Time-shifted Learning

Merging Synchronous and Asynchronous Techniques for E-Learning

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Introduction

E-learning techniques are usually classified into two broad categories: synchronous and asynchronous. The core question of this research is how to combine synchronous and asynchronous techniques in e-learning software, so it can have a stronger connection with constructivist education. The benefits and drawbacks of existing e-learning software is looked at broadly. Three popular e-learning packages used at the Australian National University are investigated: Adobe Connect (synchronous), Moodle and edX (asynchronous). The results of a brief survey of edX students is reported. Using the results of this work a team of students at the ANU Research School of Computer Science is now implementing enhanced asynchronous software to be plugged into Moodle and other asynchronous e-learning packages.

Keywords: Asynchronous Learning; Synchronous Learning; Electronic Learning; Web Conference; Videoconferencing; Pedagogy.

E-learning = computers + learning activities

- Todays Massive Open On-line Courses (MOOCs) narrower than originally envisioned [1]
- E-learning can combine synchronous and asynchronous techniques

1. Cormier, D.,"**The CCK08 MOOC - Connectivism course, 1/4 way**," *Dave's Educational Blog*. [online], October 2, 2008. Available: http://davecormier.com/edblog/2008/10/02/the-cck08-mooc-connectivism-course-14-way/

Sync and Async Techniques

Synchronous and asynchronous learning modes are assumed distinct:

- **Synchronous** (Adobe Connect): simulation of a live classroom with voice and images, but student numbers are limited and they must connect in real time, or watch a non-interactive recording later
- **Asynchronous** (Moodle): time flexible text and documents, interactive, many students, but not "live".

Can Synchronous and Asynchronous be combined?

A Brief Survey of edX Users

- **Engaging India** edX course run by Dr. Peter Friedlander and Dr. McComas Taylor at ANU in 2014
- Students surveyed with 66 responses
- 54% students believe they can have enough communication in edX courses

But learners cannot ask a question of a pre-recorded video.

Can E-learning Provide a Quality Education?

- Engaging India instructors interact with learners via the edX discussion board and with new video recordings
- But a few instructors can't interact with thousands of students
- So a synchronous tool is embedded in an asynchronous LMS

A Better Webinar Tool For Teaching

ANU student project to build a **Better Webinar Tool For Teaching**

- Moodle with embedded synchronous webinar tool
- *Time-shifting* Personal Video Recorder function
- Live webinars can be turned into MOOC content automatically.
- ANU will provide a prototype embedded synchronous webinar tool for Moodle by the end of 2005.

More Information

Paper, notes, references and slides available at:
www.tomw.net.au/technology/it/time_shifted_learning/

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