Chapter 13

Using Lotus Learning Space to Enhance Student Learning of Data Communications

Michael W. Dixon
Murdoch University, Australia

Johan M. Karlsson
Lund Institute of Technology, Sweden

Tanya J. McGill
Murdoch University, Australia

Online delivery of courses has become a viable option because of the Internet. This paper describes how we deliver and manage part of a postgraduate degree in telecommunications. We aim to foster learner-centered education while providing sufficient teacher-centered activities to counter some of the known concerns with entirely learner-centered education. We use the Internet as the communication infrastructure to deliver teaching material globally and Lotus LearningSpace to provide the learning environment.

INTRODUCTION

Computer-based packages have increasingly entered the higher education curriculum. Many provide a useful supplement to students studying conventionally by illustrating aspects of the curriculum. Other packages are directed at aspects of course administration such as automated assessment (Oakley, 1996). Until recently, such packages have played only a supplementary role in course offerings,
but this is rapidly changing. For example, Coleman, Kinniment, Burns, Butler and Koelman (1998) describe a successful attempt to replace all lecturing with computer-aided learning. Remote delivery of courses has also become a viable option because of the advent of the WWW on the Internet. For example, Petre and Price (1997) report on their experiences conducting electronic tutorials for computing courses.

Hiltz and Wellman (1997) report on a study comparing student learning and satisfaction between virtual learning and traditional classroom teaching across a large range of courses. They found that mastery of course material was equal or superior to that in the traditional classroom and that virtual learning students were more satisfied with their learning on a number of dimensions. In particular, they found that the more students perceived that collaborative learning was taking place, the more likely they were to rate their learning outcomes as superior to those achieved in the traditional classroom. They did, however, identify some disadvantages to virtual learning. These included ease of procrastination and information overload.

The different types of teaching and learning activities that are made possible by the Internet are shown in Figure 1. Harasim and Hiltz (1995) divided these activities into two categories: learner or teacher centered. There is, however, no common agreement about which category is the best, and many researchers argue for a mixture of learning activities emphasising group learning. At the moment there still seems to be an overemphasis on the teacher centered approach, which hopefully will slowly change as a better knowledge of online learning develops.

Figure 1. Categories of online activities

- Electures
- Mentorship
- Tutor support
- Ask an expert
- Informal peer interaction
- Structured group activities
- Access to network resources
- Virtual classes

Teacher centred
Learner centred
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