Higher Education, Disruptive Change and Institutional Innovation

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Innovation & Change Elements

A fundamental shift in the design of higher education
Higher Education, Innovation, and Change

- Higher education faces a future of accelerating change and the need for rapid adaptability by system components.
- Disruptive innovation and change frequently occurs on the margins.

Change themes:
- New technologies
- Disruptive practices and processes
- New metrics of assessment
- Learning vs. education
- Lifelong updates vs 1-time learning
Changing Context of Higher Education

- Changing global context of competition for institutions, students, and employers
- Need for ongoing updating of skills and knowledge for engineering professions
- Changing markets for learning education
- Changing demographics and different needs of learners
- Changing processes and platforms - attention economies, crowdsourcing, collaboration
Institutional Change Agents ("Players")

- Private sector, industry groups, platform developers
- Public Sector (government)
- Associations, Accreditors, Foundations
- Users/consumers/students/employers
- Institutions of higher education (last but not least)
Technology and Approaches

- Online Information and digital technologies facilitate new instructional, engagement, participation and learning approaches
- Massively Open Online Courses (MOOCs) – more 119 currently being offered across platform
- Collaborative learning communities
- Inverted Classrooms
- Gamification/simulations
Ecology of Platforms

- Coursera
- Udacity
- edX
- Udemy
- Fathom
- 2U (formerly 2tor)
- OLI (Carnegie Mellon)
- Blackboard
- Desire2Learn
- Traditional publishers
Disruptive Practices and Processes

- Shifts learner from “object” to “subject” — education not delivered, but learning facilitated in multiple contexts
- Social Learning
- Blended/Inverted learning approaches
- Rethinking Accreditation/Direct Assessment
- Alternative Certification
- “Markets” for Learning Options
- Learning and “knowledge upgrades”
New Metrics of Assessment

- Real time analytics (in online environments)
- Game and collaborative based evaluation
- Classroom “Clickers” (or equivalent in-person devices)
- Peer evaluations
- Crowdsourced reviews
Experimental Learning Modes

- MOOC open model popular – but sustainable business model being worked out
- Selectivity does not necessarily equal quality
- Technological platforms facilitate adaptive learning
- Peer learning and forum interaction
- Anytime anywhere learning
- Continuous improvement
Institutional Innovation and Change

- Higher education critical in a competitive global economy
- New policy/new institutions
- New thinking/new tools
- New networks/new partners
Combined Enrollment in Georgia Tech Coursera MOOCs: 323,456
GT and Future of Higher Education

- Future of GT engineering education: online and learner centered methods
- Problem based learning & design based approaches
- Capstone Expo Apr 25th - http://www.capstone.gatech.edu/?page_id=986
- GATES FOUNDATION awarded funding to develop 3 general education courses – English Composition, Physics 101, and Intro Psychology

- COURSERA – 3,269,809 Coursera students worldwide
  - 337 Coursera MOOCs, 62 university partners
  - 13 GT Coursera MOOCs: enrollment of 323,456
- UDACITY and edX – in discussions
- Professional Education at GT
“Never let formal education get in the way of your learning.”

~ Mark Twain

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