Transformation and the Future of Internet Enriched Higher Education

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Organization

My presentation will…

- Review the history of innovation in education
- Make the case that new technologies are truly transforming education
- Identify and predict the effects of emerging technologies

Technology *Predictions ?*

- Historical examples…
  - Radio would eliminate newspapers and transform education
  - Television would eliminate motion pictures and transform education
  - "I think there is a world market for maybe five computers." *Thomas Watson Sr. President of IBM, 1943*
- Current examples…
  - Online instruction will eliminate professors and transform education
  - MIT's OCW will eliminate universities and transform education

Why is Internet Technology Truly Transformative?

Changing teaching and learning practices

- Wide spread, steadily growing adoption with consequent influence on mental structures

Why is Internet Technology Truly Transformative?

Context of Learning and Teaching

- Immediate resource presentation
- Widely available learning assets (for teachers and students) http://www.hippocampus.org/
- Overriding importance of context and instructional design

Why is Internet Technology Truly Transformative?

Changes in educational distribution

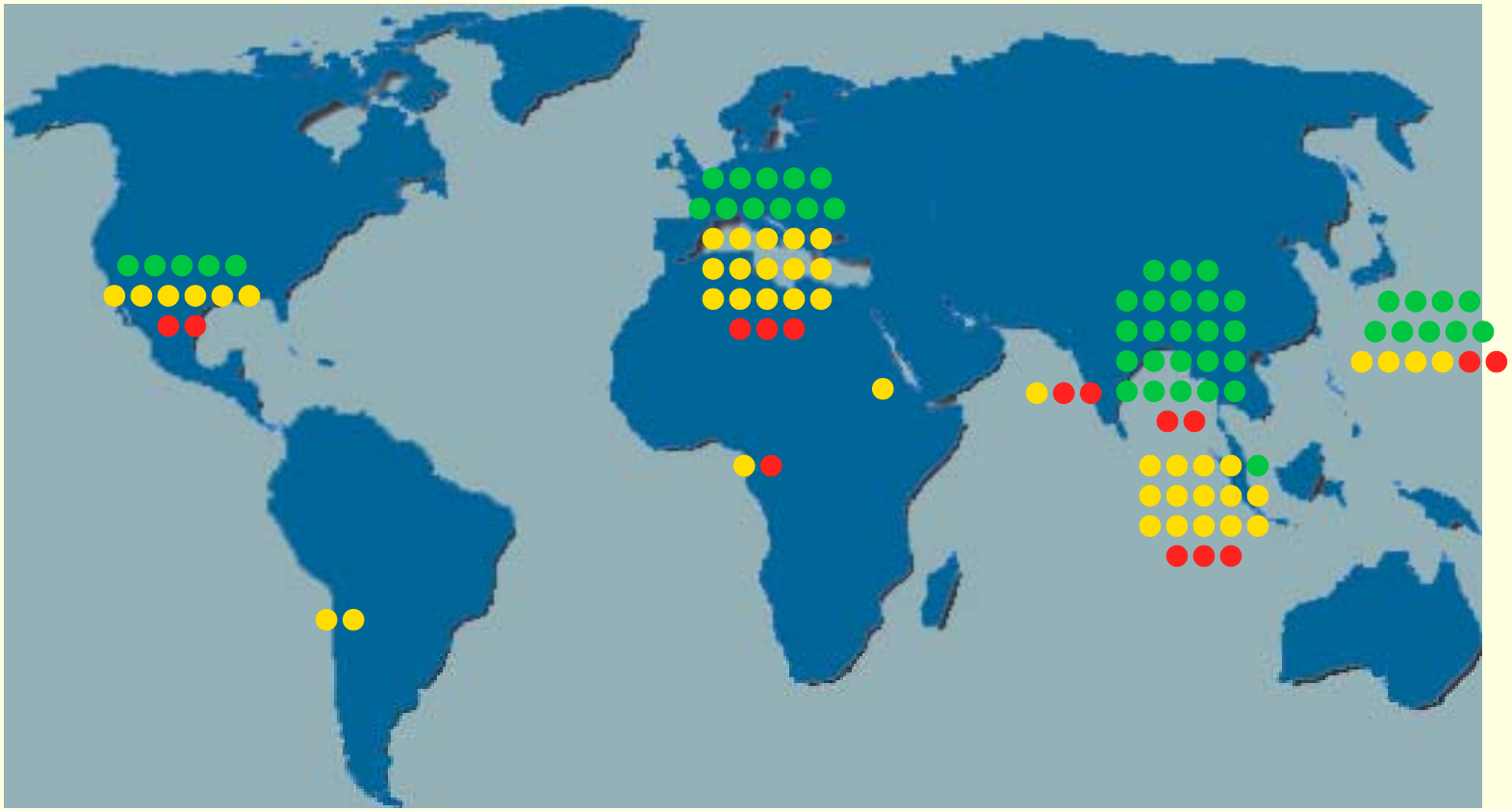
- OCW (MIT)
- OCW Consortium

Impact of OCW @ MIT

- 1,550 course available
- 61% of OCW traffic is non-US…
  - East Asia-22%
  - Western Europe-15%
  - South Asia-6%,
  - Latin America-5%,
  - Other regions-13%
- 49% of visitors are self learners, 32% students, 16% educators
- 95% of users report MIT OCW has or will help them to be more productive and effective

Source: MIT OCW Website

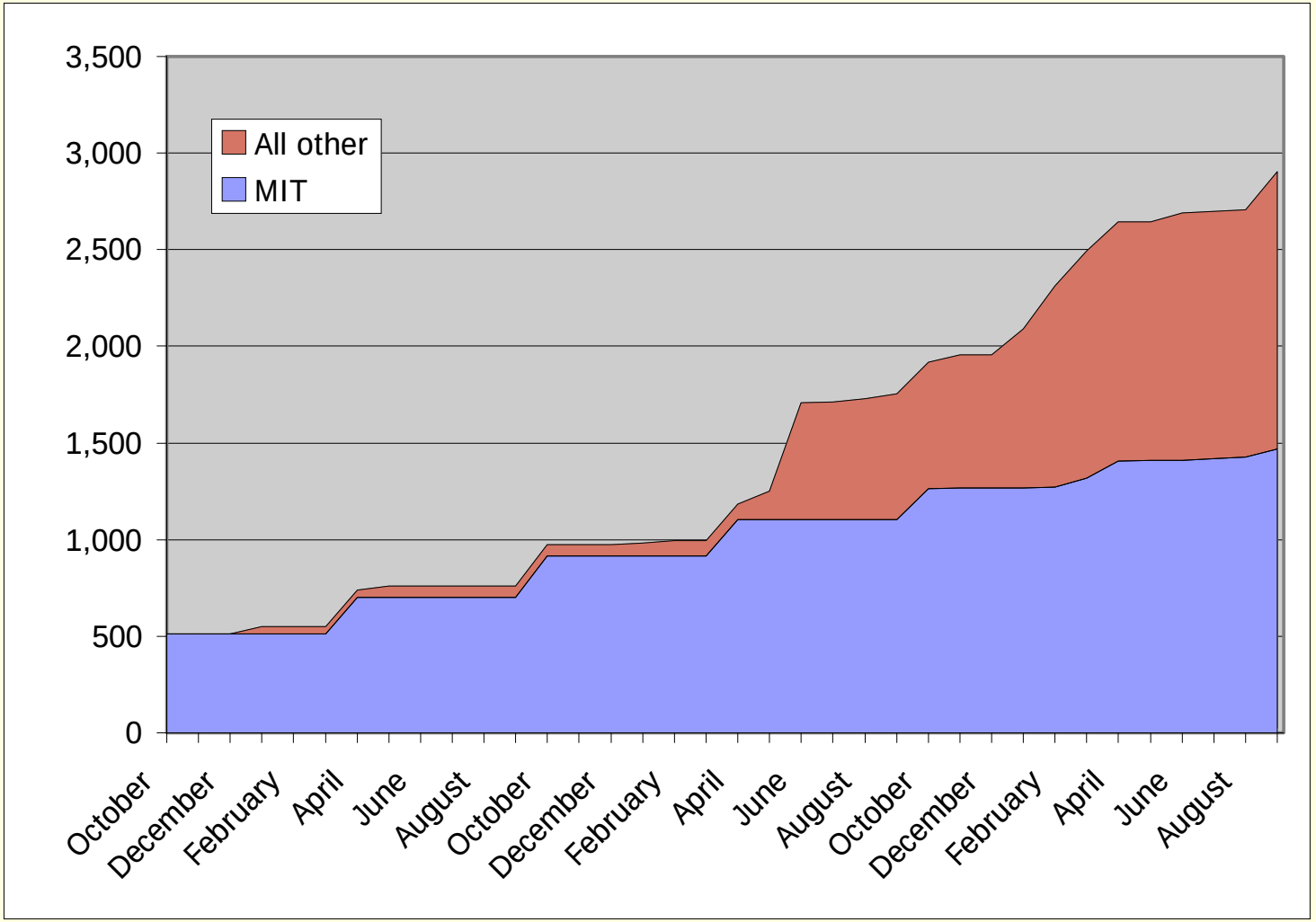
Growth of OCW Consortium



- 49 schools live
- 44 in progress
- 15 affiliates

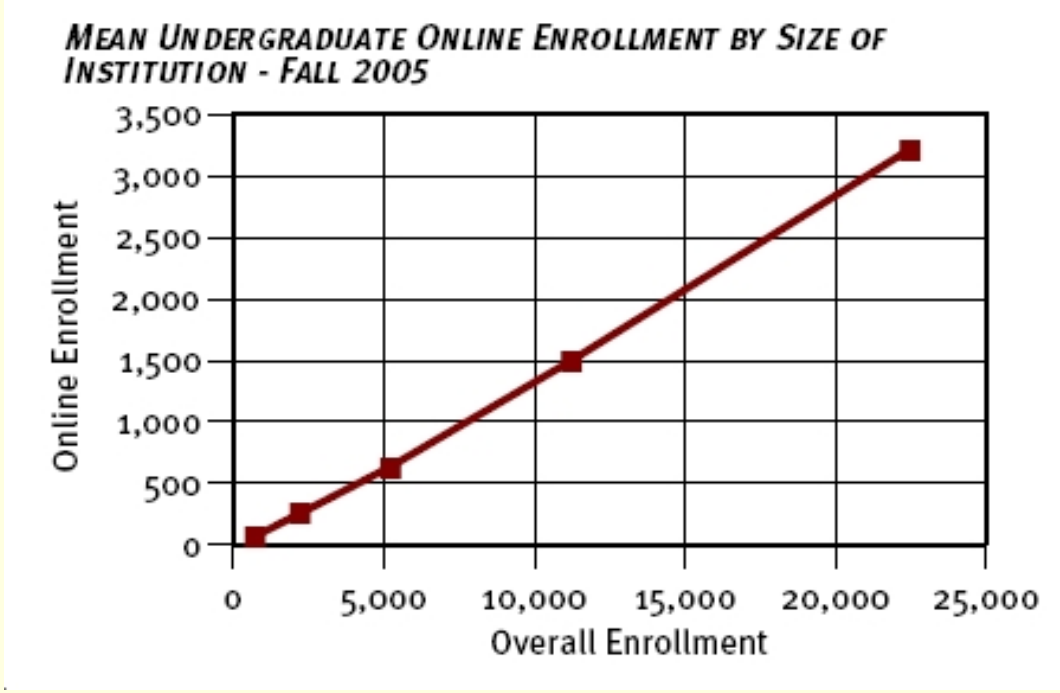
108 total

Courses from MIT and Others



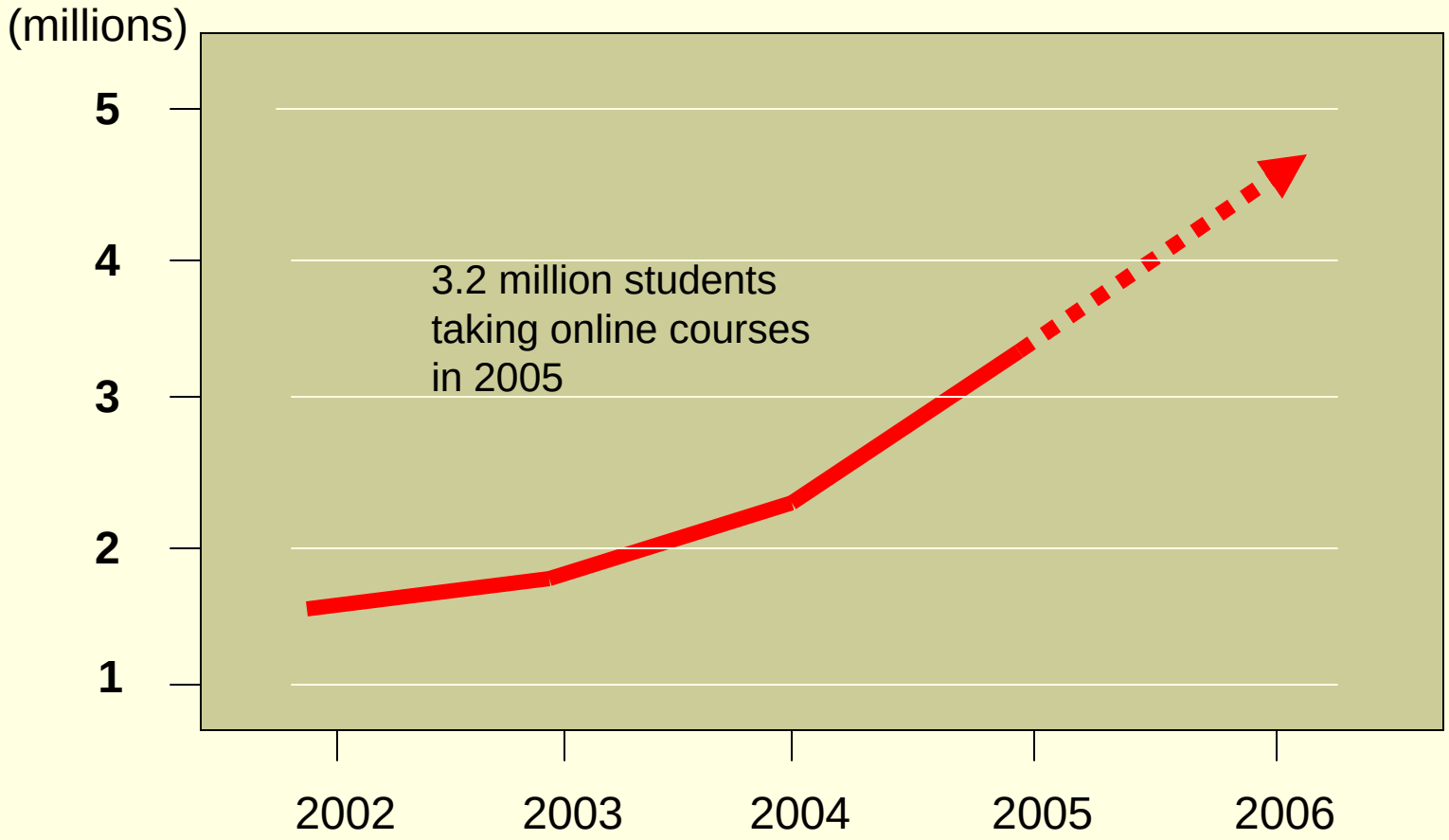
Online Today…

- 3.2 million students taking at least one online course in fall 2005 -up from 2.3 million in 2004



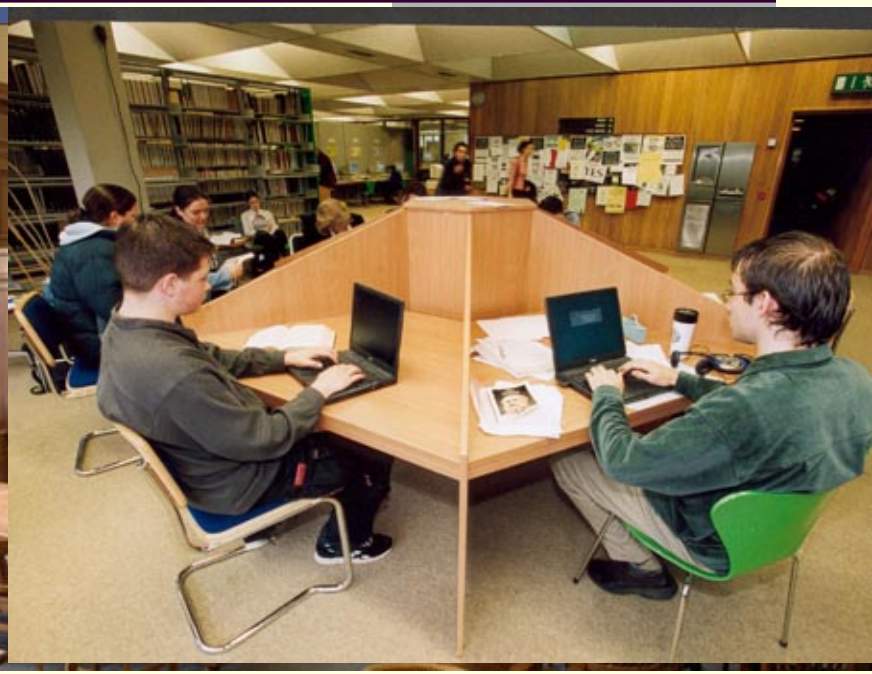
- 2/3 of the largest higher education institutions offer fully online programs

Growth of Online Enrolments



The Sloan Consortium

Libraries too have changed…



Emerging Technologies

- User Created Content
- Social Networking
- Mobile Phones
- Virtual Worlds
- Emerging Forms of Publication
- Multiplayer Educational Gaming

TOMORROW (1 year or less)

- User-Created Content

  http://weblogs.elearning.ubc.ca/textologies/links.html

- Social Networking

  http://www.ratemyprofessors.com

A Virtual Keyboard for Adult Fingers!

Second Life http://www.secondlife.com

Second Life, a virtual world, currently has over 100 educational institutions with virtual presence, including Harvard and Stanford. *Second Life* provides students an opportunity to use simulation in a safe environment to enhance experiential learning, allowing individuals to practice skills, try new ideas, and learn from their mistakes safely and without impacting life work projects.

http://www.youtube.com/watch?v=JS2JT9IV3CM

Video Games

Video games have tremendous potential for creating learning opportunities. A recent UK study from Teachers Evaluating Educational Multimedia has shown that simulation and adventure games - such as *Sim City* and *RollerCoaster Tycoon*, can help develop children's strategic thinking and planning skills.

Video Games

Currently, Starbucks and the environmental organization, Global Green USA has created an online video game, *“Planet Green Game”,* to show players ways to combat global warming and influence legislators to take action against global warming. http://www.planetgreengame.com

http://www.planetgreengame.com - Planet Green Game - Microsoft Internet Explorer
TAKE ACTION
ABOUT GLOBAL WARMING
ABOUT THE GAME
Planet Green Game
end game
instructions
send to a friend
POP QUIZ!
Evergreen High School needs to be turned into a green school.
You will be given 5 questions. Answer each question as quickly as possible for the best score.
The wrong answers will fade away revealing the correct answer. Each correct answer will add a green feature to the school.
START QUIZ>
GLOBAL SOLUTIONS
Zen
TOTAL SCORE
0
TRANSPORTATION
HYBRID
KEY DESTINATIONS
0 of 6
BONUSES FOUND
0 of 10
FUEL
exit challenge
music off
Starbucks Coffee Company in collaboration with Global Green USA
© 2007 Starbucks Corporation. All rights reserved.
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TOMORROW (2-3 years)

- Mobile Phones

  http://my.hamilton.edu/magazine/2005/spring-summer/vidblinks.html

- Virtual Worlds

  http://muppets.rit.edu

TOMORROW (4-5 years)

- New Scholarship and Emerging Forms of Publication

  http://www.plos.org (Public Library of Science)

- Massively Multiplayer Educational Gaming

  http://www.gridtoday.com/grid/944856.html

Conclusion…

- Given what we now know, the question is no longer whether online education is better or worse then classroom education.
- The question is not whether or not online has introduced incremental or transformative improvements in education even though I argue for the transformative view.
- The question is…

  How quickly can true innovation be introduced in higher education?

Conclusion…

Subsidiary questions…

- Are we prepared to alter faculty review and faculty reward processes to be compatible with new forms of scholarship?
- Are we prepared to meet the growing expectation to deliver content via mobile and personal devices?
- Can we align faculty views of technology with student views?
- Are we, as educators, prepared to meet the challenges posed by the Internet and online education?

The Horizon Report 2007

Conclusion…

and…

Will innovation be in time to meet the huge demand for higher education?

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