Education Innovation Quest:
A Century in the Service of Knowledge
University of Pretoria,
South Africa:
24-26 June 2008

Why universities must change: the challenge of technology

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Overview

1. SA needs: technology can help
2. Defining and understanding e-learning
3. Why e-learning is important
4. Changing students and technologies
5. Implications for academic planning
6. Conclusions

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Meeting local needs

Technology not a panacea: tools need to be used appropriately

Needs assessment essential (difficult from Canada)

Main challenges to SA HE:

- expansion/equity/the knowledge economy/quality of HE

Ng'ethe: so far in African higher education: expansion only

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Needs of SA HE

Dep. Min. Ms Phunzile Mlambo-Ngcuka, UNISA, Feb 2007:

- development of ICT skills
- retrain unemployed graduates
- engineering, planning, telecoms, energy
- management in health/education
- maths, science, ICTs, languages in schools

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Meeting the needs

ICTs/e-learning can help meet these needs, but ONLY if:

- **there is a parallel shift in the design and delivery of teaching**
- **there is an institution-wide plan/strategy for e-learning**
- **academic departments/faculties are fully involved in the planning**

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What is e-learning?

My definition:

all computer and Internet-based activities that support teaching and learning - both on-campus and at a distance

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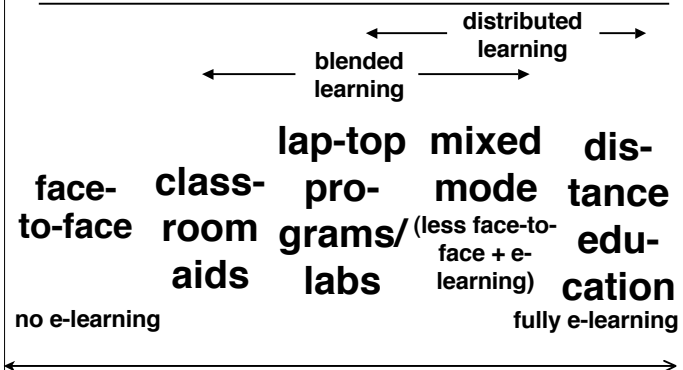
What is e-learning?
(Bates, 2005)



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Why is e-learning important?

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Different economies

Resource-based: agricultural, mining, fishing: land/sea-based, local

Industrial: manufacturing: urban, national, factories, hierarchical, economies of scale, specialist skills

Knowledge-based: financial, bio-technology, ICTs, telecoms, entertainment: 'virtual', global, networked, multi-skilled

All three economies in parallel

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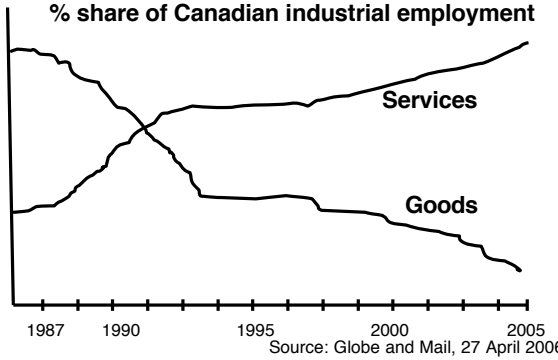
Shifting economy



Source: Globe and Mail, 27 April 2006, B9

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Skills of knowledge-based workers

- **problem solving, critical thinking**
- **communication skills**
- **computing/Internet skills**
- **independent learners**
- **entrepreneurial, initiative**
- **flexibility**
- **team-work/networking**

AS WELL AS subject expertise

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Why the shift?

Knowledge explosion: too much to learn by heart: smarter rather than more

Skills required in knowledge-based businesses (and in life):

- **critical thinking, creative thinking, problem-solving, communication, use of ICTs**

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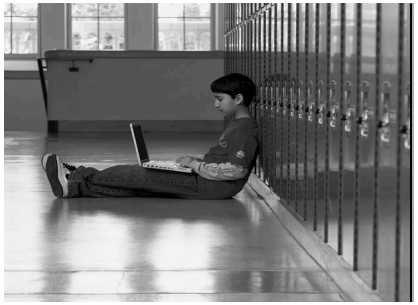
Changing students and changing technologies

Changing students: digital natives (Prensky, 2005)



Under 25 years of age: brought up with technology: computers, mobile phones

Lifelong knowledge workers: a major new market

- On-going education/learning essential for economic survival; LLs need access to latest research
- = 3 months training over five years
- In Canada, nos. = univ. entrants from school
- Most do NOT want traditional offers
- NOT the same market as traditional continuing education

New programs for lifelong learners

- Modules, certificates, industry accreditation leading to masters
- Inter-disciplinary, 'topic-based'
- New knowledge since they graduated
- Flexibly delivered:
  - Part-time (evenings/weekends/half-days)
  - Blended (campus + online)
  - Fully distant (home or workplace)

Online learning 1995-2006

Main driver: Internet + learning platforms:

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

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

Why e-learning is important

E-learning supports the development of skills needed in knowledge-based societies, e.g. how to seek, organize, analyse and apply information

Allows new markets to be served

Won't succeed though without:

- **an institutional strategy**
- **major changes in the organization/ design of teaching**

Implications for academic planning

The 'natural' development of e-learning

1. Early adopters - all alone
2. Grants for early adopters
3. Rapid expansion; low quality
4. A strategic plan
5. Focused, sustainable, high quality e-learning

Where are you?

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Why strategic planning is needed

Third stage:

- rationale for e-learning not clear
- concerns about poor quality
- duplication
- faculty (and student) workload increases
- increasing costs
- disillusion grows, growth stops

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Change is difficult

Change is about people, not technology

Professors are difficult to manage

Institutions have inertia

But we know how to change

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Managing professors

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The importance of academic departments in change and innovation

Two typical approaches to change:

- top down: Vice-chancellors or governments decide a strategy then try to implement it
  - universities like graveyards; autonomy of the faculty member
- bottom up: early adopters; Lone Rangers

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Institutional strategy

Leadership: recognition of importance of ICTs for economy

Set clear/measurable institutional goals, e.g.

every UoP student will graduate with the ICT skills needed in their profession

Put in place processes to achieve this

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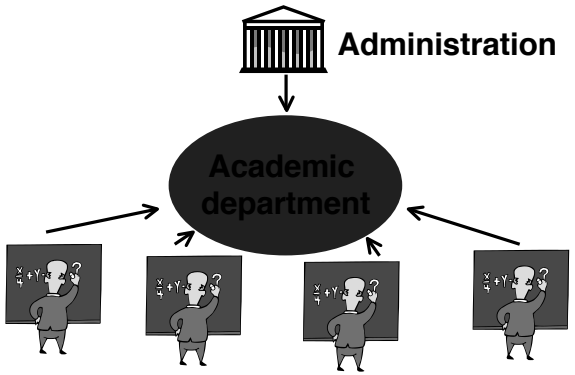
The critical role of academic departments



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The importance of the academic department/faculties

Academic departments/faculties determine programs and curriculum

Bridge between autonomy of faculty and institutional objectives

Place where consensus can be built

Academic faculties/departments determine the success of e-learning

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Making choices

For any program:

Where should each course in a program be on the continuum of e-learning?

Should this continuum reflect course sections or students?

Who should make this decision?

These are academic decisions - must be made by academic programs

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Departmental vision

e-learning a tool, not a panacea

need to identify where it will bring most benefit

depends on type of students, nature of topic

program teams to develop vision of teaching/learning + role of e-learning that drives funding

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Markets

What are your markets?

- **undergraduate: full-time**
- **undergraduate: part-time**
- **graduate (research)**
- **graduate (lifelong learners)**
- **men/women/international/……**

Who will benefit most from online learning? Why?

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What teaching roles are suitable for online learning?

What is best done online? What face-to-face?

- **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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Planning goal for academic units

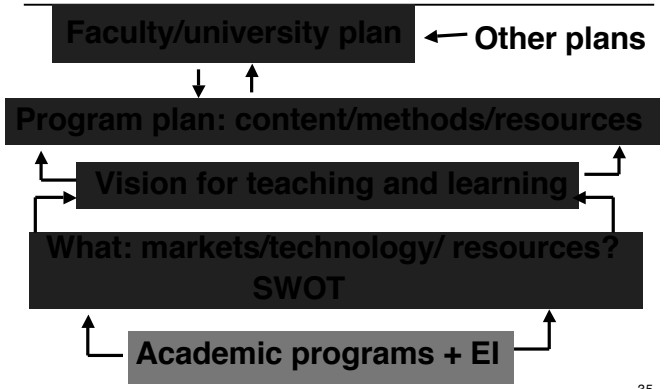
Academic faculties/departments:

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

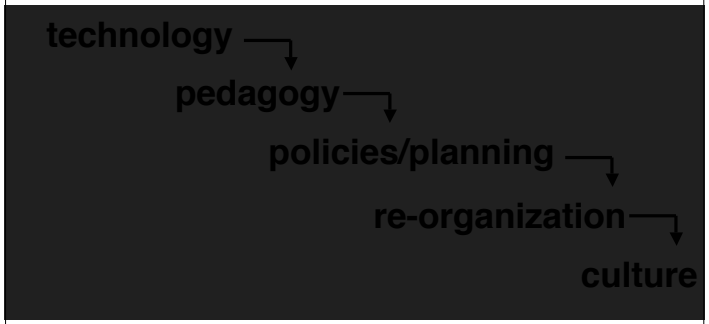
Determining the role of e-learning

- **who are - should be - our students?**
- **what new programs do we need?**
- **where does e-learning fit in the faculty's programmes?**
- **how will e-learning change the way we teach?**
- **what do we need to support e-learning**

Building a plan for e-learning



Critical factors for change



An on-going, continuous process

Further information

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