

Symposium on e-learning in tertiary education
University of Canterbury
Christchurch
25 September 2008

Effective teaching and learning with technology in tertiary education

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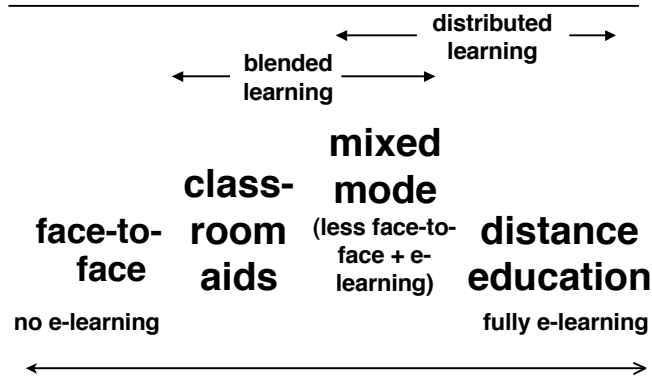
Overview

- 1. Definition of e-learning**
- 2. Changing technologies: Web 2.0**
- 3. Who should decide on when and how to use e-learning?**
- 4. How to design and develop high quality e-learning**
- 5. Conclusions**

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Technology and flexible learning



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Making choices

- For any program:**
- Where on the continuum of e-learning should this program be?**
 - What should be taught online and what face-to-face?**
 - What kind of students benefit most from online learning?**
 - Who should make these decisions?**

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Changing technologies

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Online learning 1995-2006

Main driver: Internet + learning platforms:

- WebCT, Blackboard, Moodle, Virtual Campus
- integration of teaching and administration
- proprietary vs open-source
- institution/teacher-focused

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What is Web 2.0?

Definition (Wikipedia):
second generation of Internet-based services—such as social networking sites, wikis, communication tools, and folksonomies—that emphasize online collaboration and sharing among users.

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Google



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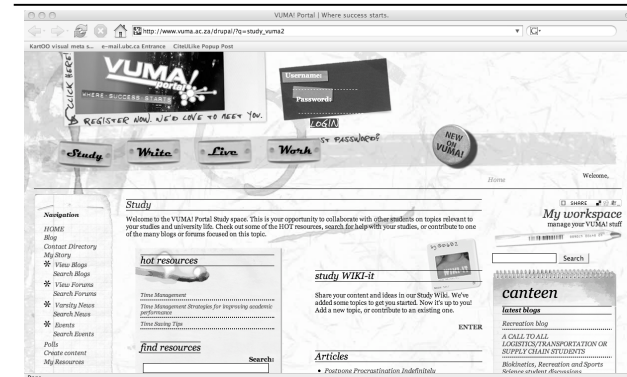
MySpace/Facebook



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Student portals



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iTunes podcasts Higher Education



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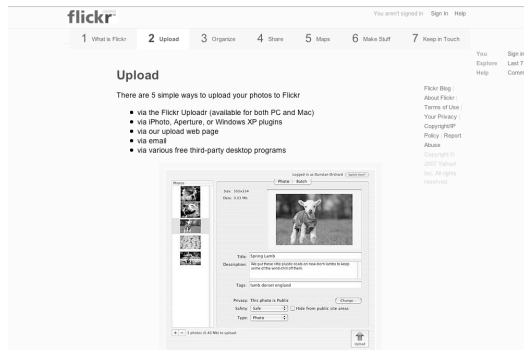
Second Life



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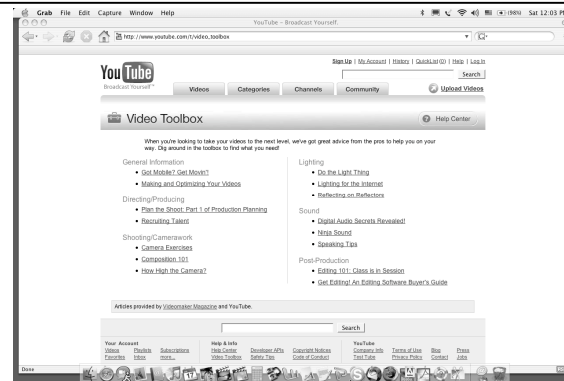
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YouTube



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New technologies: 2005 -

user-created content: blogs, YouTube
social networking: MySpace
mobile learning: phones, MP3s
virtual worlds: Second Life
emerging publication: wikis, e-Portfolios
multi-player games: Lord of the Rings
simulations: MyPhysicsLab.com
synchronous: Skype, Elluminate

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What is Web 2.0?

Educational implications

- learners have powerful tools
- learners create/add/adapt content
- personal learning environments
- power shift from teachers to learners
- 'open' access, content, services

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What is Web 2.0?

Educational implications:

- **social networks; peer-to-peer (P2P)**
- **institutional shift to service, speed, and market response**
- **issues of quality, IP and accreditation**
- **others?**

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How to mobilise Web 2.0 in online teaching

Within programmes:

- **group work**
- **projects and cases**
- **outside experts and content**
- **field work**
- **language teaching**
- **multimedia assignments/e-portfolios**
- **.....**

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Dangers of Web 2.0

‘Instead of a dictatorship of experts, we’ll have a dictatorship of idiots’
Andrew Keen, ‘The Cult of the Amateur’

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Dangers of learner-centred Web-based learning

- **‘democratization’ of learning: threat to expertise/authority/reliability?**
- **undermining of scientific thinking?**
- **dependent learners: need for structure/guidance (teachable)**
- **didactic teaching sometimes best**
- **trustworthiness and security**

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The educational benefits of Web 2.0

- **lot of hype: much of Web 2.0 is social not educational**
- **BUT there is educational potential: meets many lifelong learning needs**
- **change in philosophy as well as technology**
- **will lead to power shift to learners**
- **needs more experimentation/ evaluation**

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How should decisions be made about the use of e-learning?

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The importance of academic departments in change and innovation

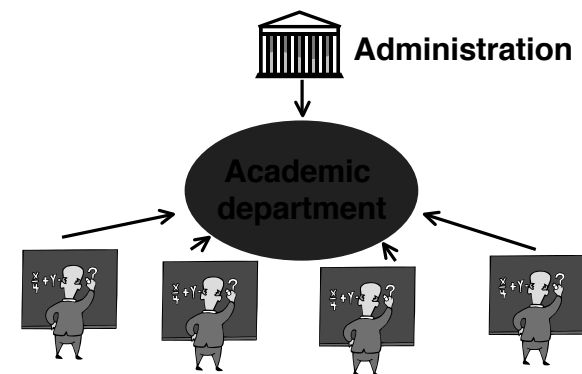
Two typical approaches to change:

- **top down: Presidents or governments decide a strategy then try to implement it**
- **bottom up: early adopters; individual professors working alone**

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The critical role of academic departments



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The importance of the academic department

Academic departments determine programs and curriculum

Bridge between autonomy of faculty and institutional objectives

Place where consensus can be built

Academic departments determine the success or failure of e-learning

BUT: mandate must be clear: how, not if

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Planning goal for academic departments

Academic departments:

Each program will develop a vision and plan for teaching and learning, including the appropriate use of e-learning

Plan base for budget decisions

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What teaching roles are suitable for online learning?

Face-to-face or online?

- **transmitting information**
- **collecting data/finding information**
- **preparation for lab work**
- **designing experiments**
- **doing experiments**
- **discussing best ways to do things**
- **problem solving.....**

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A decision matrix for teaching

Identify teaching activities

Activity	f2f	online
Information transmission		x
Lab experiments	x	
Lab preparation		x
Data collection	x	
Data analysis		x

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Learners and their differences influence choice and use of technology

who are your learners?

- straight from high school?
- working students?
- international or multicultural?
- part-time, unmotivated?
- independent graduate students?

Who will benefit most from online learning? Why?

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A decision matrix for markets

Identify best delivery method:

Market	f2f	online
Undergraduate	70%	30%
Graduate: academic	50%	50%
Graduate: professional	10%	90%

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Vision: 2000

**UBC: public research university
(35,000 students)**

**new strategy for e-learning
workshops for professors**

how do we want to teach?

scenarios

summary video



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Mandate for video (2000)

fit academic plan: goals:

- learner-centred teaching
- research into u.g. teaching
- inquiry-based learning (PBL)
- collaborative learning
- community-linked

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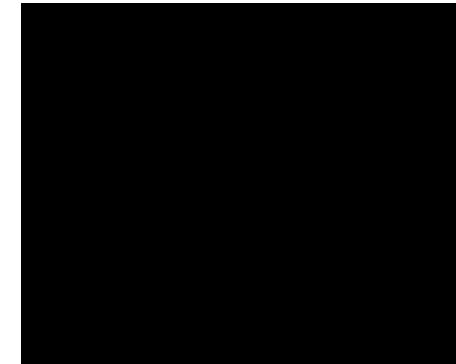
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Mandate for video

**include lifelong learning
assume large classes
exploit existing campus
use 'known' technology
realistic about cost
8 minutes length**

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**How to design and develop
high quality e-learning**

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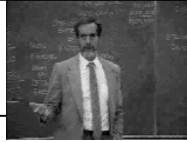
New models of course development

- 1. Individual professors**
- 2. boutique**
- 3. collegial materials
development**
- 4. project management**

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Individual professors working alone



main model everywhere
early adopters; essential for change
dedicated; no alternative
too much effort: no boundaries
poor interface/graphics/more time
than web professionals
idiosyncratic: no economies of scale
deter other professors; greater cost

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Boutique model of course design

- **on demand technical support**
- **technology help not educational design**
- **high cost**
- **difficult to manage**
- **not scalable**

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Collegial materials development

academics work together
mainly learning objects, but also
courses (California)
share materials (e.g. MERLOT,
Harvey, CAREO, Ariadne)
collaboration essential
depends on interests of individual
professors: 'hit-and-miss'

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Project management



establish projects
work in a team: professor(s) +
instructional designer + web designer
schedules/budgets/product
funding linked to project management
not popular with faculty
Would project management work here?

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Instructional designers

- instructional design
- scheduling/tracking/
commissioning work
- managing budgets
- course maintenance
- course meetings and minutes
- can handle 4-8 courses

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media production

Professionals in media production:

- text design
- A/V media
- web design
- simulations and animation

Quicker and better than students or professors

In-house or outsource?

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The continuum of design



face- class- laptop
to- room pro- mixed distance
face aids grams mode education

technical help
less — change in methods — more
more up-front money

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Conclusions

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For each program:

1. **Identify what kind of students to be taught**
2. **Identify basic content**
3. **Identify what kind of teaching approach to take**
4. **Describe how teaching will be delivered and how students will learn using e-learning**

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Change and stability

technology will continually change
learning processes are stable: read, observe, think, discuss, practice, receive feedback, be assessed
technology requires teaching to be re-organized: increased flexibility, new outcomes, more learner-control

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Conclusions

- **link technology to student needs, teaching methods and project management**
- **choose projects carefully; go for major benefits**
- **strengthen collegial planning of courses and programs**

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Further information

Bates, A. and Poole, G. (2003)
Effective Teaching with Technology in Higher Education San Francisco: Jossey-Bass
<http://tonybates.ca>
tony.bates@ubc.ca

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