Darren Smith gives a demonstration of Moodle, and explains why this free software, which can be used to create a VLE is the next big thing in ICT education.



By Darren Smith

The Next Big Thing in ICT Education

We've all done it but let's be honest, maintaining a resources website is a waste of time! Initially you spend ages putting the site together but never really find the time to keep it up to date. And why should you? It's essentially an admin task and surely you're supposed to be a teacher, aren't you? Anyway, even if you are still using it then it has probably just ended up being a dumping ground for that PowerPoint presentation you used in the lesson the other day or some notes in a Word document you found on the web. Ok, so you put a counter on it to see if the kids are using the site but how many of those hits are yours checking to see if the counter has gone up?

Enter the next big thing in ICT education: The Virtual Learning Environment (VLE)

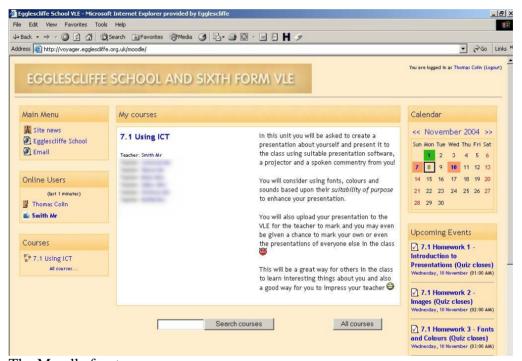
You've heard about these. You receive lots of e-mails and flyers in your pigeon hole from various companies trying to sell you one. According to the Head you need one but you're not daft. The school down the road has spent thousands on theirs and it has just become a dumping ground for that PowerPoint presentation they used in the lesson the other day. Apparently, they have even put some of your notes on it which they got from your website!
Why Should You Moodle?

I'm an ICT and Computing teacher at Egglescliffe School and Sixth Form. I had been looking around for systems which would help me easily manage my electronic resources and also systems which would help maintain an electronic mark book. Googling for such things one day led me to the Moodle website.

Since then I have been using Moodle extensively with my exam classes and this year the ICT department has rolled it out across all seven year groups. At the time of writing, the rollout has only been going for about five weeks but such is the success, CDT, Business, Drama, Geography, History, Psychology, Science and our learning mentors are all managing their own courses and have started to integrate Moodle into their pedagogy. Work colleagues that have used an array of different VLE systems frequently tell me Moodle has the best features they have ever come across.

Course Structure

Moodle is structured around the concept of courses. When a student logs in they are presented with a front screen which contains a list of the courses on which they are enrolled. They can also access a full list of course if they wish or search for a course by keyword. You will notice from the image below that students also get a list of links, online users, a calendar showing user / course / site specific dates (such as end of term or deadlines) and a list of upcoming events – usually due assignments or activities.



The Moodle front page

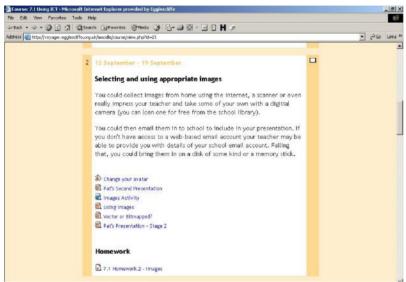
This year, all of our Year Seven ICT classes will participate in six courses in total, closely following the Key Stage Three National Strategy structure. Each week is allocated a box where you as a teacher can add text, images, multimedia files and the like. You can also link to uploaded files and other web pages through a simple interface. Resources, and even weeks can be moved about, hidden, deleted and edited. This is fine and to be expected of such a system. The true power in Moodle comes from adding activities inside the weeks and, of course, how you as a teacher use them with your students.



Unit 7.1

Above you will notice Colin, our test user, has logged on and is viewing the 7.1 Presenting Information course. On the left hand side (although these elements can be moved or deleted by teachers) he can see who else is logged into his course. Amongst other things he can click on Grades to see all of his results so far and use the activities block to jump directly to assignments and resources. On the right he can jump to particular weeks and view course and global dates on his calendar and upcoming events block

When Colin scrolls down he can see the remainder of the course content



Week 2 of 7.1 in student view

In week two you will notice Colin has some basic introductory text outlining that week's lesson content along with various resources and activities. Those familiar with the ICT National Strategy will notice that Colin has access to the resources which the teacher used in the images lesson. This will obviously aid Colin in completing that weeks quiz homework – if he looks at them again !!!!



Pat's Poor Presentation as viewed through the VLE

Any text or resource added to a course can be set as hidden from pupils at the click of a button. This allows teachers to prevent pupils from completing / viewing upcoming activities without first experiencing the classroom learning. Another use is for teachers to leave notes for each other, or themselves, regarding the lesson or course content.



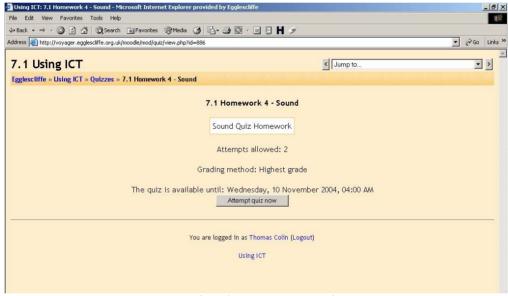
Unit 7.1 as view by a teacher.

In the above image you will notice the now visible teacher notes along with the 7.1 PDF Scheme of Work. The administration block has now been expanded providing me (the teacher) with various options including the ability to add teachers and students, add new marking scales (such as A* .. G or V,G,S,C, NC levels and so on), view students grades for all activities and view / upload course files.

Activities for Assessment

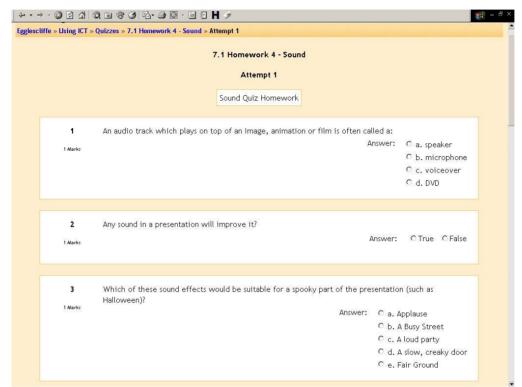
Quizzes

This is the most popular activity among my colleagues. Here you can create a range of self-marking quiz questions incorporating multiple choices, true/false, cloze, short answer, numerical, calculated and matching types. Quizzes can be imported from other VLEs or text files in various different formats. Still not enough quiz options for you? Well, you could also integrate all of those Hot Potato exercises you have produced and have the scores recorded automatically in Moodle upon completion. Of course the entire question bank can be used over and over again enabling you to either build up a bank of self-marking homeworks that automatically become available by date or create end of topic tests based upon the previous homeworks.



A student about to attempt a quiz

Everything in the Moodle environment is very configurable. You will notice above the teacher has set the number of attempts to two and the student will be awarded the highest grade of the two attempts. A deadline of 10/11/2004 and 4pm has also been set. When the student is ready they simply hit the attempt quiz now button.



A student attempting a non-timed quiz

Above you can see a student is presented with multiple choice and T/F questions based upon the sound lesson in the ICT National Strategy. I hope he reviewed the resources used in the lesson before he began his attempt! During timed quizzes the countdown appear at the top right of their window.

After the quiz has been completed the teacher can access a variety of different statistical information. I find the most important to be a look through the *Grades* link in the administration block. This will provide the teacher with an overview of the year group (or you can filter by class) and you can clearly see who has not attempted the quiz and who received what score.

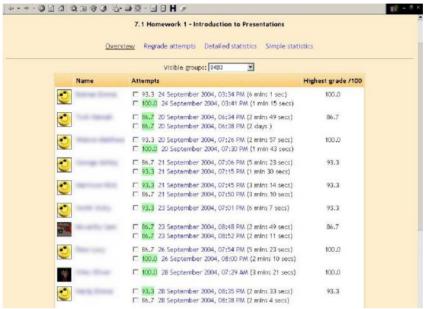
	First name	Surname	7.1 Homework 1 - Introduction to Presentations Max: 100
	See	Bross	
3	Seems	tomer	100
©	100		93.33
3			93.33
0		-	93.33
学			100
0	times		93.33
2			93.33
0			93.33
0		No. or The	86.67
37			93.33
2			100

A teacher's overview of attempted activities

Above you can see the results of the first quiz homework for some of a year seven class. Subsequent activities appear in further columns to the right (which I have cropped).

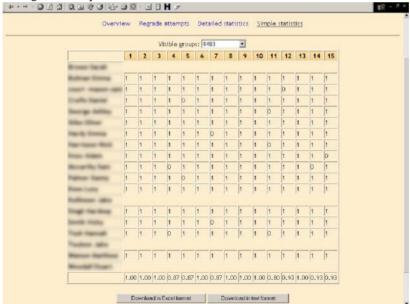
You will notice that at least one student owes me some kind of explanation as to why the homework wasn't completed! Scrolling right I can easily identify problems by just looking at the gaps in the grades.

If you want more information you can easily find out how many attempts which student has taken and what their score was. You can also view the date and time stamp of the attempts.



An overview of 7.1 quiz 1

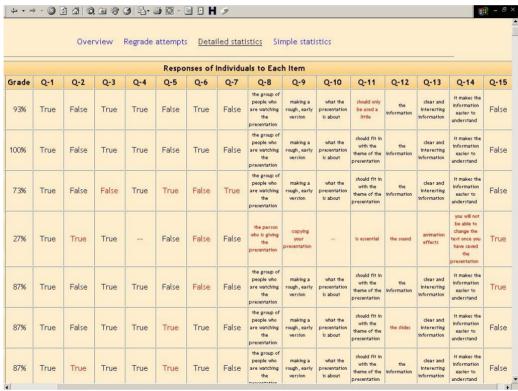
If you wish to breakdown the information further then you can click on *simple statistics* to see which student got which question correct.



A simple statistical view of the quiz data

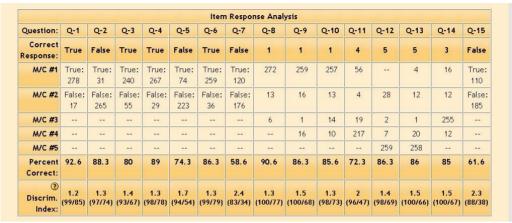
Obviously by a simple scan of the table above you can establish which questions were too easy and where the common misconceptions may lie. Looking at the average scores at the bottom is would seem question 11 caused the most difficulties in this instance. Note in the above image you can download the data to your PC in Excel or text format.

Still not enough detail for you? Firstly you need to get out more, seriously! Secondly you need to click on the detailed statistics link



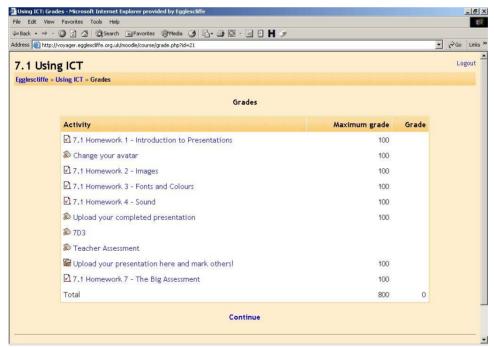
Detailed Statistics showing selected answers

Still not enough detail? How about a hobby which involves interacting with other people or, at the very least, leaving the house! No? Scroll down to the bottom of the detailed statistics screen.



Now we are having fun!

Obviously such detailed information would be overwhelming for year seven students! When they click on grades they get a list of all activities and a grade for those attempted.



I think young Colin and I will be discussing his lack of progress!

Setting and Marking Assignments

Obviously there are occasions when you need to mark work in a little more depth. The assignment module allows students to upload a piece of work for you to mark. This could be the completed presentation in 7.1, their theme park schematic produced in a graphics program, a video file or a Word document for GCSE coursework. In fact, it could be anything digital.



Year 7 students have been asked to upload their passport presentation

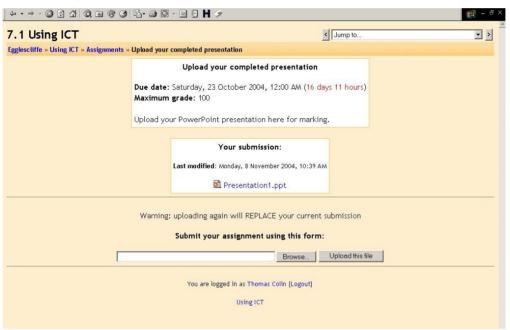


A student submitting work

Above you will notice Colin uploading his presentation for the teacher to mark online. You will also notice some simple information from the teacher that could be expanded upon, that it will be graded out of 100 (although this could easily be set to NC levels) and that he is submitting the work a little late! I am beginning to question his commitment to my lessons!



Colin has uploaded his presentation. It had better be good.



An uploaded assignment awaiting marking

Once the student has uploaded the file the teacher simply clicks the file name to view the work, chooses a grade from a list (as mentioned earlier you can add your own scales) and then writes comments in a box.



A teacher is marking Colin's work. He is lucky This time!

The student will receive an email to let them know their work has been marked and the student can access the comments at anytime via the site. In fact the student (and indeed their parents if you or the student provides them with a password) can review all of the comments made at anytime across all of their pieces of work.

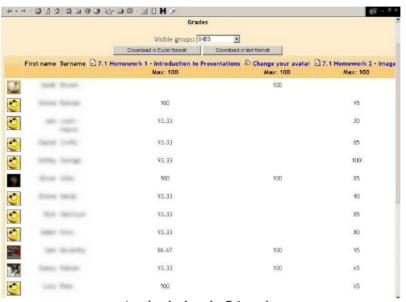
I have found this activity, in combination with quizzes, to be a very impressive and simple way of collecting a scores and feedback bank for every student you teach – with the minimal amount of effort.

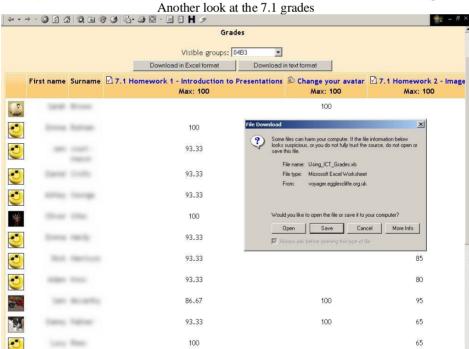
You now also have automatically and permanently acquired a copy of the students work allowing you easily provide exempla (or indeed poor) pieces of work to colleagues and students in the future, along with having a snapshot of the students work to enable you to compare progress (or indeed the lack of it) against future uploads.

Online assignments can also be set to having 'no grade' which is useful for providing students with a method of transferring work to and from home, avoiding all those e-mail issues (blocked file types, large file sizes, full inboxes, hotmail is banned at school, I sent it but it isn't there now, Sir!) and without having to go down a more technical route such as web folders or an external FTP server.

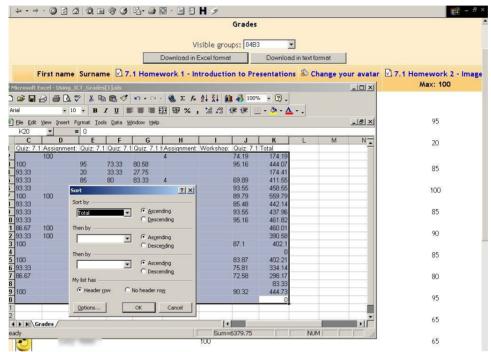
Offline assignments can also be created to enable you to, for example, mark their hand drawn designs or a written test, and maintain the marks and comments along with the uploaded assignments and other activities.

Using this method you can easily bring up your class list with all of their marks in a table making it easy to identify trends. Usefully, you can also download this into Excel or similar at the click of a button enabling you to sort to produce class rankings, discover minimum; maximum and average values, perform detailed statistics or graphing, or even mail merge the data into your reports.





A teacher electing to download the data to a spreadsheet



A teacher performing a sort on the data

Lessons

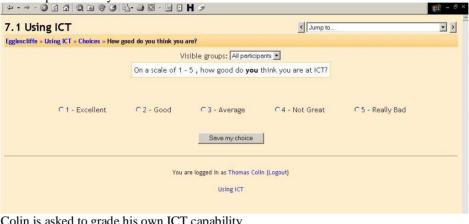
A lesson activity leads the student though a series of pages or slides which can contain text, images, links and multimedia content. Each slide can end with a question based upon the text. If the answer is wrong then the student can be forced back to the same page, where they will remain until the correct answer is given. This is a useful way of providing or reinforcing a small amount of content, such as in an introduction or plenary. The development version of the lesson module has the facility to set essay answers after the slides which the teacher can mark manually at a later date.

Other Activities and Features

As well as modules designed for assessment, Moodle has many other features.

Choices

Choices allow students to pick a response from a list using radio buttons. This is very simple and very powerful for conducting simple class surveys and assessing student opinions. Results can be kept confidential or displayed with or without names depending upon how the teacher has set up the activity



Colin is asked to grade his own ICT capability + - → - ⊗ 1 d | Q × 9 3 | E- → 0 - E | H / Egglescliffe » Using ICT » Choices » How good do you think you are? Visible groups: All participants On a scale of 1 - 5 , how good do **you** think you are at ICT? € 1 - Excellent C2 - Good C 3 - Average C 4 - Not Great ○5 - Really Bad Save my choice Not answered yet 1 - Excellent 5 - Really Bad

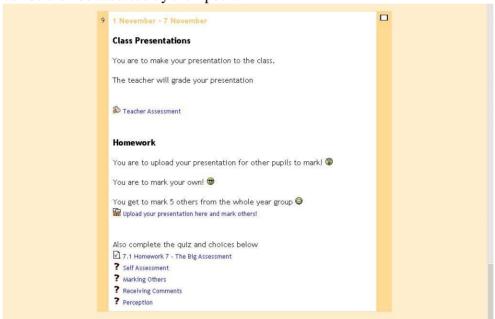
Colin's teacher has allowed him to see anonymous results after he has made his selection

Glossaries

Glossaries allow you to build up an explanation of key words, like the ones outlined in the Key Stage 3 National Strategy. The interesting aspect is that any occurrence of these words can be automatically set to link to the glossary. So, if a student doesn't know what the word hypertext means in a set homework they can simply click on the word to pop-up an explanation. Students can also be allowed to contribute to glossaries (if you want them to) where their submissions can be graded.

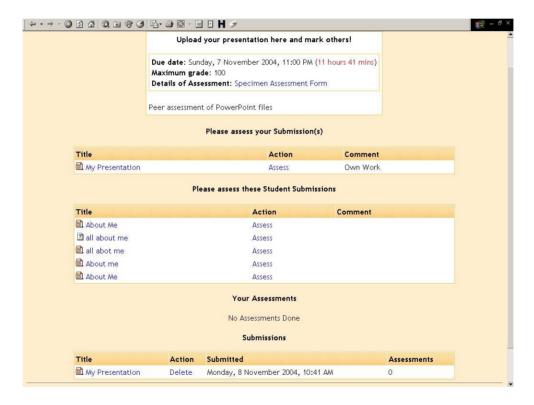
Workshops

Workshops are similar to assignments but much more complex. It allows the teacher to set tasks which comprise of different elements. The uploaded files can be then be assessed by their peers.

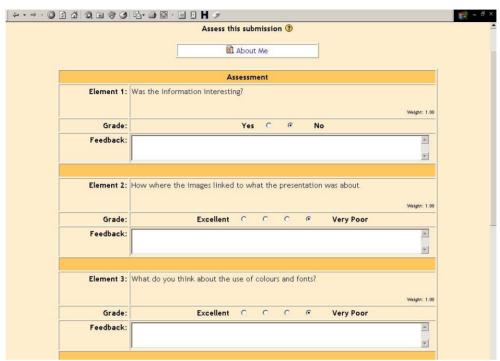


A student is about to click on "upload your presentation here and mark others!"

After the student has uploaded his presentation (in much the same way he would for a standard assignment) he is presented with some assessments to complete. In the example below the teacher has set the workshop for the student to perform a self-assessment and also five peer assessments. Peer assessments are completely anonymous in the sense that the student doesn't know whose work they are marking. Nor are they aware who is marking their work. This of course is subject to the fact that the student hasn't included their name anywhere in the document – in this case a presentation about themselves!



Colin needs to assess his own work and five others.

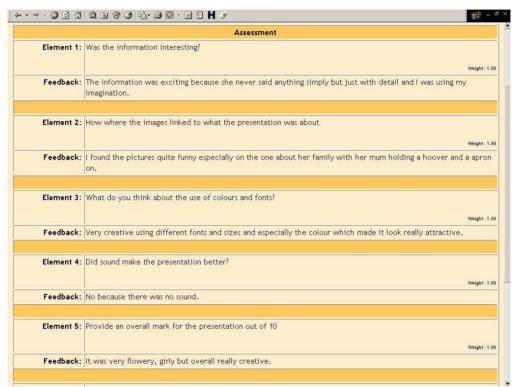


A student about to grade another student's work

Above you will notice the teacher has broken down the marking criterion into different elements, which are roughly in line with the ICT National Strategy 7.1 objectives. Obviously a teacher reviews all student submissions with all names included and can edit or delete comments.



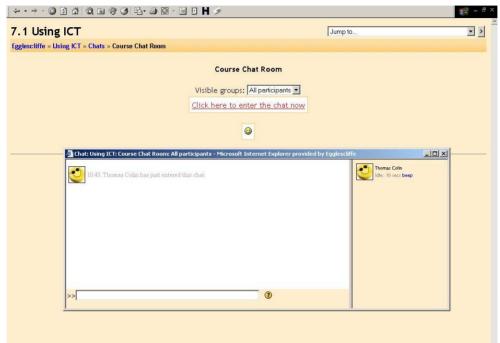
Teachers can also provide grades for student's comments on another students work!



An example of a real peer assessment from a Year Seven pupil

When set up correctly, our department feel that a student receiving comments from another student is a very powerful means of providing feedback.

Also included are activities including **Books**, **Forums**, **Chat Rooms**, **Journals** and Pre-Built **Learning Style Surveys**

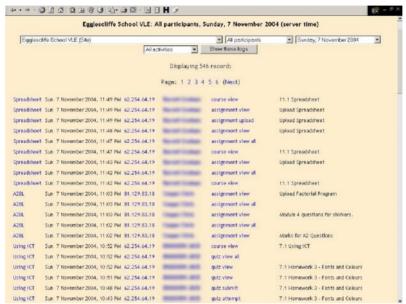


Colin entering the chat room. All conversations are logged

Logging Student Access

I know what you are thinking. Do the kids actually use this? Well, in my humble experience the answer is a resounding YES! All student activity is logged in significant detail. Not only can you easily discover when the students logged on to the site but also what they were looking at and for how long. You can also examine how many times, if at all, they have viewed a resource such as homework.

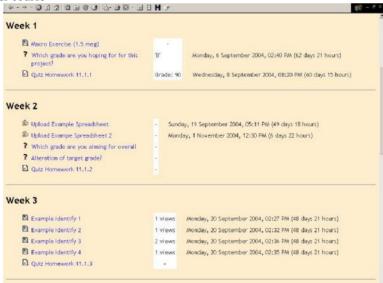
Exploring the logs has provided me with some surprising results. I was amazed to discover that a lot of my more lethargic male students were accessing the site frequently and some were even reviewing grades and resources on the first Saturday of their summer holidays! It can really change your perception of some of your students.



An example of student activity taken at 11:50pm on a Sunday.

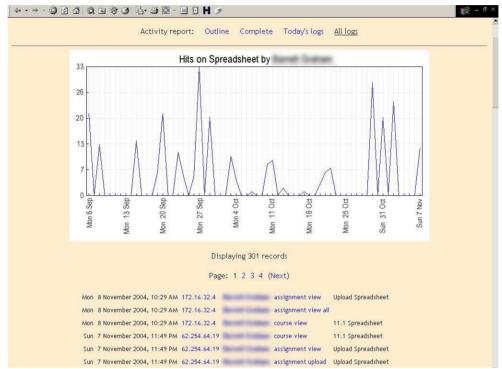
The above logs show site wide activity for the day. You can alter the date of filter the logs by course or even student! Notice the Year Seven student who should be in bed!

If you wish to see how much (or little) work a student is doing then you can access the *outline* log view per course



The outline view shows which activities a student has accessed, how many times and when

Want a more visual and complete representation to your Big Brother spying? Click on *all logs* to see everything the student has done ... ever



A complete log of activity based by student

Reusing Courses

Moodle has a facility that allows you to backup a course and then restore it under a different name whilst removing specified elements. The most powerful way to use this feature is to essentially copy a course without the user data to provide you with a brand new 'clean' course for the next intake. In the course you will find all of your activities and content which you set up previously, ready to be used again.

Courses for administration

Courses can also be set up to exclude students. We have an ICT teacher course which contains important internal and external deadlines embedded into the course calendar, course specifications, report templates, Schemes of Work and so on. We also have a developing

general staff resource area which contains things like a downloadable school calendar, resources from PD days, minutes from meetings, student tracking documents and so on. Other departments have also expressed a strong interest in putting their teacher resources online via



Whole school resources accessed via the VLE by a teacher

The Moodle Exchange

It takes time to build the courses. The content is the most important aspect of learning but Moodle can help here also. Although in its early stages, a free resources exchange has been set up on the Moodle website allowing educators to share their quizzes, lessons and the like. At the time of writing there are a couple of lessons suitable for A Level Computing and tutorial courses for parents and students which introduce them to the Moodle experience. I have uploaded some Key Stage Three quizzes based upon the National Strategy with a view to submitting more resources if the exchange becomes popular.

Ok, so it's really good. How much does it cost?

I don't want to sound like a sales person but how much do you think a system like this is worth to your school? How much would you be willing to pay? When you have a value in your head (no cheating) you can read the first sentence in the paragraph below. In fact, you may need to read the fourth word a few times before it sinks in.

The Technical Bit

Moodle is a free CMS (Content Management System), which is sometimes referred to as a VLE (Virtual Learning Environment) and can be downloaded from http://www.moodle.org. To get Moodle up and running you will need a websever, PHP and a supported database. The common setup is Apache, PHP and MySQL running on either a Windows or Linux server but other combinations are available. Moodle will also authenticate users against an LDAP server such as MS Active Directory. If this is all too technical for you then you could get some web space from a company like Supanames (http://www.supanames.net), download the zip from the Moodle website and then just upload the extracted Moodle files and work through the simple install interface.

Happy Moodling! Darren Smith