New Technology-based Models for Post-secondary Learning

Chris Dede
Harvard University
Chris_Dede@harvard.edu
http://isites.harvard.edu/chris_dede

Questions for Part A

- What advice would you provide to the institution's senior leadership team about ways to create constructive dialogue between DIT advocates and critics, both faculty and students?
- How can the senior leadership team best assess the impact on and investment needed for DIT in curriculum reconfiguration, faculty professional development, and technology infrastructure?
- What kinds of evidence about improvement in learning, retention, employment, and recruitment would best inform the senior leadership team about the degree to which the DIT initiative is effective?
- What level of success would justify a significant institutional commitment to the DIT approach?

Questions for Part B

- How can the institution determine whether DIT undercuts its mission or is a better way to achieve its goals, given shifts in the larger societal and competitive contexts?
- How can the institution assess longer-term implications of a different student mix, based on shifts in credentialing and degrees, as well as prospective student response to a DIT "signature"?
- How can the institution evaluate the veracity of concerns about DIT's impact on faculty research time and inefficient student learning?
- How can the institution maximize the value and use of student data while also protecting privacy?
- How does DIT shift the number and type of students who are disadvantaged by forms of instruction that are not suited to the ways they learn?

Key Take-Away Ideas

- Digital technologies are not innovations themselves, but catalyze deeper content, more active forms of learning, more authentic assessments, and more links between classrooms and life.
  - This has implications for "massive" learning
- It's important to assess new teaching methods in terms of the full range of outcomes they enable
  - "Big Data" is important, but institutions must show benefits outweigh risks.
- As an instructor, using technology to innovate, rather than automate, involves unlearning as well as learning

What is the "business" of your institution?

Evolution, Transformation, and Disruption

- Evolution: incremental changes to slowly alter current model
- Transformation: Leaps to major variations competitive with current model
- Disruption: Undermine current model through non-competitive, unfettered development

Knowledge Diffusion (Rogers)

- Compatibility
- Simplicity
- Trialability
- Observability
- Opinion leadership

Proof of Effectiveness
Transformation

Disruptive Innovation Theory

Why Successful Companies Go Out of Business

- *Sustaining innovations* are incremental improvements in a product
- *Disruptive innovations* offer a new product initially not as effective as what is currently sold, but immediately meeting a specialized need (alternative is non-consumption) and potentially better in the long-run
- Over time, the disruptive product drives out the standard product (e.g., mini-computers)

Transformation via Disruption

Disrupting Class **Christensen, Horn, & Johnson, 2008**

My Altered Version

- *Schooling* is the sustaining innovation (based on industrial model)
- *Customization* is the disruptive innovation (e.g., individual human tutors and the 2-sigma effect)
- Customization in *online learning* is the initial product that competes against non-consumption

– **Inclusive, customized learning – based on much more distributed "teaching" – is the innovation that forces schooling to adapt**

The Promise of MASSIVE

- Serves a broader range of learners
  - increased human capital
  - greater diversity in co-learners
- Wider opportunities for social capital and for links to workplace and life
- Self-improving via research and continual feedback
- Excellent return on investment by learners and by society

If effective (mastery, full range of skills)

Rethinking Educational Processes

- Credentialing/certification based on competency rather than time
- Many sources of accredited learning, based on alternative business models and new marketplaces
- Continuous improvement via analytics applied to rich databases and embedded A/B experiments
- Generic tools and media repurposed for learning

Inputs to Outcomes

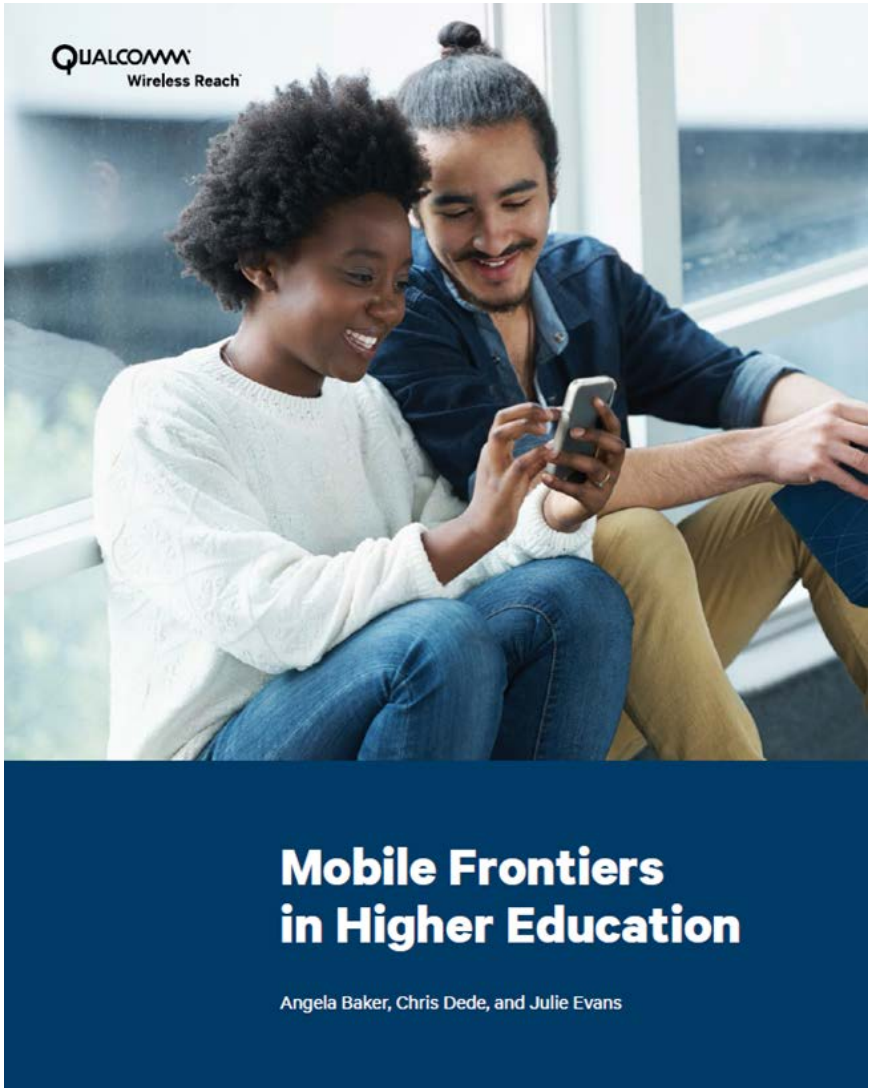
- Reward not just for output-based performance—as in, when a student completes a course—but for real learning outcomes independently verified.
- Allow students to demonstrate competency through assessments, portfolios, or other means *anytime* they complete a course, not just at limited fixed times throughout the year.
- Eliminate input-based rules, such as student-to-teacher-ratios, seat-time, and teacher certification requirements.

Organizational Strategies for Adoption and Scale

- Develop authentic assessments based on outcome objectives
- Select initial innovations carefully so that strong models of learning are implemented
- Emphasize user-friendly interfaces
- Study design strategies for effective media that have scaled
- Accomplish tasks instructors/institutions want to relinquish
- Use organizational development strategies to change culture

New Models for Financing

- Attract 0.5% of the 1B people who are looking for learning experiences over twelve months
- Start a new session of 10,000 people 50 weeks of the year
- $5 a person for a twelve hour experience over six weeks
- $2.5M annual revenue



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New paper examines:

- 8 Essentials for Mobile Learning within higher ed context
- Includes examples from 5 higher ed projects