

WAYNE STATE COLLEGE 

Strategies for Engaging Recalcitrant IT Adopters



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Introduction



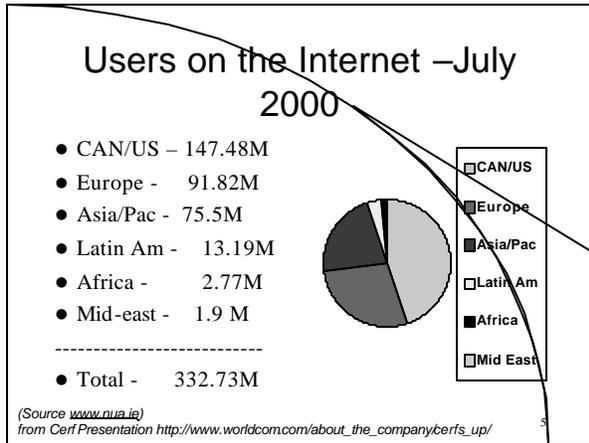
- Director of Instructional Development
 - Facilitate and oversee faculty use, understanding and appreciation of teaching with technology for both classroom as well as distance learning (teleaching and web-based) environments
 - Facilitate all employees' use of technology for office productivity
 - Operate 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



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)

- ### 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

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/>

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

Diffusion of Technology and Willingness to Adopt

Rogers

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

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...



15

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...

The screenshot shows the Duke CIT website with a navigation menu (Home, About, Events, Services, Profiles, Resource Guides, Funding, Site Map, Contact) and a section titled "Complete List of Speakers, Events, and Training". It lists several "Opening Events" and "Previous Events and News" with dates and locations.

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

The screenshot shows the "STUDENT TECHNOLOGY FELLOWS PROGRAM" website at South Dakota State University. It includes a "Program Overview" section and a "Techrangers" logo. A note mentions that the 2000-2001 website is the top link and that all submissions have been approved.

Strategies...

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

The screenshot shows a Blackboard LMS interface for "Wayne State College Atlantic Monthly Forum". It features a sidebar with navigation options like "Announcements", "Course Information", "Staff Information", "Course Documents", "Assignments", "Communication", "Related Links", and "Student Tools". The main content area displays "Announcements" with a list of items and a "Blackboard.com" logo at the bottom.

Strategies...

- Embrace ADA
 - Sometimes physical difficulties and culture affects receptivity
 - Heighten awareness of special needs
 - <http://www.wmich.edu/met/>
 - 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, Picturatel, 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/relevant.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



Questions

- Slide beyond this point are extra material



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



The screenshot shows a web browser window with a navigation menu at the top. The main content area is titled 'Course Materials' and includes a sub-section 'Description of Course Material'. Under this section, there are three items: 'Lectures', 'Tutorials', and 'Project'. Each item has a small icon and a brief description. The 'Lectures' item is expanded, showing a list of lecture topics and their descriptions. The 'Tutorials' item shows a list of tutorial topics. The 'Project' item shows a description of the project work.

37

Using RealAudio

The screenshot shows a 'Session Schedule' page. On the left, there is a table with columns for 'Week No.', 'Lect. Code', 'Lect.', 'Title', and 'Required Readings'. The first row is for '1. 1.14p' and the second for '2. 12.14p'. The 'Lect.' column contains '650' and '650' respectively. The 'Title' column contains 'Media-based Plug-in Test for Lect 1' and 'Developing Technology'. The 'Required Readings' column lists various documents and books. A RealAudio player is embedded in the page, showing a progress bar and a play button.

Currently in Session

The screenshot shows a BlackBoard course page. The top navigation bar includes 'Home', 'Lectures', 'Assignments', 'Tests', 'Grades', and 'What's New'. The main content area is titled 'Announcements' and contains two messages. The first message is from 'Lee Gilbert' dated 'Nov 24, 2000' with the subject 'Marking for Lectures in Section 6'. The second message is also from 'Lee Gilbert' dated 'Nov 24, 2000' with the subject 'Welcome to the Draft Follow-up & E-Comments'. A sidebar on the left contains navigation links like 'Home', 'Course Information', 'Self-Reflection', 'Course Documents', 'Assignments', 'Grades', 'What's New', and 'Resources'.

Prior to Using BlackBoard...

The screenshot shows the NTU (Nottingham Trent University) website. The main heading is 'Centre for Educational Development'. Below it, there is a large 'NTU' logo and a quote from Dr. Chen Tao, President of Nottingham Technological University. On the right side, there is a 'My Blackboard' button with a mouse cursor hovering over it. The website also features a navigation menu with links for 'HOME', 'PERSONAL TOOLS', 'COURSES', 'CAMPUS CENTRE', and 'COMMUNITY'.

What about Zaplets?

The screenshot shows a Zaplet interface. The title is 'zaplet' and the subject is 'Updated: Conference Call - Schedule Zaplet Zue 1'. The main content area contains a message from 'Jon D Kendall' dated '11 November 2000' with the subject 'Schedule Zaplet'. The message discusses the use of Zaplets for scheduling and includes a table with columns for 'Name', 'Date', and 'Time'. The table lists 'Jon D Kendall' and 'Dan Helms' with dates '11 November' and times '10:00 - 11:00' and '11:00 - 12:00'. There are also 'Reply' and 'Follow' buttons for the message.