Internet Based Course Delivery: Technology and Implementation

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Abstract

This paper describes the implementation experience of an Internet based distance-learning course currently offered at University of Salford in the UK. The course uses the Blackboard system which provides a virtual teaching and learning environment. It facilitates the interactions between the tutors and students to be conducted over the Internet, which were traditionally only possible in classrooms. This paper seeks to offer some observations on distance learning practice by reflecting the experience of the course delivery. As the Course Director, the author is well positioned to gather extensively qualitative data of feedback from students and tutors. These data together quantitative data captured by the Blackboard system form the basis for this paper.

1. Background

The University of Salford is a leading UK university in the field of IT and Construction Management. Its School of Construction and Property Management runs an on-line MSc course in IT Management in Construction, one of the first exclusively Internet delivered courses in the UK. The course was originally developed jointly by leading industrialists and academics with UK government funding as a part-time course for UK construction companies. Its Internet distance learning delivery started in 1998. After a review of the existing distance learning systems, CourseInfo supplied by Blackboard was chosen as the platform to deliver this course. Using this system, students can access course materials, engage in on-line discussions with fellow students, interact with course tutors, and undertake on-line assignments and assessments.

2. The on-line learning environment

CourseInfo is an Internet based teaching and learning platform. It integrates Web technology with database technology and provides a user-friendly teaching and learning environment for tutors and students (Figure 1). It consists of a course server where the CourseInfo software is installed, and many client PCs from which tutors and students interact with the server using WWW as the interface. The learning environment offers the following essential services.

Course documents dissemination: CourseInfo allows files in multiple formats, e.g., acrobat, Microsoft Word and others, to be uploaded to the course server and organized in hierarchical folders. A student will be granted access to these materials once he or she registers for the course. To save student’s downloading time and cost, course materials including workbooks, presentations and additional reading materials are also sent to the students on CD-ROM disks.

Tutor/learner interaction: The system supports both synchronous and asynchronous communication between tutors and learners. Virtual Classroom is a synchronous chat room for student and group communications. It can be used to hold “live” classroom discussions, tutorial sessions, and office hour type question/answer forums. However, due to many students live in different time zones, we find it very difficult to co-ordinate a specific time to deliver a live lecture. The learning environment provides a discussion board as an asynchronous communication tool. Conversations are grouped into forums that contain threads and all related replies.

On-line assessments: The learning environment supports a variety of assessment methods, written tests, multiple choice questions, essays, projects, etc. The tutor can use a combination of these instruments when determining a course assessment strategy. Students can either complete these assignments on-line or they can complete them off-line and submit their answers using the digital dropbox. The learning environment provides a Gradebook which integrates the students’ submission to the tutor’s marking. It gives the tutor a clear picture of who has submitted coursework. It also informs the student about the assessment results once the tutor has marked an assignment. This is one of the most liked features of the system by the tutors.
Course management and statistics: The learning environment provides a suite of functions to help the tutor gathering information on the student’s interaction with the course server. This feature provides instant access to course statistics including page usage, link usage, and access times. The system can generate report on individual student’s access pattern to the server. This information will help the tutor to identify students who might need extra support.

3. Discussions and Conclusions

The course described above has been running for more than three years. At present, over 60 students from several countries, including the UK, South Africa, Australia, Singapore, Hong Kong, etc., are studying the course from their own countries. It no doubt achieved one of its main objectives in widening the recruitment base. However, there are a number of issues need to be addressed in the future including:

Tutor skill training: Tutors play a vital role in the successful delivery of distance learning programs. Implementing an Internet based course delivery requires tutor to acquire skills in using the course delivery technologies. A good teacher in the conventional face-to-face classroom setting may not be well-prepared to teach in a distance learning environment because it requires very different skills.

Tutor commitment: It is equally important for tutors to be committed to distance learning course delivery. Otherwise, they will very conveniently ignore the existence of the “virtual” students.

Student support: Most distance learning students study the course in their spare time usually alone. After a long day’s hard work, to study late at night can be very stressing. The distress and frustration suffered by distance learning student have been widely acknowledged. The most complaints we got from students were about the lack of prompt response to their enquiries. It is therefore very important to provide effective student support to make them feel they belong to a learning community.

Harmonization with University administration: One of the major advantages of distance learning is its flexibility. It allows individual student to progress at his or her own pace. Unfortunately, this often cause tension with the existing university administration system which is more geared for the traditional full-time taught courses.

4. Conclusions

On a whole, the described course has been a success. It enables students in many countries to benefit from the course with regardless physical distances. However, it also revealed a number of issues need to be addressed in its future development.

The adoption of Internet based teaching and learning technology allows universities to share teaching resources and expertise. With experts from different universities, even different continents can easily teach on the same course, the students will have a richer learning experience. Salford University is in a process of forming collaboration links in relation to distance learning courses with a number of international universities.