Using Moodle for Student Centred Learning

Brendan Ryder,
Dept. of Computing & Mathematics

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Aim(s)

• To provide an overview of current trends in e-learning technologies.

• To provide an introduction to the capabilities of Moodle to support student-centered learning.

• Outline DkIT’s experience with Moodle.

• Explore how DkIT could support Moodle adoption & deployment within the NEFHEA partnership to enhance collaboration.
The seminar is NOT:
- Definitive guide to all possible technologies and how they can be used to enhance teaching and learning.
- Critique of e-learning.
- Moodle workshop.
- Claiming to be solution for all issues in education.

The seminar IS:
- An opportunity for everyone to see the potential of the Moodle environment.
- An opportunity to think about how you might use it in your daily teaching activities.

Disclaimer....
What is E-Learning?

Evolution - Web 2.0 and E-Learning 2.0

Forms of E-Learning:
- Web supported
- Web-dependent
- Fully Online

Virtual Learning Environments

What is Moodle?
Overview (Cont’d)

• **Moodle Features and Demo (brief):**
  – Login, Enrolment, Screen Elements, Course setup.
  – Course Content & Assessment.
  – Communication and Collaboration Tools.
  – Managing a Class.

• Integration with Other Systems

• E-Learning at DkIT

• DkIT assisting NEFHEA
What is E-Learning?

- Any form of instruction where computer technology, and other technologies, are used and applied to facilitate learning.

- JISC (UK) puts e-learning into context:
  - e-Learning exploits interactive technologies and communication systems to improve the learning experience.
  - Has the potential to transform the way we teach and learn across the board.
  - Can raise standards, and widen participation in lifelong learning.
  - It cannot replace teachers and lecturers, but alongside existing methods it can enhance the quality and reach of their teaching (Ref: Towards a Unified e-Learning Strategy, DfES 2003).
Web 1.0 & Learning 1.0

Web 1.0

- one-way web
- read-only web
- content produced by an expert author
- published on the web
- to be read by consumers.

E-Learning 1.0

- one-way learning
- read-only learning
- online courses produced by experts (teachers)
- and published on a VLE/LMS
- to be studied by learners

Ref: http://www.slideshare.net/janehart/from-vle-via-ple-to-sln
WEB 2.0 Landscape

WEB APPLICATION

Aggregation/recombination

CONTENT SHARING

RECOMMENDATIONS/FILTERING

SOCIAL NETWORK

Widget/component

Rating/Tagging

FURL

www.futureexploration.net

NOTE: Each of these Web 2.0 applications has multiple functionality - for each service the primary positioning has been used.

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Learning 2.0 = Social Learning

Web 2.0 = read-write web
services and apps to co-create content, collaborate and share it with others
social media tools encourage socialisation
FREE Open Source Hosted tools

Learners create content in a variety of formats using tools like blogs and wikis
share knowledge, experiences, information with others
work and learn collaboratively participatory learning
Learning 2.0 = Social Learning (Cont’d)

“Can’t I just email you a link to my blog, miss?”
Learning 2.0 is Social Learning (Cont’d)

"No, you weren't downloaded. Your were born."
Forms of E-Learning (Cont’d)

- **Web supported:**
  - Easy access to basic information such as lecturer notes, exam questions
  - Runs in parallel to face-to-face teaching, which continues as the more prominent mode of content delivery.

- **Web-dependent (enhanced):**
  - Web supported plus
  - online participation by students being a required and assessed.
  - Face-to-face teaching is reduced, often considerably, rendering access more flexible.
  - Group work/collaborative learning often a feature.
  - Tutor feedback may be considerable.

- **Fully Online**
Virtual Learning Environment (VLE)

- Refers to the components in which learners and tutors participate in online interactions of various kinds.

- Main players to date:
  - Blackboard
  - WebCT
  - Moodle
What is Moodle?

- Modular, Object-oriented Dynamic Learning Environment
- Web site: [http://moodle.org](http://moodle.org)
- A course management system for developing and delivering Internet-based courses.
- Free open-source alternative to commercial VLE software like WebCT or Blackboard.
- Available in numerous languages & dialects.
- Can be used for a wide variety of E-learning activities and learning styles (supports social learning concept).
Registered validated sites: 55,799

There are 479 sites with more than 10,000 users. The site with the most users is Moodle.org with 61 courses and 689,778 users. The site with the most courses is ATENEA – Campus Virtual de la UPC with 21,948 courses and 70,474 users.
Student Centred

- Based on social constructionist learning theory.

- A constructivist perspective views learners as actively engaged in making meaning.

- Teaching with that approach looks for what students can analyze, investigate, collaborate, share, build and generate based on what they already know, rather than what facts, skills, and processes they can parrot.
Activities are at the heart of a course management system.

“Constructionism asserts that learning is particularly effective when constructing something for others to experience.

E.g. a spoken sentence, internet posting, to more complex artifacts like a painting, a house or a software package.

Concept of social constructivism extends the above ideas into a social group constructing things for one another, collaboratively creating a small culture of shared artifacts with shared meanings.
Activities

- Made up of a number of activity modules:

<table>
<thead>
<tr>
<th>Resources:</th>
<th>Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labels, text page, web page, link to file or web site, directory, IMS content package</td>
<td></td>
</tr>
<tr>
<td>Assignments</td>
<td>Blog (OU)</td>
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<tr>
<td>Chat</td>
<td>Quiz</td>
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<tr>
<td>Choice</td>
<td>Survey</td>
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<tr>
<td>Database</td>
<td>Wiki</td>
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<tr>
<td>Forum</td>
<td>…….</td>
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<tr>
<td>Glossary</td>
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<tr>
<td>Journal</td>
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</tbody>
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- You will consider what type of learning is facilitated by a particular activity before adopting it in the context of a specific learning task or activity.
We will categorise activities to illustrate capabilities:
- Login, Enrolment, Screen Elements, Course setup.
- Course Content.
- Assessment and Evaluation.
- Communication and Collaboration Tools.
- Managing a Class.

Focus on Web supplemented to Web-enhanced.

Sample module called Student View.
Login using Email username & Password

All you need is a web browser (Internet Explorer, Netscape, etc.)

http://moodle.dkit.ie
Enrolment

- Every student must enroll on your module/course.
- How?
  - Search, enter module name e.g. Student View Module
• Enter the enrolment key – e.g. `studentview`
• Module will then be added to your list of modules.
Screen Elements (Cont’d)

Learner Management Features

- People
  - Participants

- Activities
  - Assignments
  - Forums
  - Journals
  - Quizzes
  - Resources
  - Wikis

- Calendar
  - May 2009

- Recent Activity
  - Activity since Thursday, 21 May 2009, 09:26 AM
  - Full report of recent activity...

- Administration
  - Turn editing off
  - Settings
  - Assign roles
  - Grades
  - Groups
  - Backup
  - Restore
  - Import
  - Reset
  - Reports
  - Questions
  - Files
  - Unenrol me from Mod1
  - Profile
Before you start to add content you should examine the Settings for the module found in the Administration side-block:

- **General Settings:**
  - Full Name – name of module.
  - Short Name – Module code
  - Summary – aims and learning outcomes from module descriptor
  - Format – Topics, Weekly, Social (+ others), etc.

- Enrolments.
- Groups.
- Availability.
- Language.
• Before adding any content you should **plan** how you intend to **present** and **organise** your teaching materials.

• Go through an **iterative process**:
  – **Prepare** your resources – notes, slides, examples, web references, videos, etc.
  – **Upload** the resources to the Moodle server into appropriate folders.
  – **Link** to the uploaded content in the course content area.
  – **Test** that all files can be viewed correctly.
2

Introduction to Distributed Computing

- Definitions
- Examples of Distributed Computing
- History of Distributed Systems
- Different forms of Computing
- Issues/Challenges
- Operating Systems basics
- Network basics
- Software Engineering basics

Essential Reading

- Chapter 1 in the core text - pags 1 - 46.
- "Introduction to Distributed Computing"
- "Basics of Operating Systems"
- "Network Basics"
- "Software Engineering Basics"

Example(s)

- Chapter 1
- Batch file for command-line (paths.bat)

Exercise(s)

- Questions 1 - 5 in the core text - pgs. 39 - 44. Pay particular attention to questions 2, 3 and 4.
- Review material on Threads, particularly the material on shared resources.
• You can **create, manage, grade** and provide **feedback** on various types of assessment.

• **Activities:**
  – Assignments.
  – Quizzes.
  – Journals.
  – Etc.
Administering an assignment involves the following cycle:

- Lecturer creates and posts the assignment.
- Student completes the assignment and uploads single or multiple files.
- Lecturer provides feedback – iteratively over the duration of the assignment or at the end.
- Student receives the feedback.
Assessment Activity (Cont’d)

- **Upload a single file:**
  - Allows a student to upload a single file for the lecturer to grade and provide comments.

- **Online text:**
  - Allows a student to add or edit text online for the lecturer to grade and provide comments.
  - Lecturer may add comments inline and/or edit a student's submission.

- **Offline activity:**
  - Allows a student to complete an offline activity.
  - Lecturer can still grade the assignment.

- **Advanced Uploading of files:**
  - Allows a student to upload one or more files in any format.
  - Lecturer can also upload multiple response files.
Advanced-Lecturer

General assignment settings: Name, description, due date, as before

Advanced uploading of files

- Maximum size: 8MB
- Allow deleting: Yes
- Maximum number of uploaded files: 3
- Allow notes: No
- Hide description before available date: No
- Email alerts to teachers: No

Delete before grading
No. files to upload
Permit notes
Advanced-Student Submission

Multiple documents uploaded

Finalise submission
Advanced-Student Submission (Cont’d)

Confirmation of submission
Advanced-Lecturer Feedback

Response files – give feedback in a file
Advanced-Lecturer Feedback

Assignment text goes here.

Available from: Thursday, 25 October 2007, 11:00 AM
Due date: Thursday, 20 December 2007, 11:00 AM

Submission feedback

Brendan Ryder
Thursday, 25 October 2007, 01:50 PM
Grade: 92 / 100

Response file(s)
Quiz

- Allows lecturers to design and set quizzes made of a wide range of question types.
  - True-false, multiple choice, short answer, matching question, random questions, numerical questions, etc.
Communication and Collaboration Tools

- **Forums:**
  - Online message boards used for discussion where you and your student can post messages to one another.

- **Blog:**
  - Form of online journal used for self-expression and communication.
  - Organized as a chronological series of postings by author.
  - Engage students in debate, sharpen rhetorical skills, allow peer review.

- **Wiki:**
  - Collection of collaboratively authored web documents.
  - Web page everyone in your class can create together
  - Powerful tool for collaborative work.

- **Chat:**
  - Allows participants to have a real-time discussion via the web.
Grades & Scales

• Grades:
  – Activities such as assignments, forums and quizzes can be given grades.
  – Can be calculated, aggregated and displayed in a variety of ways.
  – Grades may have numerical values, or words/phrases from a scale or rating system.

• Scales:
  – Method for evaluating or rating a students' performance.
  – Moodle offers a standard set of numeric scales.
  – Possible to create custom scales which can be available on the site.
Grades

Download to Excel for further processing
Integration with Other Software

- Plagiarism
- Portfolio
- 3D Virtual World
- Social Networking
Sloodle
E-Learning at DkIT

• Has evolved over time.

• E-Learning Working Group (E-LWG) through academic council

• Pilot in Dept. of Mathematics & Computing:
  – Focus on web supplemented and some web-enhanced.

• Dissemination of progress to broader staff within DkIT.

• Resources and Technical support plan.

• Training – planned, prepared, presented.

• Champions in Schools/Department.
E-Learning at DkIT (Cont’d)

• **e-Learning/Flexible learning Centre (Dr. J. Dallat):**
  – Integrate *instructional principles* & best practise with 
enabling *technologies*.
  – M.A. in Learning and Teaching.

• **Focus on:**
  – Continue *building capacity* – SIF2 funding.
  – Training – staff and students.
  – Resources – staff and students.
  – **Interest Groups:**
    • Flexible modules.
    • Organic, natural growth.
  – Communications and internal processes.
What did we learn?

- Adoption of e-learning technologies must develop naturally, organically and collaboratively with individuals & teams – ownership essential.
- In the beginning Keep It Small and Simple (KISS)
- Must show options available and capabilities in order to build capacity focusing on how the student experience is improved.
- Introduce e-learning systematically into your courses – be realistic.
- Investigate, evaluate to find out what works.
- Willingness to explore and make mistakes.
What did we learn? (Cont’d)

- Above all Use Appropriate Technology Appropriately!!
DkIT Assisting NEFHEA

- How could DkIT assist and support the members of the partnership with e-learning activities/deployment/initiatives?
  - Hosting.
  - Technical support.
  - Training.
“Higher Education in the Web 2.0 World”, published 12\textsuperscript{th} May 2009:

- Explores the impact that Web 2.0 and the collaborative, social web are having on higher education.
- Examined the experience and expectations of learners in the light of their increasing use of the newest technologies.

- **Podcasts:**
  - [http://www.jisc.ac.uk/media/avfiles/news/interviews/podcast80heinaweb20world.mp3](http://www.jisc.ac.uk/media/avfiles/news/interviews/podcast80heinaweb20world.mp3)
Final Thoughts…

“I expect you all to be independent, innovative, critical thinkers who will do exactly as I say!”
“There aren’t any icons to click. It’s a chalk board.”
Thank you for your time and enjoy using Moodle !!!

Email: brendan.ryder@dkit.ie OR ryder.brendan@gmail.com
Resources

- **Web 2.0 and Education:**
  - Podcast: What is Web 2.0 and how is it impacting on education?

- **From VLE via PLE to SLN:**
  - [http://www.slideshare.net/janehart/from-vle-via-ple-to-sln](http://www.slideshare.net/janehart/from-vle-via-ple-to-sln)

- **Social Learning:**
  - [http://www.c4lpt.co.uk/socialmedia/about.html](http://www.c4lpt.co.uk/socialmedia/about.html)

- **Higher Education in the Web 2.0 World (May 2009):**
  - [http://www.jisc.ac.uk/media/avfiles/news/interviews/podcast80hei naweb20world.mp3](http://www.jisc.ac.uk/media/avfiles/news/interviews/podcast80heinaweb20world.mp3)
Resources

- Moodle web site:  
  - http://moodle.org

- Moodle Features Demo Course:  
  - http://demo.moodle.org/

- Moodle documentation:  
  - http://moodle.org/support/

- Using Moodle, 2nd Edition:  
  - Free online version in pdf:  