The Fourth Decade of the “IT Revolution”
Kenneth C. Green • The Campus Computing Project

THE FOURTH DECADE OF THE “IT REVOLUTION”
Continuing Challenges and Opportunities
Kenneth C. Green
THE CAMPUS COMPUTING PROJECT
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The Fourth Decade of the “IT Revolution”

Cross Cultural Subtitles

• China: 小心你希望的东西
  (Be careful what you wish for)

• France: plus ça change
  (The more things change, the more they stay the same)

• Brazil: só as moscas mudam!
  (Only the flies change)
SPOILER ALERT!

We need a “new pragmatism” about our expectations for the role of IT in higher ed.

Elephants

- High touch vs. high tech
- Technology saves money
- Online ed is “as good or better” than classroom ed
- Students are “tech savvy”

- Tech-enabled high touch
- Unmet expectation: the elusive quest for academic productivity
- Mixed evidence; context matters
- GGTT are not core tech skills
Great Aspirations

Both the processing and the uses of information are undergoing an unprecedented technological revolution. Not only are machines now able to deal with many kinds of information at high speed and in large quantities, but it is also possible to manipulate these quantities so as to benefit from them in new ways. This is perhaps nowhere truer than in the field of education. One can predict that in a few years, millions of schoolchildren will have access to what Philip of Macedon’s son Alexander enjoyed as a royal prerogative: the services of a tutor as well-informed and as responsive as Aristotle.

Patrick Suppes
Scientific American
October, 1966

The New Computing in Higher Education

Beginning in the 1980s, college professors and college students who had never used a computer and never thought of themselves as computer users began to realize that they had to embark on a journey they could no longer delay.

Steven W. Gilbert & Kenneth C. Green
The New Computing in Higher Education,
Change, 1985
Déjà vu?

For better or worse, television dominates much of American life and manners…. Part of [the] lackluster record of the educational uses of television is of course due to the heretofore merciless economies of the medium. But profound pedagogic mistrust of the medium also remains a fact of life. The proof of the pudding lies in the fact that on many campuses, fancy television equipment… now lies idle and often unused…. Academic indifference to this enormously powerful medium becomes doubly incomprehensible when one remembers that the present college generation is also the first television generation.

George Bonham
Television: The Unfulfilled Promise
Change, 1972

Presidents & Provosts on IT
The Effectiveness of Technology Investments

- Presidents and provosts are ambivalent about the value of campus IT investments in instruction and research.
- Libraries earned the highest ratings; technology to support on-campus instruction received lower ratings.

(Not) Using Data to Aid and Inform Decision-Making

- The majority of presidents and provosts report that their institutions DO NOT make effective use of data to aid and inform decisions.
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The ERP Problem

“We have lots of information technology. We just don’t have any information.”

Strong Support for Online Education

- Extend reach and raise revenue
- Not clear that presidents understand development and support costs

pct. of presidents who “agree” or “strongly agree”

Serve more learners
Increase tuition revenues

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**Going Online:**

**Connecting the (Digital) Dots?**

**QUERY:** Do campus officials really understand the infrastructure required to support online courses & programs?

- Presidents are ambivalent about the instructional effectiveness of IT investments
- Presidents view “going online” as a way to reach more students and generate more revenue
- *Missing connection:* IT is the infrastructure for online programs!

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**What Do IT Leaders Report?**

- Continuing budget pressures affecting IT and other campus units
- Waiting for “The Cloud(s)” to Arrive
- Transitions in the IT environment
  - LMS transitions
  - Mobile
  - Analytics
  - Social media
- Quest for outcomes: does IT make a difference?
- Expanding interest in online ed
  - Student demand
  - Institutional options and opportunities
Where are the Clouds?

High Clouds
- ERP & HPC

Middle Clouds
- CRM & LMS

Low Clouds
- mail & calendar

A fifth of campuses (21 pct) have a strategic plan for Cloud Computing, up from 15 pct in 2010 and 9 pct in 2009.

Source: 2011 Campus Computing Survey

The Cloud

Little Migration to Cloud Computing

Little movement to the Cloud for the Really “Big” Tasks
- Risk
- Limited Options from Providers
- Trust
- Control

Source: 2011 Campus Computing Survey
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Rising Use of IT in Instruction

Learning Management Tools (CMS/LMS)

- The LMS is the icon of IT in instruction.
- Rising use across all sectors
- Breath vs. depth issues.

Source: The Campus Computing Project

The LMS Conundrum

- Whole new category of software
- Annual cash paid to providers: $400M?
- Annual institutional support exp: < $300M
- In-kind support: < $1B?
- Total annual LMS expenditure: < $1.7B?
- Impact on instruction?
- Impact on outcomes?
- TIME TO REFRAME THE CONVERSATION

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“Lecture Capture is an Important Part of Our Campus Plan for Developing and Delivering Instructional Content”

- Slight gains in the importance of Lecture Capture?
- Deployment remains low – about 5 pct
  - 8.3 pct Pub Univ
  - 3.9 pct pvt 4-Yr. Colleges

Source: The Campus Computing Project

Activating Mobile Apps, Fall 2010-2011

- Big gains in 12 months
- Impact of student expectations and consumer market experience
- More (LMS & ERP) mobile app & service providers means a wide range of costs for deployment

Source: The Campus Computing Project

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Institutional Efforts to Expand Online Education Impeded by:

- Employer Resistance
- National Accrediting Agencies
- State Regulations/Authorities
- Fed Regs Governing Student Aid
- Union Agreements
- Program Accreditation
- Budget Cuts
- Lack of Key Resources
- Faculty Resistance to Teaching Online

Major challenges are internal, not external:
- Faculty resistance
- Budget resources
- Lack of key resources (instructors and support personnel)

Reorganizing the Mgmt of Online Ed

Organizational structures for online education programs are in transition.

- 44 pct have restructured the mgmt of online programs in the past two years
- 30 pct have restructured in the past two years – and expect to restructure again.
- 59 pct expect to restructure in the next two years.

What Drives the Reorganization?
- Budget Issues (59%)
- Coordinating instructional resources (38%)
- Change in institutional leadership (35%)
- Change in sr. program official (29%)
- Centralizing mgmt of online ed (27%)

Source: Kenneth C. Green, MANAGING ONLINE EDUCATION 2010 (WCET/Campus Computing Project)
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ADA Compliance in Online Programs
Institutions are vulnerable on the issue of ADA compliance.

- No Set Policy or Procedure
- Faculty Responsibility 34%
- Central Office Review 16%
- No Campus Policy 18%
- Academic Units 23%
- Sample 9%

percentages, fall 2010

Source: Kenneth C. Green, MANAGING ONLINE EDUCATION 2010 (WCET/Campus Computing Project)

Comparing the Quality of Online vs. On-Campus Programs

HOW DO THEY KNOW?

percentages, fall 2010

Better on Campus
Both the Same
Better on Online

Source: Kenneth C. Green, MANAGING ONLINE EDUCATION 2010 (WCET/Campus Computing Project)

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Online Students Perform As Well or Better than Their On-Campus Peers

Research published on the Carnegie Mellon course modules indicates that they are effective. At a large public university, 99 percent of students taking the program’s formal-logic course online completed it, compared with 41 percent of students in the traditional course. At Carnegie Mellon, students who took an accelerated-statistics course in hybrid form completed it in eight weeks, and learned as much material, and performed as well on tests, as did students taking a traditional 15-week course.

WHY?
• Smarter?
• Better teachers?
• Better content?

Technology vs. Time

“Studies in which learners in the online condition spent more time on task than students in the face-to-face condition found a greater benefit for online learning.”
Going Online vs. Learning Outcomes

“Going online” requires colleges and universities – and campus officials – to commit to informed discussions about and thoughtful assessments of quality for both online and on-campus programs. The quality conversation involves more than simply comparing the performance of students in online vs. on-campus courses: ultimately, the conversation is about what all students learn and what learning environments and enabling resources and technologies foster student learning.

Making the Classroom “Safe” For Faculty

- Technology is a metaphor for change
- The “Potemkin Campus” effect
- Compelling evidence of impacts – and benefits
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The Public Conversation

Medium vs. Message

- Hyped promised vs. actual performance
- Technology is part of infrastructure
- Operating vs. capital cost
- Bring data to the discussion
- Explain – and invest – in training

Six Challenges for IT Advocates

- Focusing on people, policy and planning.
- Attending to tech trends.
- Supporting the faculty; communicating with presidents and provosts.
- Attending to the evolving of roles and responsibilities of IT leadership.
- Investing in infrastructure.
- Addressing the issue of IT impacts and outcomes.

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