

WAYNE STATE COLLEGE
A Division of Teachers College



Strategies for Engaging Recalcitrant IT Adopters



Jon D Kendall (<http://www.quino.net>)
Director of Instructional Development
Wayne State College (<http://www.wsc.edu/frc/>)

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

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>

3

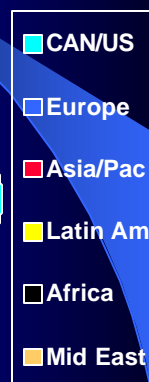
General Trends

- 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

4

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



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

5

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

Interplanetary Internet

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

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

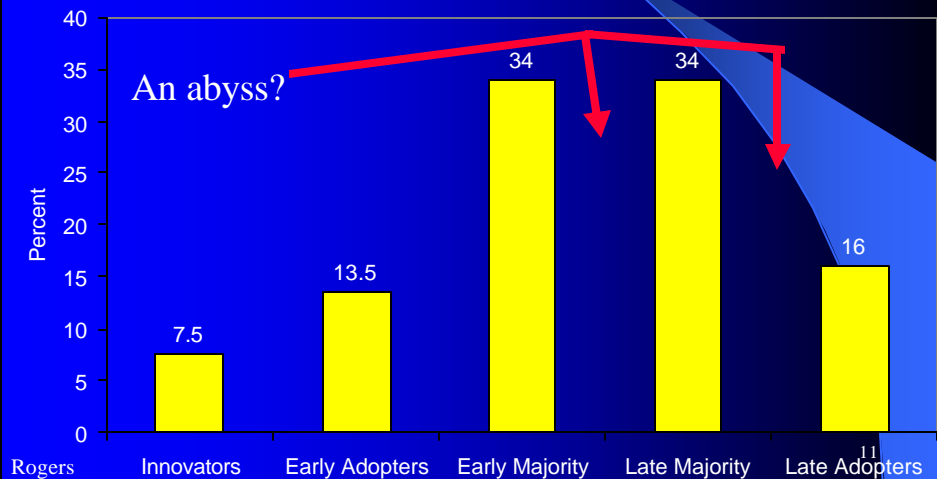
Impressions of IT Adoption in Teaching & Learning

- >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/>

10

Diffusion of Technology and Willingness to Adopt



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

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...

- 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...

18

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...

- 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

20

Strategies...

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

The screenshot shows a web browser window displaying a Blackboard course site. The browser's address bar shows the URL: http://www.blackboard.com/courses/WSC001/7/course_id=45001. The page title is "Wayne State College Atlantic Monthly Forum". The main content area is titled "Announcements" and includes a post from 2000-11-20 with the following text:

- Greetings and welcome to our experimental forum site.
- The most active areas will be the Discussion Board and Virtual Chat (under Communication).
- Navigation tips can be found under Course Information.

Below the list, there is another post from 2000-11-20 that reads: "Welcome to your new CourseSite™! To begin adding content to your course, click on the Control Panel button on the left hand side. To learn how to use this CourseSite, access our [online help](#)."

At the bottom of the page, there are navigation options: "Today", "Last 2 Weeks", "Last Month", and "All" with a "Show" button. The Blackboard.com logo is visible at the bottom right.

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

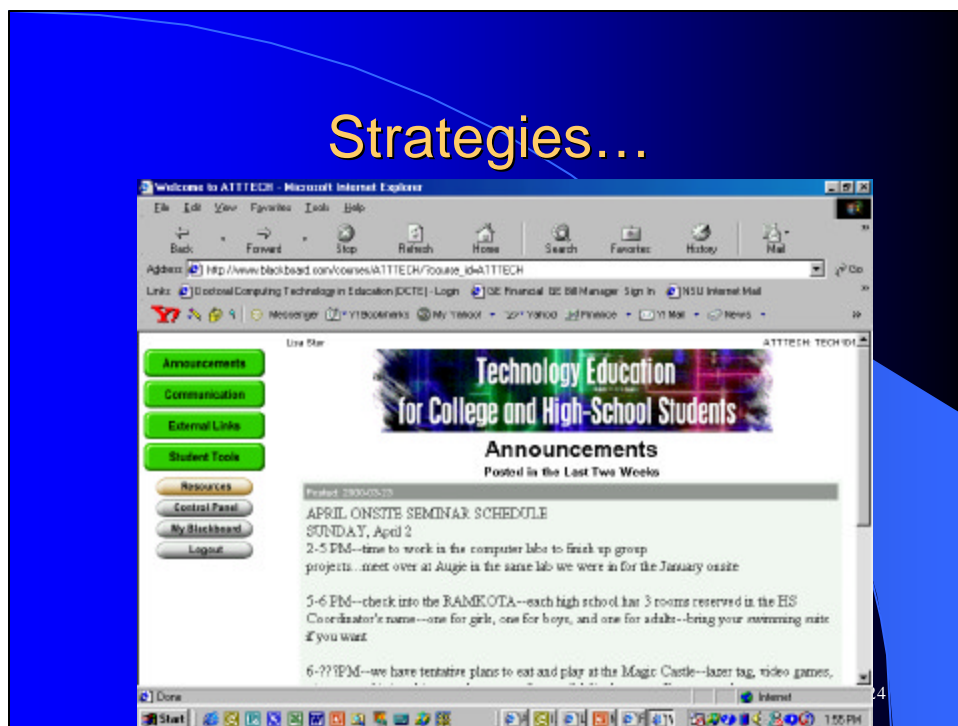
22

Strategies...

- 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

Strategies...



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)

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

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



Questions

- Slide beyond this point are extra material



The slide features a dark blue background with a lighter blue curved shape on the right side. The IRT logo is present in the top-left and bottom-right corners.

Needs for Teaching and Learning

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

The slide features a dark blue background with a lighter blue curved shape on the right side.

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 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

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

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

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

Projects

36

Information Technology and International EC Courses

- Created my own cms



37

Using RealAudio

Session Schedule

[Reading bibliography \(143\)](#)

Week No. Lect. Date	Lect.	Topics	Required Readings
1 5 July	ALG	<p>Multimedia Plug-ins Used for Lectures:</p> <ul style="list-style-type: none"> See our homepage about how to view pdf files. See our homepage about how to play RealAudio files. <p>←-----→</p> <p>Introduction</p> <p>Theme: Processing Erysa Baharom Industry: Hospitality Course: Cybermaths Technology: IP, HTML</p> <ul style="list-style-type: none"> See this page (200 kb pdf file) See this page (4 MB) See this page (1 kb) See this page (1 MB) See this page (15 minutes) See this page (1 MB) 	<ol style="list-style-type: none"> Kulkarni & Whitman (1997): Applications: 623 kb; Walton, et al (1999): Internet: Deconstruction; Shapiro & Varian 1999: Information Economy; Current Term: Definition & History, 2000.
2 12 July	RSI	Enabling Technology	<ol style="list-style-type: none"> Kulkarni & Whitman (1997): Infrastructure, Internet, Security, 693 kb.

Prior to Using BlackBoard...

The screenshot shows a web browser window with the address bar displaying <http://edventure.ntu.edu.sg/>. The website header includes the NTU logo and the text "Centre for Educational Development". The main content area features the "edventure" logo and a quote from Dr Cham Tao Soon, President of Nanyang Technological University: "I can foresee a future where our students will be taught online by the best professors from around the world, and attend tutorials with students from other universities." Below the quote is a "LOGIN" section with a note: "*Please note Username and password are case-sensitive". On the right side, there is a "My Blackboard" interface with a navigation menu (HOME, PERSONAL TOOLS, COURSES, CAMPUS CENTER, COMMUNITY, WEB RESOURCES) and a "Home" section containing "Today's Announcements" (No announcements were posted today) and "Today's Calendar" (04:00 AM NTU Convocation).

Currently in Session

Bookmarks Location: <http://edventure.ntu.edu.sg/courses/FE8906/> What's Relat

Jon Kendall FE8906: WIP: Nanyang Fellows and MSC Financial Engineering joint site

WIP: Nanyang Fellows and MSC Financial Engineering joint site

Announcements

Posted in the Last Two Weeks

Subject: Master's level courses in Electronic Commerce Posted by Lee Gilbert on Nov 24, 2000

These courses run during the first half of Term 3

Subject: Welcome to the Draft Fellows and FE E-commerce site Posted by Lee Gilbert on Nov 24, 2000

This is a development site where we can collect information and share resources for seminars and our Term 3 (March 2001) postgraduate subjects. It will later serve BOTH postgraduate groups. The primary textbook will be the in-press third edition of [Schneider and Perry](#), Electronic Commerce, Thomson Learning, 2001. Those students who have not completed a data communications course will also be expected to use Panko's Data Communications and Networking 2E, Prentice Hall, 1999.

Lee Gilbert

Today
 Last 2 Weeks
 Last Month
 All

What about Zaplets?

Subject: Updated: Conference Call - Schedule Zaplet Zaplet

beta **zaplet** www.zaplet.com

Jon D Kendall writes: I am trying out one of Zaplet's features. This Conference Call Schedule Zaplet will allow all of us to coordinate our schedules quickly and easily. Just click on the Reply button and indicate your availability for this meeting.

(11/11/00 09:58 PM PST / UNREGISTERED) [Tell-A-Friend](#) about Zaplet!

[AUTHOR / VIEW](#) all recipients)

What is this? This e-mail is a Zaplet. A Zaplet is a new type of shared, interactive e-mail message. As recipients interact with it, you will see their updates every time you view the Zaplet!

Click the Zaplet buttons directly below to interact with this Zaplet.

Schedule [Notifications Off](#)

	11 November -- 23:10 hrs
Jon D Kendall	Maybe
Dan Helmick	Maybe

Comments [Notifications Off](#)

Comments per page:

Name [text] Date / Time [text]

1 - 4 of 4

Zaplet Notificatio... QUALCOMM