Brave New World ... Wide Web

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Have you ever thought students in your course were listening to what you say, yet barely communicate with you? Have you ever wanted to provide a large number of documents and information to your students without using the copy machine? Have you ever had the intention to guide students to certain topics, but there were too many in your class to be able to do this? If your answer to any of these questions was "yes," a Virtual Learning Environment may be a solution. VLEs provide many possibilities to use online tools in and of themsleves, or even better, as an addition to a face-to-face class. In a VLE, course- and content-management are incorporated and easily coordinated through Web-based software. Alternative teaching and discussion methods like online quizzes, forums, chats, or Wikis (comparable to a white board on which anyone can write anything) are built in. Best of all, working on the teacher's (as well as the student's) side of a VLE is simply a lot of fun.

What Exactly Is a VLE?

A virtual learning environment 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. A common scenario is that the VLE software runs on a server so that it can be accessed from a convenient place (e.g. a university, home, or Internet café) with an Internet connection.

A Web page for your courses is a good starting point and literally the simplest form of a VLE. It offers a fast and easy way for publishing schedules, papers or Internet links (Ansburg, Caruso & Kuhlenschmidt, 2003). A more sophisticated approach to online teaching and learning is the usage of a VLE package that includes tools such as electronic communication (e-mail, forums, chat), syllabus, reading lists, and timetables. All of these are manageable without HTML knowledge. It can further provide quizzes, Internet links, assignments (that can be fulfilled by uploading a file to the server or solving a task online), electronic delivery of teaching materials (presentations, documents or sound files), and finally the tracking of students' work (a convenient feature for instructors that automatically checks for deadlines, shows participation rates and plots quiz results).

What VLE Packeges Can I Choose From?

The freely available Moodle (www.moodle.org) is a prominent VLE used by scholars all over the world. Currently there are more than 1,200 installations in over 80 countries. Handling is easy and intuitive, community support is great, and there is the possibility of suggesting new features and working on them in the spirit of open source software.

On the commercial side, Blackboard (www.blackboard.com), WebCT (www.webct.com) or Lotus Learning Space (www.lotus.com/home.nsf/welcome/learnspace/) are commonly used packages. In most universities there are ready-to-use installations available. Ask your tech people for access to them.

Advantages and Disadvantages Of VLES

O'Leary (2002) and Perrie (2003) discuss advantages and disadvantages of VLEs. The following issues are a selection of their extensive listings.

Disadvantages

Both instructors and students need training in order to be able to use the VLE. As with every new tool, it takes some time to learn usage and gain confidence. A VLE can become a 'dumping ground' for material not designed for online delivery. Filling up a VLE with hundreds of journal articles, long lists of links, or high-resolution pictures/videos hinders accessibility and lowers satisfaction. Often, the advice faculty give to students about how to sign on a VLE or use it is ignored and the students do not take advantage of the VLE in a course. A VLE does mean additional work in students' spare time, so make the added value transparent to your students and propose reachable goals.

Advantages

Learning materials can be updated with some mouse clicks and take a variety of form (e.g., text, graphics, audio, or video). Changes in electronic documents are simple; the upload onto the server is done in seconds. This flexibility and speed enables the instructor to quickly react to new demands or changes in the nature of assignments and the rhythm of the course. For example, if a course module must be skipped or greatly condensed because of time constraints, summaries or study guide material can be distributed to students in the course quickly and easily.

Student-Student and Student-Instructor communication can be stimulated. Because of the promotion of contact between peers, students start communicating on a regular basis with each other and even in larger classes personal communication is possible. This is also true for communication with the instructor.

A VLE demands thinking about the structure and aims of a course before providing materials, and therefore helps course organization. Each lesson gets its own area in the VLE, and all necessary information for students (a quiz before the lesson, literature to read, or assignments to complete) is together in one place. Preparation for classes becomes more convenient because the teacher has an overview on completed assignments or possible questions raised before the actual lesson. Of course, this assumption of convenience assumes there is a sure way to ensure that students read and think about the material before class.

Clarifying Misconceptions About VLES

The tech-myth: A enormous amount of technical knowledge is needed for working with a VLE. The truth is that technical knowledge is not necessary to work with a VLE, but of course a little always helps. Many universities offer access to pre-installed VLEs and provide detailed documentation and usage support. The learning curve for administering a VLE is not steep and comparable to learning your word processor.

The timesaving-myth: Using a VLE requires no additional time for class preparation. The truth is that

with a VLE, class preparation may stay the same or even increase (especially at the beginning of usage). Nevertheless with the scope for new teaching possibilities, a favorable forum for communication and transfer between the two, classes become more interesting.

The uniqueness-myth: Once you turned to a VLE there is no way back and everything has to be done within this framework. There is absolutely no need to change an idea or a method that works well. Use the advantages of a VLE and combine them with the advantages of a face-to-face class. The term "blended learning" summarizes this approach. The idea is to combine lectures with case studies, audio, or video recordings is not a new one. Delivering content online is just an ingredient that cannot function well without all the other parts.

The First Time

Experience a VLE for a topic that interests you on your own. Try what you want your students to do and modify your ideas with the insights you get.

Because you are interested in VLEs, why not start at www.moodle.org and learn something about virtual learning environments? Register to the site (it's free!) or login as a "Guest" to the Community Discussion. Take a look at "Using Moodle for Teaching" (Topic 3 in the Topic Outline). You will find tons of messages discussing teaching with VLEs, providing solutions, giving hints on methods, or offering links to interesting Web pages. With these experiences in mind, start your work with small steps. Take a look at your local university's VLE; setup a test course and play around with the features. In most of the common learning environments, templates for courses are already available.

Give students small tasks and talk to them about what they liked or disliked about the VLE. Through this evaluation you will get valuable insight into their learning process and needs that should be incorporated into your VLE.

Before the Course Begins

There are some things you should do *before* your course starts:

- Set up a forum for general announcements and discussions with a welcome message for your students. State why you think your VLE is a good idea, what students can expect and what you expect from them (frequency of access, netiquette for communicating)
- Provide an overview of your course for download. This information could be a simple text file, a table or a small presentation.
- Refer to your course schedule and update it as soon as there are changes.
- Differentiate online activities from face-to-face meetings.
- Write a quiz for the first two or three lectures. General questions are as good as specific ones with some searching or reading necessary to be able to answer them. This is a nice feature to get students into using your VLE. Ask students to complete the quiz between two lectures and talk to them about their experiences and answers. Pay close attention to students who are silent and query if they did the assignment. Emphasize the importance of using the VLE.

With these steps completed before your lecture starts, you are well prepared for the "first contact." In

your first lecture, give students the URL address of your VLE and tell them to register and download the schedule for the following weeks. Make slides or a short online demonstration of the registration process and the starting page, and consider also distributing this information on paper. After this first step is done tell them to try a quiz each week (for the first two or three weeks).

Encourage students to discuss possible answers in the forum. Minimize your comments in these discussions (unless you are addressed directly). Postings from you as an expert virtually "kill" any other communication in the forum.

Give your students time to get used to the new medium and let them find answers to questions on their own first. You may find that some students are already used to the format from other courses. If there is the need for clarification or comments you should, of course, respond, but still try to formulate a new question with your answer in order to continue the discussion.

When the VLE is up and running, refer to topics from it in your lecture, and vice versa. Provide additional information on what you are dealing with in your lecture in the VLE (e.g. links, papers, and room for discussion).

Even with this slow introduction of the VLE, some students might not participate and may need some selective attention and hints from you. Look at the usage statistics of your VLE from time to time to identify such students. Ask these students in your face-to-face class whether there are technical problems with their Internet access or troubles with the VLE in general.

Following these simple steps makes it easier for students to get used to the medium and more willing to come back to it.

Teaching Scenarios Using VLES

Lectures

Lectures are a widely used form for teaching large amounts of knowledge in a one-to-many communication style. Because student numbers are often large, three types of VLEs are especially applicable: forum, chat, and Wiki-Pages.

Forums and chats. Forums are asynchronous (writing and reading of messages do not occur at the same time), whereas chats are synchronous (writing and reading takes place at the same time). Three types of communication are possible: one-to-one, one-to-many, and many-to-many. All of these offer a convenient possibility for instructor announcements, discussions, or questions and answers. One can expect more discussion of questions because students are not forced to answer immediately as in class. They can think about an answer, perhaps check with their books, and then respond. In contrast to this process, in chats urgent problems can be discussed in real time (synchronous).

Wiki-Pages. A Wiki-Page (a hybrid between synchronous and asynchronous tools) is comparable to a whiteboard on which anybody can write, change, or delete something. All of your students can access the page through a browser without any additional software. They can add news, correct words and structure, or delete unnecessary parts. For the instructor, a detailed list of changes and modifications is

available. In a cognitive psychology course, a possible Wiki task could be the collaborative writing of taxonomy of decisions in everyday life. Such a process normally begins with some brainstorming until a participant starts categorizing. The unique dynamic of collaborative writing opens completely new learning possibilities; I do promise that you will love it! To see what is possible through collaborative writing/working, look at the largest free online encyclopedia – www.wikipedia.org – completely done within the Wiki system.

Seminar

In a seminar, a small group of students typically read journal articles, prepare group projects or work on presentations.

Shared work groups. A shared group work is useful with groups of four to six participants. Groups not only work together in real life but also have an assigned space in the VLE. Students are allowed to share group files and communicate with each other through a forum, and edit the same files and post comments on work of the other group members. Different perspectives on a task can be assigned to different groups. For example, in a personality course, group one tries to identify the advantages of a theory, whereas group two collects critical discussion points. Each group prepares a short summary that is put into the VLE. In an online discussion with the two groups and the instructor, the value of the theory is discussed.

Give a quiz for each new topic in a seminar. A short quiz gives feedback to the students about their level of understanding and reactivates knowledge connected to the new topic. The generation of such quizzes is easy, and with the statistical analysis that is included in most VLEs a picture of student performance can be drawn.

Scavenger hunt. This assignment is a good method to teach online information search and search engine usage. The instructor asks a question and gives a hint on a starting point for the students (e.g., a link posted in the VLE or a list of keywords for triggering the search process). Students perform the search online and post answers into the VLE. These answers can be assessed or graded by the other students or discussed later. The advantage of this method is that it is flexible in inducing reading depth; i.e., questions about easy to find facts elicit only scanning through a text or a Web-page, whereas questions with answers hidden in the text force students to read through it more precisely.

Try it on your own! Start your favorite search engine and find answers to the following two questions:

1. What is Brooke Broadbent facing in her paper on the Learning Circuits platform?
2. What is the largest Moodle course Martin (the inventor of Moodle) is aware of?

It should be possible to answer Question 1 with a short search, whereas question is a little trickier (hint: go to the source of Moodle).

Two things happen while you search. You learn that there is a Web page called Learning Circuits that has a lot of information on teaching methods (on and offline), and you see and already use Moodle (welcome to the world of VLEs!).

Lectures and Seminars

The final two methods do not necessarily depend on the number of participants and can therefore be applied to lectures as well as to seminar formats.

Team building exercises combined with group critiques. Such exercises enhance communication and help build up team spirit as well as exposure to criticism. Each team works on a part of the whole task and posts results into the team forum (internal use for discussion) or on the course forum (for presenting results). A list that can be accessed by all participants shows the progress of all teams. Each team is then assigned to critique another team. Establish rules beforehand that emphasize the importance of critiquing the method or discussion but not the other group members.

After completion of this process, it can be altered so that all participants discuss the integration of single parts into the big picture. In this phase, feedback from the instructor is particularly useful.

Virtual laboratories. If an experiment is difficult to conduct at your local university because of limited resources or a lack in laboratory space, a virtual laboratory can give students comparable insights. The discovery of a principle by students increases its validity to them and makes it more knowable.

At the PsychExp Web page (run by Ken McGraw, Mark D. Tew, and John E. Williams and found at http://psychexps.olemiss.edu), various experiments from the areas of perception, reasoning or learning are offered. Each of the experiments can be done online, and data are available for download. Students can try the experiments, analyze data they generated themselves, and get better insight into a method or research idea. Ulf D. Reips offers WEXTOR (http://psych-wextor.unizh.ch/wextor/en/index.php), a "Web-based tool that lets you quickly design and visualize laboratory experiments and Web experiments in a guided step-by-step process." The complete generation of a between- or within-subject design is possible. Data can be collected afterwards on a local server and analysed with additionally offered tools. As a third example, WebDip (developed by Neun and Schulte-Mecklenbeck, http://webdip.sourceforge.net) is especially useful for decision-making researchers with an interest in information search.

Conclusion

All of the methods described here should be used interchangeably to meet course objectives. The tools/didactical methods presented and their combination are only one possible solution. Try to find your own blend of traditional and online methods that fit your teaching style best.

What the "Master Blender" of Chivas Regal says about the whisky also is true for teaching psychology: "A master blender's job is creative, artistic and technical all at the same time. He must be able, using nose and palate, experience and memory, to assess and identify whiskies every day and to understand how they will interact with each other" (Colin Scott, 2004, www.chivas.com/).

References

Ansburg, P.I., Caruso, M. & Kuhlenschmidt, S. (2003). Getting started on the Web. In B. Perlman, L. I. McCann, & S. H. McFadden (Eds.). *Lessons learned: Practical advice for the teaching of psychology*

(vol. 2) (pp. 81-89). Washington, DC: American Psychological Society.

Horton, W. (2000). *Designing web-based training*. New York: Wiley.

O'Leary, R. (2002). Virtual learning environments. www.ltsn.ac.uk/application.asp?app=resources.asp&process=full_record&section=generic&id=36. Retrieved April 26, 2004.

Perrie, Y. (2003). Virtual learning environment. *The Pharmaceutical Journal, 270,* 794-795.

Tucker, S. (2001). Distance education: Better, worse or as good as traditional education? *Online Journal of Distance Learning Administration, 4*(4), 1-12.