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Building a Modern Virtual Learning Environment

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ABSTRACT: A virtual learning environment (VLE) is an online platform used for educational purposes. It encapsulates all the online environments that act as supplements to the course, whether they are online courses, reading resources and informational sites with stand-alone skill assessments, or other forms of virtual learning. Developing countries are facing with variety of challenges that include among others poverty, poor infrastructure, poor infusion and use of Information Technology (IT), poor education facilities and lack of experienced and skilled personnel, which are affected in Learning Institutions. So to enhance the capabilities of both educators and learners by using few available resources Virtual Learning Environment (VLE) is essential. It helps to promote innovations and to encourage educators and learners to grow from traditional to virtual learning pedagogy.

KEYWORDS: Communication, Student, Teacher, Virtual Learning Environment.

I. INTRODUCTION

A virtual learning environment (VLE) is an online platform used for educational purposes. It encapsulates all the online environments that act as supplements to the course, whether they are online courses, reading resources and informational sites with stand-alone skill assessments, or other forms of virtual learning. A virtual learning environment (VLE) is a set of teaching and learning tools designed to enhance a student's learning experience by including computers and the Internet in the learning process. The principal components of a VLE package include curriculum mapping which is breaking curriculum into sections that can be assigned and assessed, student tracking, online support for both teacher and student, electronic communications like e-mail, threaded discussions, chat, Web publishing, and Internet links to outside curriculum resources.

II. RELATED WORK

Martin Weller [1] looks at the current use of VLEs in institutions, and in particular the shift from commercial to open source systems. The process of technology adoption in institutions is analogous to that of succession in plant communities, whereby successive generations of colonizers alter the environment, making it favourable for other species. Using this notion the future direction of learning environments is examined, and the concept of a VLE 2.0 outlined.

A 2004 survey conducted by the Organisation for Economic Cooperation and Development looked at e learning in tertiary education in thirteen countries and a smaller survey by the Observatory of Borderless Higher Education reveal a good deal about the current situation regarding VLEs (OCDE 2005). The survey showed that only 37% of respondents had a single institution wide VLE, while the remainder had a mixture of systems, often with one institutional and then a number of local versions, although 90% expected to have an institution-wide system in the next 5 years. Just over half of the institutions used a proprietary system, often in conjunction with some open source systems. The OECD survey seems to strengthen the position of commercial VLEs, but this may reflect the history of VLE uptake rather than its future direction. Three factors may see this position gradually undermined: Open standards – the development of open standards presents something of a dilemma for commercial VLEs. Customers expect the systems to comply with standards, and yet in doing so the commercial system begins to lose its unique selling point.

Ros O'Leary [2] aims to give an overview of Virtual Learning Environments – what they involve, how they can benefit your teaching, how to get started and where to find further information and resources. Following the emergence of the Internet in the early 1990s, many new tools and products have been developed to fully exploit its benefits. Since the



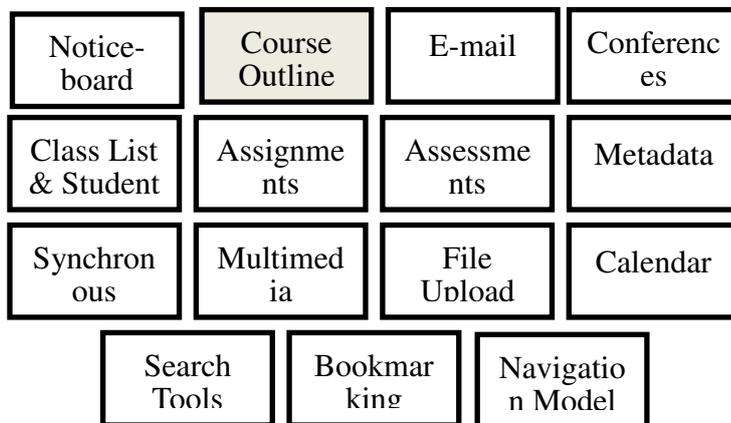
mid1990s the education community has witnessed the appearance of software products labelled Virtual Learning Environments (VLEs) that aim to support learning and teaching activities across the Internet. Many educators want to take advantage of the benefits offered by the Internet to support their teaching activities. However, creating Internet resources that are stimulating, appealing, easy to use and educationally sound is time consuming and requires considerable expertise. VLEs allow educators to create resources quickly and without the need to develop technical skills. Typically web-based, VLEs provide an integrated set of Internet tools, which enable easy upload of materials and offer a consistent look and feel that can be customised by the user. Popular commercial VLEs currently being used in UK HE include Blackboard and WebCT1, Managed Learning Environments (MLEs) incorporate the elements of VLEs but also include and interact with the whole range of information systems student record systems, finance etc that contribute directly or indirectly to learning and teaching management.

III. METHODOLOGY

The advantages of virtual learning environment (VLE) are

- Educators receive real-time data on the success (or lack thereof) of the students.
- Students communicate with their peers as well as their teacher.
- Coursework schedules can be personalized for each student.
- Work can be completed anywhere a student can log onto the site – many learning platforms even include offline capabilities.

No virtual environment can replace the interaction of two human beings. Therefore, the best VLEs have a personal touch. This can be an actual teacher/facilitator in the room, synchronous online time with a mentor, real-time chats with peers, or submersion into courses using augmented reality or virtual classrooms. Collaboration is a key indicator of effectiveness in online learning. Small group assignments and required forum discussions give opportunities for students who might sit in "the back of the room" to participate fully. In student-centered learning, the instructor gives the student more control over what they learn, how they learn, and when they learn a particular topic. This degree of personal interaction makes students more active in their own learning process and has been proven to have meaningful outcomes. This is a much more involved educational scenario than just assigning learners certain modules. It helps learners develop a love for the act of gaining knowledge itself rather than just checking off the boxes. Promote an environment where immediate feedback is welcome and expected. The automatic grading features in the LMS that you choose should be utilized to keep learners involved. Encourage students to interact and respond promptly to questions and comments in the forums and chat rooms. One of the great advantages of virtual learning is the ability to course-correct midstream, if necessary. Difficult concepts can be repeated and misunderstandings can be corrected.



Noticeboard

A noticeboard or announcements area is a useful feature that may well appear as soon as a student logs in to the system.



Course Outline

The course outline or schedule provides an overview of the course structure and may include dates for assignments, assessments, lectures, video conferences etc. Typically the system will provide a structured means for the tutor to create the course outline. The course outline will provide hyperlinks to the course pages themselves. In a web-based system these will be simply html-pages containing the material relevant to that part of the course.

E-mail

Most systems include a built in e-mailer that can be used to email either the tutor or individual students on the course.

Conferencing Tools

Asynchronous conferencing or discussion groups form the heart of many VLEs as they provide the means for students to engage in collaborative exchange about topics on the course.

Class List & Student Homepages

Another key feature of a learning environment is getting to know the other students on a course or for tutors to get some idea of student backgrounds, interests and aspirations. Many systems incorporate a list of students enrolled on a course – perhaps with e-mail addresses.

Metadata

Metadata is simply information about an object. It is important for categorising and searching objects according to their intended use in a particular context. A sophisticated metadata set can encompass a wide variety of information about an object.

Assignments

A VLE allows tutors to create assignments for students to complete as they work through course material. It should provide a means for students to return completed assignments to the tutor for grading and feedback.

Assessments

Some VLEs provide automated on-line quizzes for performing assessments, self-testing versions are also a feature of some systems.

Synchronous Collaboration Tools

Synchronous collaboration tools such as Chat, Shared Whiteboards, Group browsing and videoconferencing are a feature of majority of VLEs.

Multimedia resources

One major advantage of VLEs is the ease with which multi-media resources can be accessed and stored within the learning environment as an integral part of the course package. As more and more sophisticated educational materials such as interactive simulations get published on-line, the importance of multimedia facilities will increase dramatically.

File Upload Area

For truly interactive functionality students should not just be recipients of content uploaded onto the system by a tutor, but should be able to upload their own materials for other participants to look at.

Some VLEs include a facility for students to build their own materials and objects they have found into the learning environment.

Calendar

A Calendar tool is a useful feature built into some VLEs.

Search Tools

When a course structure becomes very large or there are several participants navigating around the environment by browsing and hyperlinks alone can become quite cumbersome. Consequently some systems incorporate search tools in order to jump straight to subjects of interest or a particular person.



Bookmarking

Like search tools, a bookmarking facility can significantly decrease the amount of time spent navigating to frequently used places or items within the environment.

Navigation Model

Although navigation is not strictly a feature or tool within a VLE, it is intrinsically part of the experience of using a VLE. The navigation facility allows a user to move around the environment and the navigation model or metaphor in conjunction with the look-and-feel of the system is extremely important as it defines in many ways how the system is used.

Virtual learning environments enable students and teachers to engage in personalised education, while freeing teachers from the constraints of classroom management tasks. For a student to be able to access a 'Virtual' room as either a duplicate or extension of their physical classroom is a clear advantage for learners and teachers alike. Every educational establishment ought to integrate a VLE into their lessons and allow it to become second nature to learners and educators outside of the classroom.

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

Producing work : students do not physically have to hand in work due to secure virtual 'hand-in' folders that have time windows.

Resource hub : teachers have infinite online storage space for ppts, docs, worksheets etc. that can either be secure or shared with students.

Dynamic home pages : teachers have the opportunity to create an exciting virtual space to represent their room/subject.

Links to outside sources : pathways to all other online learning spaces are linked via the VLE.

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

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

IV. CONCLUSION

VLE offers a vast array of functionality covering academic administration, Teaching and Research delivered by a wide range of Software that has grown according to a broad spectrum of requirements. As digital information continues to permeate educational processes, the potential benefits of adopting an institutional VLE will increase. With appropriate planning and preparation, virtual learning environments can contribute towards a more creative and productive educational experience in many developing countries.

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