WAYNE STATE COLLEGE

The CITE

Strategies for Engaging Recalcitrant IT Adopters

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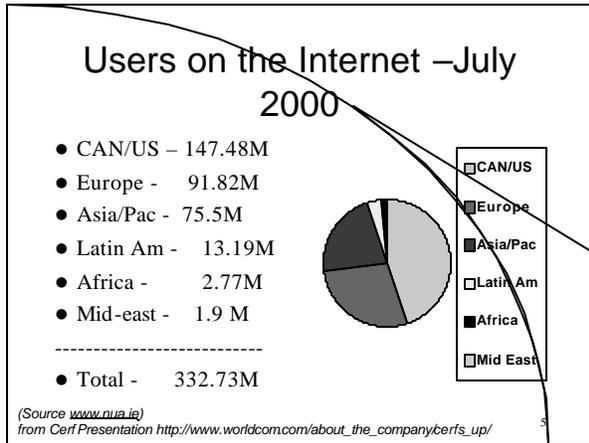Wayne State College (http://www.wsc.edu/frc/)

Introduction

- Director of Instructional Development
  - Facilitate and oversee faculty use, understanding and appreciation of teaching with technology for both classroom as well as distance learning (teleteaching and web-based) environments
  - Facilitate all employees' use of technology for office productivity
  - Operate the multimedia lab used by faculty and students
- Previous: Faculty member in Singapore, Australia and New Zealand
  - Innovator in use of technology in teaching
- Lived and worked in Chile; hablo castellano
- See http://www.quino.net

Agenda

- Introduction
- General IT trends and their impact
- Impact of IT on teaching
- Impressions of IT adoption in teaching
- Willingness to adopt IT by faculty
- Challenges of recalcitrant adopters
- Strategies for engagement
- Questions

General Trends

- Moore's Law—Computing power doubles every 12 to 18 months
- Telecommunications costs halve every two to three years.
- Advances in networking technology
- Leads, via Internet explosion, to
  - rapid convergence of media into digital form
    - print, audio and video
  - ubiquitous connectivity

Users on the Internet –July 2000

- CAN/US – 147.48M
- Europe -   91.82M
- Asia/Pac -   75.5M
- Latin Am -   13.19M
- Africa -   2.77M
- Mid-east -   1.9 M
- ---------------------------
- Total -   332.73M

- CAN/US
- Europe
- Asia/Pac
- Latin Am
- Africa
- Mid East

(Source www.nua.ie)
from Cerf Presentation http://www.worldcom.com/about_the_company/cerfs_up/

5

Interplanetary Internet

Slide belongs to Vint Cerf. See his
web page (from sources below)

General Impact

- Growth of Electronic Commerce
  - New business models
  - Paperless transactions
- Information Explosion
  - But our ability to process grows arithmetically
- Growth of Internet Devices (wired and wireless)
  - WebTV, Palm-Pilot, Nokia 9000
  - Automobiles, household appliances— 'smart devices'
  - Voice-activated
  - Nomadic computing
- Rise of knowledge workers (and need for lifelong learning)

6

Impact of IT on Teaching

- Historically —teaching and learning centred around a stable classroom lecture setting and related social relationships
                              But
- Information technology and advanced networks can
  - enable ubiquitous active learning
  - transform university operations
  - change the economics of education delivery
- Vision: harness the potential

9

Impressions of IT Adoption in Teaching & Learning

- >50 % Faculty: email communication and/or web assignment
- 10-25+% Faculty: use some form of presentation graphics regularly in class
- >10 % Faculty: use course management software (e.g. Blackboard)
- Business as usual in many classrooms
- Radical transformation of course structure since 1995

Steve Gilbert http://www.tltgroup.org/   10

Observations

- Still a lot of 'recalcitrant' adopters
- The characteristics of each category differ (especially between innovators and late adopters)
- Need to bridge the adoption gaps through use of technology linkers
- Not a smooth process and it is moving target

12

Diffusion of Technology and Willingness to Adopt

An abyss?

Rogers   11

Challenges of 'Recalcitrants'

- They want proof of results
  - Where is the value added?
  - Is the investment of time worth it?
- They want a total, reliable user-friendly solution
- They want their point of view respected
- Their discipline may not be IT friendly
  - What they need may not yet exist (art example)

Source: Jamie McKenzie 1999   13

Strategies for Engagement

- Measure the gains
  - Enhanced student success; richer experience, better retention
  - Enhanced research productivity
- Deliver total quality service
  - High-quality IT support/hardware/software/infrastructure for development (It is just not on to be without PC for three days)
  - 24x7 service for web-based access
    - Cannot have web site down just prior to exam
  - Standardised smart classrooms (MSU, Stanford)

Source: Jamie McKenzie 1999   14

Strategies…

- Reduce risk and surprises – Manage Expectations
  - Not useful to implement software changes two days prior to start of term
    - And not, "it works perfectly for me. It is intuitively obvious."
  - Honest appraisal of how well the technology will work
    - "There may be times when the video conf link will be down during class. Here is a strategy for dealing with it."
    - "You may wish to avoid giving a Sunday evening assignment deadline for your class of 800 using Blackboard"   16

Strategies…

MSU

Strategies…

- Talk their talk
  - Technical jargon overwhelms and intimidates
  - Respect their opinion about active or flexible learning
  - Build them up incrementally (Hispanic Lit ex)
  - Find out what they enjoy
- Offer on-going support
  - One workshop does not an expert make (pianist example)
  - Create user groups (with a mix of people)
  - Create good and usable documentation (Scanner, CD Burner examples)

17

Strategies…

- Create Awareness…

Strategies…

- Provide incentives
  - What worked for innovators and early adopters will probably not work for late adopters
  - Money as well as a stake in the intellectual property rights (this rewards innovators too)
  - Ignore the lawyers; listen to the economists and psychologists

Strategies…

- Entice teamwork and interaction
  - If students can learn a lot from each other, so can faculty members
  - Faculty can learn from students
    - STC—STFP—Tech Rangers -- win-win situations

Strategies…

- Lead by Example (Does the President Use Blackboard?)

Strategies…

- Embrace ADA
  - Sometimes physical difficulties and culture affects receptivity
  - Heighten awareness of special needs
    - http://www.wmich.edu/metl/
  - A lot of resources are going in to building retrofitting – We should not make the same mistake in cyberspace

22

Strategies…

24

Strategies…

- Embrace Diversity
  - *Using Educational Technology to Promote Cultural Diversity, Teaching, Mentoring, and Collaboration*
  - Lisa Star, South Dakota State
    - Augustana College, University of Sioux Falls, Dakota Wesleyan University
    - Flandreau Indian School, Bennett County High School, Wagner High School
  - Funding
    - AT&T Learning Network Grant in co-operation with FIHE
  - Basic tech tools (Blackboard.com
  - Web, MS Office, FrontPage, Photoshop, Scanner, Digital Cameras, PC Cams, Picturetel, Zip drives, Thinkpad Laptops

23

Meeting the Challenge

- Strategic IT Planning utilising frameworks of
  - Intellectual Capital
    - Measuring the value of non-tangible assets
    - Managing knowledge
  - Scenario Planning
- Collaborate with peer institutions
  - TLT Roundtable
    - Internal
    - External
    - Live and breathe the technologies, using world-class best practices
- Integrate Information with courses (big challenge)

25

Sources…

- Cerf's Up: Presentations (Vint Cerf) http://www.worldcom.com/about_the_company/cerfs_up/
- Gilbert, Steve. Presentations http://www.tltgroup.org
- McKenzie, Jamie. Reaching the Reluctant Teacher. From Now On. http://www.fno.org/summ99/reluctant.html
- Student Technology Fellows South Dakota State Uni http://web.sdstate.edu/techfellows/
- Tech Rangers. University of Central Florida http://techrangers.ucf.edu/
- Star, Lisa. Using Educational Technology to Promote Cultural Diversity, Teaching, Mentoring, and Collaboration. South Dakota State University http://learn.sdstate.edu/star/

26

IRT

Questions

- Slide beyond this point are extra material

IRT

Sources

- Brown, Byron, MSU's Technology Classrooms http://www.bus.msu.edu/econ/brown/cnsbb/ http://www.msu.edu/service/lcttp/ (Blackboard)
- http://smartpanel.stanford.edu/
- Learning Environment Architecture Development (LEAD) Project UC-Davis http://lead.ucdavis.edu/
- Hawkins, Brian. Technology, Higher Education, and a Very Foggy Crystal Ball. Educause Review, Nov/Dec 2000. Ebsco.
- Erhmann, Stephen C. Technology and Educational Revolution: Ending the Cycle of Failure. http://resources.blackboard.com

27

Needs for Teaching and Learning

Ideas from the UC Davis Learning Environment Architecture Development (LEAD) Project

Manage complexity

- Help us do more re-usable work
- Standardise tools to minimise need for learning new technologies
- Make the administrivia trivial to do
- Unbury us – make it easier to manage the information flow (including email)

30

Help Us Communicate and Collaborate

- Help connect faculty to their students
- Help connect students to each other
- Help us share work that is re-usable
- Create an environment which provides communication and participation options for more reticent students

32

Help Us Manage Dissemination of and Access to Information

- Help faculty and students easily publish and distribute class-related materials
- Help us control access to our IP, allowing shared access with a defined community of scholars

31

Design Principles and Institutional View

- Support the ability to work from anywhere, at anytime, at our convenience
- Provide for secure and verified identity to document the source of messages and approval actions
- Protect privacy
- Protect intellectual property rights
- Support all platforms
- Embrace ADA requirements

33

Selected Responsive Technologies

- Portals
- Course Management Software
- Databases (text, images, audio, video)
- Web server/middleware/database integration
- Interactive communication and collaboration tools
- Meta-data and search functions

34

Projects

36

Implications (Brian Hawkins)

- Residential campuses still significant
- Erosion of traditional sources of students
- Inability of universities to compete alone
- Significant market shakeout
- Governance evolution
- New models of faculty motivation
- University operations transformed by technology
- Missing complementary library infrastructure
- Increase in institutional market segmentation

35

Information Technology and International EC Courses

- Created my own cms

37

Using RealAudio

Currently in Session

Prior to Using BlackBoard…

What about Zaplets?