VIRTUAL LEARNING ENVIRONMENT

Pooja Jain

Assistant Professor (Information Technology)

Jain Vishva Bharati Institute

Ladnun – 341306, Rajasthan

Introduction

Virtual Learning Environment (VLE) is a platform designed to support teaching and learning activities across the internet. It gives the facility to the teachers to manage various educational courses through the web for their students. It is very popular in many higher education institutions around the world. Since VLE is fully web based, it provides tools or applications on the internet which enable users to upload materials, customize the content/material the way the user wants, content delivery, assessment, evaluation, communications etc. This overcomes the limitation of traditional face-to-face teaching, and ensures that learning is neither confined to geographical location nor time.

There are various commercial VLE tools available such as Blackboard, WebCT, Moodle, Moocs etc which provides the various facilities which every institutions are in need. One of the most important contributions of the Internet to teachers is the opportunity for global cooperation and International teaching and learning. By using the web based tools, students from different parts of the world, learning together, reading each other's ideas and views, discussing common concerns and understanding the differences in their attitudes.

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Types of VLE

1) Off-the-shelf, such as Blackboard or WebCT

2) Open source (often free to use and adapt but support is charged for), such as Moodle

3) Bespoke (developed by institutions for their own individual needs)

VLEs are also known as Course Management Systems (CMS) and Learning Management Systems (LMS), among other names. There are some international standards associated with VLEs which help to make content and assessments interoperable (i.e. they can be used in different types of VLE). The standard for content is called 'Sharable Content Object Reference Model' (SCORM) and the standard for assessments is called 'Question and Test Interoperability' (QTI).

Need of VLE

1. Interaction – Opens up an infinite number of channels in the format of forums, discussion threads, polls, surveys – instant feedback either as a group or individually.

2. **Self dependent** – Students do not physically have to find their teacher to hand in work due to secure virtual 'hand-in' folders that have time windows.

3. Resource Centre – Teachers have infinite online storage space for ppts, docs, worksheets etc. that can either be secure or shared with students.

4. Dynamic pages – Teachers have the opportunity to create an exciting virtual space to represent their room/subject.

5. Links to external sources – Pathways to all other online learning spaces are linked via the VLE

6. Embedded content – YouTube, BBC, and newspapers can all be embedded as the dynamic feed of the homepage

7. Podcasts & videos – Both teacher- and student-produced podcasts and videos have a shared platform; again, either secure or shared.

Examples of VLE

Second Life

Second Life ® is a 3-D virtual world created by its Residents. Since opening to the public in 2003, it has grown explosively and today is inhabited by millions of Residents from around the globe. This virtual world has many uses including but not limited to educational learning experiences. **(Second** Life, http: //secondlife .com/ **)**

Moodle: Modular Object-Oriented Dynamic Learning Environment

Moodle is a course management system and is a free, Open Source software package designed using sound pedagogical principles, to help educators create effective online learning communities. You can download and use it on any computer you have handy (including webhosts), yet it can scale from a single-teacher site to a University with 200,000 students. (Moodle, http://moodle.org/)

Sloodle

Simulation Linked Object Oriented Dynamic Learning Environment is an open source project which integrates the multi-user virtual environment of Second Life with the Moodle learning-management system.

The advantage of this system is that teachers can use Second Life for teaching and all the materials, discussions, etc. will be saved in Moodle. In this way Moodle will be use more as a repository. **(**Sloodle, http://www.sloodle.org/ **)**

Edusim

Edusim is a free opensource 3D multi-user virtual world specifically for your classroom interactive whiteboard (Smartboard, Activeboard, Mimio, eBeam, or WiiBoard). Edusim is extendable allowing multiple classrooms to connect their interactive whiteboards for collaborative learning sessions. (Eduism, http://edusim3d.com/alpha)

Claroline

Claroline is an Open Source eLearning and eWorking platform allowing teachers to build effective online courses and to manage learning and collaborative activities on the web. Translated into 35 languages, Claroline has a large worldwide users' and developers' community. (Claroline, http://www.claroline.net/)

Atutor

ATutor is an Open Source Web-based Learning Content Management System (LCMS) designed with accessibility and adaptability in mind. Educators can quickly assemble, package, and redistribute Web-based instructional content, easily import prepackaged content, and conduct their courses online. Students learn in an adaptive learning environment. (Atutor, http://www.atutor.ca/)

Microsoft SharePoint

A business and enterprise tool rather thana VLE, but can be deployed to provide similar functionality i.e. learning object management, document management, communication and collaboration functionality.

Blackboard

Blackboard is the chosen VLE at Sheffield Hallam. It's a suite of software accessible via shuspace. Administration is undertaken through a control panel, and access is limited to staff and students that are enrolled on a particular site. It is simple to use.

Elluminate

Online collaborative environment, incorporating web conferencing, video, audio, chat, break out rooms, shared desk top, shared white board. Very important to our learning on this course, allows us to all communicate.

Ilias

Open Source Learning Management system. ILIAS is especially popular in the security and defence sector because it satisfies their specific requirement and needs. The four requirements for defense institutions are:

- Defence specific security requirements

- Defence specific interoperability requirements

- Defence specific structural requirements

- Defence specific didactical requirements

Alexandra Tödt, Leifos (2008) Fernausbildungskongress; Why ILIAS is a good choice for defense institutions

Smartschool

Smartschool is a digital school platform. There are four parts is this platform i.e. Communication, E-Learning, Administration and Report. It is the most used VLE in secondary school in Flanders (Belgium). The main reason why it's so popular is because it integrates a lot administration tasks. The biggest disadvantage is the language; it's not available in other languages than Dutch.

Skype

One of many online voice and video calling pieces of software. In this example of a VLE the technology is purely used to facilitate communication. Learning and teaching remains in the hands of the teacher/learner.

Google Wave

Google's attempt to revolutionise email, currently in open beta stage. Features include realtime conversation, drag and drop of files and conversations stored in threads called waves rather than individual emails.

What are the most commonly used VLEs?

- ✓ Blackboard

- ✓ WebCT (acquired by Blackboard in 2006)

- ✓ Moodle

- ✓ Universities' own bespoke systems

How does a lecturer obtain a VLE content package file?

VLE content is delivered via the password-protected lecturer area of an Online Resource Centre. Lecturers need first to adopt the related textbook. They can then register on the textbook's Online Resource Centre for a password to access the lecturer area. (All password applications are activated within three working days, once they have been positively verified.)

Once a lecturer has a password they can request or download their version of the VLE content package file directly from the Online Resource Centre.

➢ Go to the homepage of the Online Resource Centre that corresponds to the adopted textbook.

➢ Click on the 'VLE content' link on the Online Resource Centre homepage.

➢ Click on the appropriate version of the content package file and request or download it to your computer (this should only take a few minutes).

➢ Upload the cartridge to your VLE or pass it to your ICT/VLE support staff to upload on your behalf. Please see the section below for step-by-step guidelines to specific systems.

Advantages of VLE

✓ Teachers can track if learners are engaging with the internet-based communication and related materials by submitting evaluations online and providing quick feedback.

✓ The message services can inspire teamwork and communication both between instructor and learner and learner and learner.

✓ Teacher and learner can also involve more enthusiastically in a course at a time and place that is suitable for both (Becta, 2005).

✓ Course information such as past exam papers, timetables, and administrative information can all be found in one place, and are accessible from one authoritative source.

✓ Careful signposting (such as including links with course material) can provide extra care for learners, or inspire learners to study at an intensive level.

✓ With a VLE, it is possible save time for teachers by dropping time required for photocopying, course material delivery and updating course material (Becta, 2005).

✓ The main benefit of virtual learning environments appears to be that they can present information at a variety of scales and present images from a variety of perspectives at once (for example aerial views, cross-sectional views, animated rotating block diagrams, etc.).

✓ Consequently, extremely varied forms of information from the field, laboratory or library can be unified together to form immediately obtainable material. (Qiu & Hubble, 2005)

✓ The apparent and most thoughtful shortcoming of VLEs is that they are less effective at informing mere based skills than actual world (Shroder et al. 2002).

✓ The material presented on a computer is only an abstraction of the real thing' and 'being on a VLE does not have the same impact as a real world or face-to-face education.

✓ VLEs can be designed to be interactive, but 'there is limited give-andtake interaction with a computer, in contrast to the interaction between real field trip leaders and participants' (Hurst 1998).

Educational Challenges

There are various educational challenges such as Cost, Training, Tech support and Security and Confidentiality.

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Conclusion

The VLE will be developed in the future to meet the needs of individual learners in a better way; the use of plugins to support this will become more widespread. A clear strategy at senior management level and better support for academic staff and students in the use of the VLE will be recommended. VLE will help instructors to design courses more effectively, detect anomalies, inspire and direct further research, and help students to use resources more efficiently.

Additionally, quantitative and qualitative data will be collected to evaluate the outcome and effectiveness of the online courses. The purpose for using the VLE can vary from being like a textbook or scientific material to be more like demonstration or even a game. The long term objective is to create a full featured learning system targeted for academic environment. Society is changing rapidly, students are 'digital natives' having grown up surrounded by technology.

It is believed that the university, apart from knowledge, must prepare students for the real world; we know our students use the technology in their free time (Internet, electronic mail, social networks, chats, messenger etc), and we want them to use it in their academic lives as well. Hence the VLE plays a very important role for the Tutors and the Learners.

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