Moodle Learning Management System Proposal

Sheila Cavanagh
ETEC 565A
University of British Columbia
February, 2012

Project Context

The reason for considering the Open Source Moodle system for our remote, First Nations school stems from the fact that Gr. 5–12 teachers find the limited bandwidth and poor connectivity a significant issue when trying to deliver any online components of their courses. Due to on-going bandwidth, we need to look at hosting the Moodle LMS on the school server. The GNWT in Yellowknife is currently replacing the ESIS student information system, so linkage into this system is not a concern at this time. As Bates & Poole (2003) say, "technology–based teaching needs an effective organizational system to make it feasible and practical" (p.102). Most students have internet access and mobile technologies. There is no cell phone service, but the school and community have WiFi. The school has a computer lab, laptops, and all classes have Smart boards or whiteboard projector systems.

Project Goal

Moodle will offer a way of scaffolding our teaching and learning towards providing students access to multimedia technologies to develop the computer skills, collaboration, high level thinking, and problem solving skills they will need for future education and careers in the global culture (Bates, 2000). It is hoped that this pilot project will lead to adoption of a similar model in other schools within our Board and possibly within the larger NWT context.

Project Objectives

- Support and extend constructivist best practices: Our teaching aligns with the 'Seven Principles' of Chickering & Gamson (1987), but Moodle will extend and support collaboration, active learning, critical thinking, with variable ways of representing knowledge for teaching, learning and assessing (Dougiamas & Taylor, 2003). "If the power of new technologies is to be fully realized, they should be employed in ways consistent with the Seven Principles." (Chickering & Ehrmann, 1996, p.1)
- Staff PD in technology skills: Support peer mentoring, case studies, and class lab demonstrations to share successful course strategies. (Moore, Moore, & Fowler, 2012).
- Develop student skills: Integrated development of language and technology skills, meaningful learning, and team skills in a blended online/f2f learning environment (Bates, 2000; Carey and Morgan, 2009; ECAR Survey, 2011; iste.org).
- Authentic assessment: Meaningful feedback using project-based learning, quizzes, e-portfolios, rubrics.
- Multi-media representation of knowledge: Access to audio, video, images, and simulations. (Bates & Poole, 2003, p.85; Bates, 2000).
- Encourage reflective practice: Teachers and students participate in the development of effective courses (Hutchings, 2010, p. 9).
- Support aboriginal language instruction: archive resources, design language activities.

As Chickering and Ehrmann (1996) say "the range of technologies that encourage active learning is staggering" (p.3). Given our remote context, we need to explore the potential of Moodle technology to support learning and access to the vast learning resources now available.

Rationale for Moodle Selection

The main driver in our situation is cost, so the evaluation process has focused exclusively on Open Source LMS - Moodle and Sakai. Our process has followed the SECTIONS Model of Bates and Poole (2003), used evaluation rubrics (Edutools) and LMS evaluation reports from other institutions (Randall, Sweetin, & Steinbeiser, 2010) considering ease of use, intuitive and consistent interface design, reliability, and tools for course design, assessment, and interactivity (Bates & Poole, 2003; Perkins & Pfaffman, 2006). Our LMS Evaluation Summary has been made available for comments and feedback from school staff, and Board technology and administrative staff. Moodle is recommended in all desired areas.

In line with our current practice, Moodle supports social-constructivist strategies of teaching and learning. Based on pedagogical research, Moodle uses tools like discussion forums, wikis, e-portfolios, blogs and whiteboard workspaces to support collaborative, active learning and 'communities of practice' (Dougiamas and Taylor, 2003).

Moodle is recognized worldwide for its reliability, functionality, and flexibility as an online learning environment (Hutchings 2010, p.8; moodle.org; Al-Ajlan and Zedan, 2008).

Moodle makes it easy for teachers to create or change course content, and track student progress with timely feedback. Teachers should not have to spend all their time learning to use the system or trying to make it work (Bates & Poole, p. 91; Perkins & Pfaffman, 2006).

The system is easy to install on the local server, and tech support from the Board office, staff tech person and the online Moodle support community will ensure maintenance and update with minimal cost and time (Bates & Poole, p. 103).

Projected Costs

Moodle is a free open source system. The school has a brand new server, UPS, running Windows with large storage capacity. Installation of the Apache/MySQL server/database and program for Moodle is relatively intuitive. The Board provides IT support mostly through remote access, though occasional in-person support is available at no cost to the school. We anticipate Board support to install and configure the Moodle system on our local server. Our staff IT person would be responsible for local support. Release time of 4 hours/week time for routine support for course system and staff will cost: $200/week x 36 weeks = $7,200.00/yr. There will be eventual savings in photocopying and prep costs over 3 years as teachers move toward Moodle-based active learning. Cost for Moodle course development will be minimal, integrated into teacher PD supported by the Board several times a year, or in school time, covered internally.

Implementation Plan - Timeline

This will be a three-year pilot to undertake proper planning to avoid unnecessary fad-driven investments of time and money (Bates and Poole, 2003, p.82).

Fall 2012

- Install and configure Moodle with one or two demonstration courses.
- Staff PD on course implementation in classroom lab situations.
- Initial evaluations with staff, students, administration, Board.

Winter 2013

- Staff PD on Course design: group collaboration, two more courses
- Course delivery – peer support, classroom labs
- Year-end Evaluation: Qualitative and quantitative evaluation of Moodle re student learning using ongoing school data and NETS (itse.org; Ehrmann, 2011).
- Recommend any teaching strategy or course design changes.

  Spring 2015 Final evaluation.

References

Al-Ajlan, A., Zedan, H. (2008). Why Moodle? 12th IEEE International Workshop on Future Trends of Distributed Computing Systems. doi: 10.1109/FTDCS.2008.2258 .

Bates A. W. & Poole, G. (2003). Chapter 4: A framework of selecting and using technology. *Effective Teaching with Technology in Higher Education*: *Foundations for Success*. (pp. 75-108). San Francisco: Jossey-Bass. Retrieved January 3, 2012.

Bates, T., (2000). Teaching, learning, and the impact of multimedia technologies. *EDUCAUSE Review*, *35(5),* 38-43. Retrieved from: http://www.educause.edu/apps/er/erm00/articles005/erm0053.pdf.

Carey, S., & Morgan, T. (2009). From open content to open course models: Increasing access and enabling global participation in higher education. *International Review of Research in Open and Distance Learning*, *10(5)*. Retrieved from: http://www.irrodl.org/index.php/irrodl/issue/view/38

Chickering, A.W., Gamson, Z.F. (1987) Seven Principles for Good Practice in Undergraduate Education. *American Association for Higher Education Bulletin, 39(7),* 3-7. Retrieved from: http://www.aahea.org/bulletins/articles/sevenprinciples1987.htm

Chickering, A.W. and Ehrmann, S.C. (1996). Implementing the Seven Principles: Technology as Lever. *American Association for Higher Education Bulletin, 49*(2), 3-6. Retrieved from: http://www.aahea.org/bulletins/articles/sevenprinciples.htm

Dougiamas, M. & Taylor, P. (2003). Moodle: Using Learning Communities to Create an Open Source Course Management System. Presented at EDMEDIA 2003. Retrieved from: http://dougiamas.com/writing/edmedia2003/

ECAR: National Study of Undergraduate Students and Information Technology, 2011. Retrieved from: http://net.educause.edu/ir/library/pdf/ERS1103/ERS1103W.pdf

Edutools. Decision Tools. Retrieved from: www.**edutools**.info/summative/index.jsp?pj=4

Ehrmann, S.C. (2011) The flashlight approach: Evaluating educational uses of technology. Retrieved from: www.tltgroup.org/**flashlight**/Handbook/**flashlight_approach**.pdf

Hutchings, Nathan (2010) Implementing a learning management system (Moodle) in a secondary school, a pragmatic view. In *Journal of the Queensland Society for Information Technology in Education, 115*, 8-10. Retrieved from: http://independent.academia.edu/NathanHutchings/Papers/495453/Implementing_a_learning_management_system_Moodle_in_a_secondary_school_a_pragmatic_view

iste: NETS for students, teachers, administrators. Retrieved from: http://www.iste.org/standards.aspx

Moodle.com. Retrieved from: http://moodle.com/partners/list/

Moore, A.H., Moore, J., Fowler, S., (2012). Faculty Development for the Net Generation. Retrieved from: http://www.educause.edu/Resources/EducatingtheNetGeneration/FacultyDevelopmentfortheNetGen/6071

Perkins, M., Pfaffman, J. (2006) Using a course management system to improve classroom communication. *Science Teacher, 73 (7),* 33-37. Retrieved from: http://20100829131520_6025161.webstarts.com

Randall, B., Sweetin, J., Steinbeiser, D. (2010). North Carolina Community College System Office: Learning Technology Systems Learning Management System Feasibility Study. Open Source Collaborative Moodle Assessment Report. Retrieved from: http://oscmoodlereport.wordpress.com/

Wikipedia. http://en.wikipedia.org/wiki/Moodle