

Introducing Moodle to a Secondary School

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Introduction

In this seminar paper I will be discussing the introduction of the popular Open Source virtual learning environment Moodle, into a secondary school. The school was South Hunsley School, a large secondary high school in the East Riding of Yorkshire. My post at the time was that of Learning Resource Centre Manager, and one of my responsibilities was the development and maintenance of the school's digital resources through the development of the school's Intranet and Extranet systems. This role was identified in the School's ICT development plan, which played a part in the larger School Development Plan. In this document there were clear targets to embed ICT within all areas of the curriculum and to enable students, parents and staff greater access to resources from all places, not just school.

I line manage the school's Digital Learning Resource Technician, and the two of us made up the team that worked on these developments. To begin with, we developed the school's Intranet by hand, coding all of the pages in plain HTML. This was effective and allowed staff and students to access resources, as we made them available on the Intranet throughout the school network. Using the separate Admin and Curriculum Networks, we were able to offer secure, 'staff only' access to certain resources. However, as time went by, the size of the Intranet grew rapidly and the workload involved in a small team of people updating all of the site, caused the amount of time staff had to wait to have resources made available unacceptable.

There were targets in the SDP about home access to digital resources for staff and students. There were also plans in the ICT development plan that would mean the separate networks were to be amalgamated into one unified network. These two targets lead me to start to look into solutions that would facilitate secure, home access; a method to restrict access to certain user groups and also be able to support the aims of the SDP in embedding ICT into the curriculum.

Out of my year's budget I purchased a web server and went about investigating different content management systems that were available on the market. It was during this research that I came across Moodle, an Open Source Course Management System. I downloaded the latest version of Moodle and installed it on the web server and began trialling it out behind the scenes.

Moodle meet the school's requirements, in that it would allow teachers and staff to update their own areas of the Intranet and keep the resources up to date and current without having to feed all information through one or two people. It also had a large number of different authentication systems built in, which meant we could tailor it to suit our school, and provide all staff and students with a secure user name and password to access the

system.

Whilst I was researching and developing Moodle, I also came across the government's E-Learning Strategy. I read through this publication with great interest, as it directly related to the tasks I was working on. I took the parts of this strategy and built them into my areas of the ICT Development Plan at school and used them as the drive behind the development of Moodle at our school.

Main Body

In such a large scale project, there are always a lot of factors to consider when trying to assess the effectiveness of an innovation. I will analyse this development using the PEST model to illustrate and analyse the environmental and organisational factors driving this innovation, and to identify the different stakeholders involved in this process.

Political	<ul style="list-style-type: none">● DfES national E-Learning strategy requires schools to have a Virtual Learning Environment in place by 2009● The school has identified in its development plans and policies that they intend to embed ICT into its curriculum
Economic	<ul style="list-style-type: none">● Moodle is Open Source so it is free to download and install. This saves on initial cost and running cost. The only costs incurred by the school are those of hardware costs and paying the technicians to maintain the site● One person can administrate the site whilst teachers control the resources, providing savings in Human Resources
Socio-Cultural	<ul style="list-style-type: none">● Teachers wanted to be in control of their resources● Teachers wanted to be able to offer new ways for students to complete work in the digital climate● Students wanted to be able to access resources from home● Learners are growing up as digital natives and are used to finding information in the digital environment
Technological	<ul style="list-style-type: none">● Security of log ons to the system● Reliability of the system● Being Open Source, we can adapt and tweak the software to meet our needs without having to rely on an external company to make the changes

This analysis highlights a number of stakeholders involved in this innovation. They are; the Government, the school's Governors, the school's Senior Leadership Team, the school's teachers, the school's technical support staff and the school's students.

The Government have passed legislation that demands that schools provide a diverse and personalised learning environment for all of their learners. These requirements have been made known to the schools through the Government's E-Learning strategy and their Personalised Learning strategy. These strategies and requirements in turn drive the decisions made by the school's Governing Body and Senior Leadership Team, which become apparent in the school's Development Plan and other policy documents. The school's Governors and Senior Leadership Team are keen to meet the Government's

requirements for E-Learning and Personalised Learning, and have therefore ensured that these targets are in place in the SDP and made aware to all staff.

The teachers at the school have a slightly different set of concerns. They are keen to utilise the new technologies available to them through such innovations as Virtual Learning Environments, and many of the teachers can immediately see the benefits of offering students this facility. The main concern that teachers have raised about the introduction of these sorts of technologies are the issues of training and CPD and being given the time to adapt their teaching methods and resources to these new ways of working.

Students greatly benefit from being able to access resources from home and to be able to remotely submit work to their teachers. Their main concern and issue has nearly always been around the quality and quantity of resources available.

The main users of the system would be the teachers, students and technical support staff. Once I had a working version of the system set up at school, I began to experiment with its capabilities, often working closely with the school's technical support team to see how we could integrate it into the existing school systems.

I was approached by a teacher from the school and asked if there was a way she could have her students submit their coursework on re-writeable CD-ROMs for their GCSE year. The school does not have CD writers available in the computers, so this was not possible. As an alternative I suggested that she could trail using Moodle with her class, and showed her she could set up a simple assignment activity on Moodle that would allow her students to electronically submit their coursework through Moodle. The teacher seemed very impressed with this as a solution and asked me to set up her class with access to the system. I went ahead and did this and asked if she and her class would provide me with feedback on their experiences of using the system. A number of other teachers approached me from different subject areas with similar requests and I also trailed Moodle with these classes too.

This information provided valuable feedback for me in the further development and refinement of Moodle in our school. By half way through the summer term, my team and I had moved all of the resources that were available on the old Intranet over into Moodle and had set up the authentication system of Moodle to work with the users' (student or staff) email address. We removed access to the old Intranet and launched Moodle across the school as a direct replacement for the old Intranet. I then also spoke with the school's Training Manager to arrange a training programme for teachers in the use of Moodle and how to adapt and utilise its functionality. This training programme is still on going and well attended.

Over the summer holidays, the two networks were merged into one and I also started a new role at the school as Director of ICT. In this period I changed the authentication system that Moodle used and tied it with the school's Active Directory database of user names and passwords. This moved us one step closer to being able to meet another of the E-Learning Strategy's targets of providing a 'single sign-on solution' to ICT systems.

The introduction of Moodle into our school is an on-going project that is continually refined and adapted to the school's needs. To try and gain some kind of analysis of the successes and failures of this innovation I am going to apply a design and development business model to the process and outcomes of this innovation. The model I have chosen to use is the UDIM, or User Innovation and Development Model. This model was developed by JISC, the Joint Information Systems Committee, to ensure that its developers had a reliable and common model for developing and designing applications that were focused on the needs of users. The model has four key stages, each of which reflects upon itself at the end of its cycle, and the decision is made if the stage has been satisfactorily completed, or if it needs to be repeated. The four stages are:

1. Understanding the Users
2. Transition and Decision
3. Technical Development
4. User Acceptance and Support

The first stage of this model requires an understanding of the users of the system. In my case, these users were the staff and students at my school. Through the work I had previously carried out developing the Intranet, and meeting with all the Heads of Departments and Area Leaders to discuss their needs for digital resources I had a good understanding of my users needs and wants. The one area where I was maybe somewhat lacking in this stage was the dialogue between myself and student, however the teachers were instrumental in letting me know what their users, the students, required. The two methods I used to understand my users here illustrate the model's stated intuitive and verbalised methods of understanding your user.

Stage Two is about evaluating the work done in Stage One and deciding if enough is known about the users. This is normally done by paper piloting the project and perhaps using small scale technical examples of the project. I carried this out when I piloted the system with the first group of students and teacher and asked for their feedback.

This then lead me onto Stage Three, which is about the technical development of the systems. I carried out this process by introducing Moodle to more teachers and groups of students and by listening to their feedback and developing the system accordingly. In this

stage I was also communicating with the ICT Support at the school and streamlining the way that Moodle would integrate with our systems. During this stage I was continually adjusting and developing the system based on user feedback. It was also in this stage when I refined and developed the method that we could use Moodle to provide a secure staff only area for distributing sensitive and confidential information reliably to only those staff who needed to see it.

The final stage is about providing user support and ensuring that the new system is adopted successfully. I have ensured that this is the outcome of this innovation by developing an on-going programme of staff training in the use of the system and by holding student focus groups that allow students to tell me what their experiences of using Moodle are and by allowing them to take control of certain areas of the system. This has allowed the students to develop informed decisions about the capabilities of the system and to suggest new and exciting ways that the system could be better utilised in the school.

Conclusion

The aim of this innovation was to develop a system that meet the needs and requirements of all of the stakeholders involved and provide the school with a reliable, usable and secure virtual learning environment. The solution had to meet the requirements set out by the Government, the Governors, SMT, teachers and students. The stakeholders were identified through a PEST analysis, and further analysis of the development cycle was produced by applying the UIDM to the innovation cycle.

To summarise the analysis, I would say that the innovation was a highly successful project, that has meet all of the requirements of the stakeholders and can be shown to follow a formal development model.

The majority of the analysis and application of formal models in this project has actually taken place after the event. In both the PEST analysis and the UIDM, it is assumed that these models are applied at the start of the development life-cycle and followed through the projects completion.

Does the group think that by applying these models after the project has been run detract from the analysis these models provide? If so, does the group think there are better models to analysis projects after the event?

Given the example of a sixty year old member of teaching staff who does not even have the confidence in ICT to check her own emails; does the group think that CPD for this teacher could be better spent, not forcing them to embed ICT into their teaching practice? Is there an associated risk that imposing E-Learning on such teachers could in fact stem their creativity rather than boost it?