the First Nations Educational Steering Committee of the BC Teacher's Federation, the BC Treaty Commission, BC Ministry of Education, and the Ministry of Advanced Education, the National Indian Brotherhood and various on-line journals, books, and conference proceedings.

The Moodle interface provides an easy to use application for linking and describing these resources for student use through the “Resource” area. Students can access readings on the web and easily save or print out the content.

**Print Reading Selections for In-class/Workshop Course**

The usual way to select readings for in-class delivery is to search for textbooks and articles that relate to the content. For this particular course, this could entail a fair amount of cost for the student, since multiple books would be needed to equal the quality of the on-line readings. Of course, some of these readings are available in print form for a fee, especially those provided by government agencies. It is also possible to use some or all of these on-line readings if housed on a Moodle On-line Resource site to be used for an in-class or workshop led classes.

**Example 3 Summary:**

The time taken for both on-line and in-class reading selection seems comparable, but the actual on-line resources are superior in quality, more recent, freely available, and much more cost efficient.

*Example 4: Worksheet Completion*

**On-line Worksheet in Moodle**

The following questions and directions were typed into a Word document and saved as a rich text (rtf) file for students to download from the Moodle site. They are asked to type in their responses, save the file as an rtf file, then upload the document to a specific area housed in the Lesson application of Moodle for instructor viewing.

“Complete the following worksheet and upload your finished work to the lesson area in Module 2.

1. In the reading from the Aboriginal Healing Foundation, several examples of revictimization are described on pages 61 to 63. What suggestions/warnings do these examples present for First Nations education decision makers?
2. In the assigned reading by Kahn, several points were made about the robustness of the existing educational system, prior to colonization. What oversights did the Europeans make as they made educational decisions about First Nation children's education? How were these justified?
3. What strategies can you include in your educational planning to help heal the residual trauma from the Residential School System legacy?”

### **Worksheet Handout for In-class**

An instructor could type up the same directives above into a Word document and print it out as an in-class or workshop activity.

### **Example 4 Summary:**

Time for preparation of this worksheet is equal to preparing an in-class handout. An advantage of using the on-line Moodle environment is that students have more time to reflect and think about the questions – there is less time restraint. Because the answers are typed, they are easier for the instructor to read (compared to handwriting) and are all collected together in one Lesson area for overall class viewing.

### *Example 5: PowerPoint Presentation Development*

### **Online Delivery in Moodle**

Powerpoint summaries of the content and readings were created for each of the 13 modules. These were developed in the usual way, using Microsoft PowerPoint, then saving as both a ppt and a pdf file. Both types of files were easily uploaded into the file directory of Moodle, and linked to the appropriate module. The students are then able to view the presentation with the click of a button, and are able to view each slide at their leisure and at close proximity via their computer screen.

### **In-class Delivery**

The same Powerpoint could be presented in-class or in a workshop if the instructor has a computer projector available. The class would view the slides all at once, and would have to keep up with the pace the instructor uses to transition between slides.

**Example 5 Summary:**

Moodle gives the students an advantage in providing closer, clearer, and more customizable viewing of the Powerpoint slides for the students. Preparation time for either mode of delivery is virtually identical. The same process is true for video preparation and/or viewing (if the video is available in a digital format for on-line viewing). An example is the video: *Into the World of Treaty Negotiations: Sharing the Experience* at [http://www.bctreaty.net/files\\_3/video\\_sharing-the-experience.html](http://www.bctreaty.net/files_3/video_sharing-the-experience.html)

*Example 6: Quiz Development***On-line Quiz Development in Moodle**

Moodle allows instructors to enter questions directly into the Quiz application using a variety of quiz question formats including: Multiple Choice, True/False, Short Answer, Numerical, Calculated, Matching, and Random Short answer Matching. As the questions are typed in, the answers are also embedded, so that student work is instantly graded as they use the Moodle system.

**In-class/Workshop Quiz Development**

Instructors would write the questions for a quiz in a similar way for in-class or workshop delivery. However, answers need to be kept track of separately, so the students do not access them. Marking is then done by the instructor at a later time.

**Example 6 Summary:**

Preparation time for on-line and in-class quiz development is about equal, though instructors do not need to attend to page format when using Moodle (the program does the formatting automatically). Answers can be safely embedded in Moodle, so no separate document is needed to store the answers. As well, the quiz is graded by the Moodle system, saving marking time by the instructor. The grades are also stored in the on-line Moodle grade book for safe keeping. The same process can apply to Midterm and Final examination preparation (a final exam was created for this particular course).

**Unique Learning Activities afforded by Moodle environment**

There are a variety of learning activity capabilities provided within Moodle that would be harder to replicate for in-class or workshop delivery unless Moodle was used as an Online Course Resource or another on-line service was used. These include:

**WIKI:** This capability provides an area where all of the students can contribute to a communal WIKI, to collect their various entries, questions, musings, or ideas. In this course, a WIKI was used consistently from Module 4 through 13, focused on their Educational Planning major assignment.

**Glossary Development:** Moodle also provides the capability to construct a group Glossary of pertinent terms and definitions. Students can easily add a new term and definition to the Glossary using the specific Moodle area. This capability was used throughout most of the Modules to create a specific Education and Politics glossary of terms for student use.

**Resource Forums:** The general Forum area of Moodle can be used for the collection of on-line resource link contributions from all of the students. This activity helps students to search for, select, and present resources in a clear and usable way. It also provides a diverse and comprehensive collection of relevant resources for all of the students to access.

**SCORM display:** Various “stand-alone” applications can be uploaded using the SCORM display capability of Moodle for student viewing and downloading. This could be a multimedia presentation such as a video or audio production, lesson, tutorial or other resource.

### **Conclusions:**

The creation of this course was facilitated by the capabilities of the Moodle system to shape the content and learning activities in a constructivist, First Nations pedagogical manner. Course development time and energy was equivalent using the Moodle program compared with designing an in-class or workshop based course. As well, the Moodle system met all technological expectations as far as adaptability, customization of both layout and colour scheme, accommodating both synchronous and asynchronous learning activities, providing secure access and protected grade storage, providing feedback, creating well-structured content, allowing easily accessible multi-modal learning resources, and encouraging cooperation, interactivity, learner-centeredness are concerned: all within an extremely cost-effective well-tested, community-supported learning management system.