
Utilizing Open Source Software to Manage Training

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In the beginning

- Initially Operations had no formal training program.
- New hires are assigned as 4th person on a Day Shift crew.
- Initial job is to observe and learn from those senior.
- Start with letting you perform simple tasks under instruction.
- More freedom and complexity as you gained experience.
- Very little was written for how things worked. It either did not exist or was out of date.
- Experience dependent upon what you were exposed to.
- The information learned depended upon who you talked to.

- We needed a list of required subjects, areas of knowledge.
- Also needed something to gather the “Tribal Knowledge” and make it available to everyone in a consistent manner.
- Preferred method, On line web based:
 - available both in the control room and at the users desk.
 - easy to upgrade and maintain as things changed.

ToolBook

- Did not get used as expected:
 - Windows based:
 - Developer must create courses on a Windows OS.
 - On the client side, advanced interactions only available after installing Windows plug in. (IE only)
 - Limited number of course developers:
 - It is licensed, \$1000+ each (currently \$2795).
 - Fairly steep learning curve.

We need something else

- As a minimum we needed something that:
 - Was not Windows exclusive.
 - Could work with both Internet Explorer or FireFox.
 - Can be used by multiple developers by either having a low cost and/or by not being commercially licensed.
 - Relatively easy to learn and use.
- We found all that and more with Moodle.

What is Moodle

- From <http://moodle.org>
 - “Moodle is an Open Source Course Management System (CMS), also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE)”
- Software package written in php that you install on your web server. (it's your own training web site)
- Lets you create, manage, use, on line training courses.
 - Provides a single point of access to multiple courses.
 - Both developer and student log in to use Moodle.
 - Controls who has access and what they can access.

Course content creation

- Just about anything you can put into a web page you can put into a page in a Moodle course.
- Moodle utilizes a built-in WYSIWYG html editor.



- Most have had no problems understanding and using the editor.

- Besides the standard text, links and images of a web page, Moodle allows several multimedia plugins such as .flv, .swf, mp3, .mov, .mpg, .avi, .wmv, .rm to be embedded.
- In addition to the web page content of a course, various “Activities” can be added:
 - Assignments
 - Quizzes
 - Glossary
 - Discussion forum
 - Wikis, Chats...

Assignments

- Moodle's way of handling off line activities.
- Great for documenting performance of an activity.
- A user with the correct privileges can log in and grade another user's assignment.

Quizzes

- Multiple question types:
 - True / False
 - Multiple Choice
 - Short Answer
 - Numerical (can allow for a + / - range also multiple units such as MW, kW, W)
 - Matching
 - Calculated (formula question with random variables based on a design set of parameters for each variable)
 - Essay


Quizzes

- Questions are stored in a question bank.
- Quiz questions can be manually selected, randomly selected or both.
- You can set a time limit for the quiz, choose to allow multiple attempts, how many, set a delay between attempts...
- Statistics can be seen at the question, course or student level.

Global Glossary

- In addition to each course having its own glossary, the whole site can have a global glossary available to each course.
- Each glossary entry can have multiple keywords that can be auto linked to words within a course.
- Clicking on a highlighted glossary link opens a pop up window with the glossary entry.
- Glossary entries are created with the built-in html editor thus they can have images inserted, tables, format text...

Meet our needs?

- Not OS specific, it serves up web pages to any browser whether IE or FireFox on windows or Linux.
- Anyone with access to the web server can develop course material.* (no developer software to install)
- Anyone with access to the web server can view course material.* (No plug-in required)
- Easy to use editor. Help readily available. 
- Easily configurable as our training methods evolve.
- Yes.

* if they have the appropriate permissions on Moodle.

Stats from Moodle.org

- 46,760 Registered sites in 208 countries.
- +33 million users.
- +3 million courses.
- 85 language packs available.
- 100's of user contributed modules, hacks and plugins.

- We started using Moodle last year.
- Our first steps have been to create the course material.
- We have ~40 courses created in the 0-6 month category.
- Weekly meeting to review 3 courses for content and refine how we are using it.

Ops Discussion forum

- New operators tended to ask the same general questions.
- Future new operators as well as current operators could benefit if the knowledge traded was some how captured and stored.
- Some of the questions would do well to being discussed among several more experienced operators. “What would you do if...”, “How do you know when to...”
- On line would provide the greatest accessibility.
- Sending a group email could work but the results would not be available to future operators.

Enter phpbb.com

- www.phpbb.com Is a widely used Open Source forum software package.
- Written in php, supports several databases MySQL, MS Access, Oracle...
- Easy to setup and configure.
- Helpful support forums and knowledge base articles
- +40 language packs.
- Plenty of user created styles and modifications.

Ops forum stats

- Started:
Jul 17, 2007 4:35 pm
- Total posts 770
- Total topics 285
- Members 41

	Safety Safety related topics.
	Radcon Topics pertaining to Radiation Control
Hall Liaisons	
	Hall A Discussions pertaining to Hall A experiments.
	Hall B Discussions pertaining to Hall B experiments.
	 Hall C Discussions pertaining to Hall C experiments.
Hardware	
	RF Cold, Warm, 499Mhz or 1497Mhz it's all RF to us.
	Magnets Trims, quads, dipoles as long as it bends the beam.
	Diagnostics BPMs, Harps...