IOWA STATE UNIVERSITY

Online Learning Initiatives at Iowa State University

Ralph Napolitano

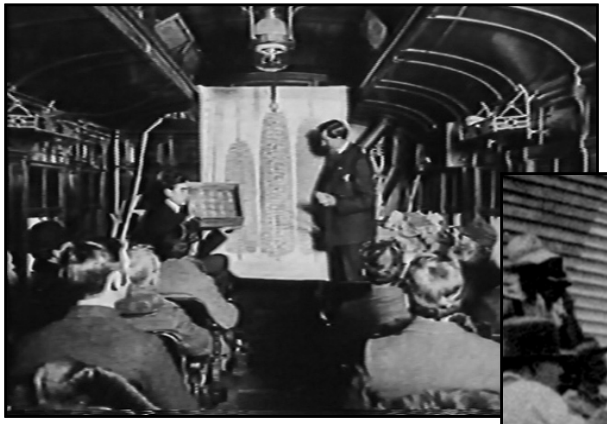
Associate Director for Online Learning

Center for Excellence in Learning and Teaching

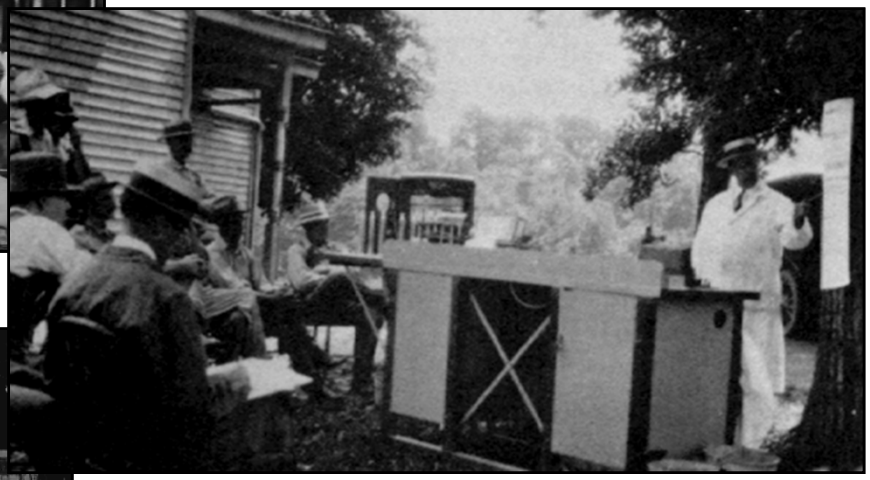
Alan and Julie Renken Professor

Department of Materials Science and Engineering

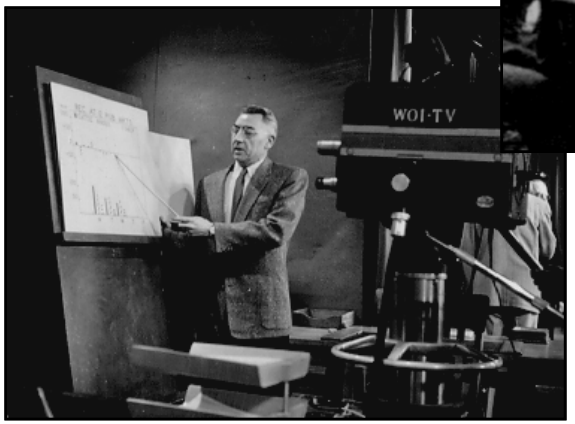
Past: A Legacy of Distance Education



Seed Corn Gospel Train (1904-1906)
"Modern Science of Corn"
50 stops, ~3000 farmers



Regional short Courses e.g.
"Manure Handling" (1905)
~250 farmers



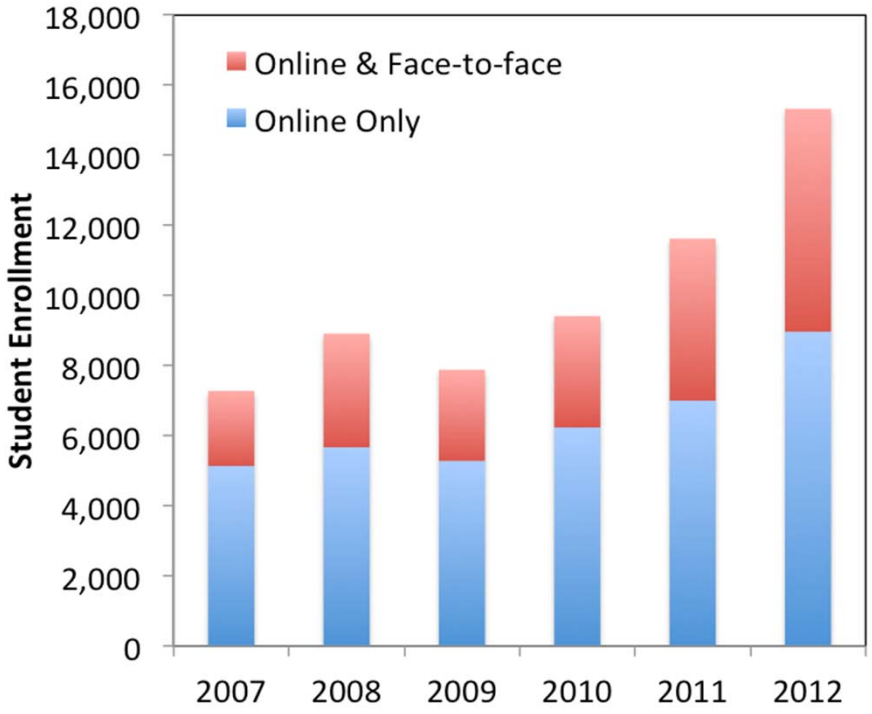
WOI: (1920s -)
"University of the Air"

The networked classroom
(1990-2000s)

Present: Online Learning – Distance/Campus

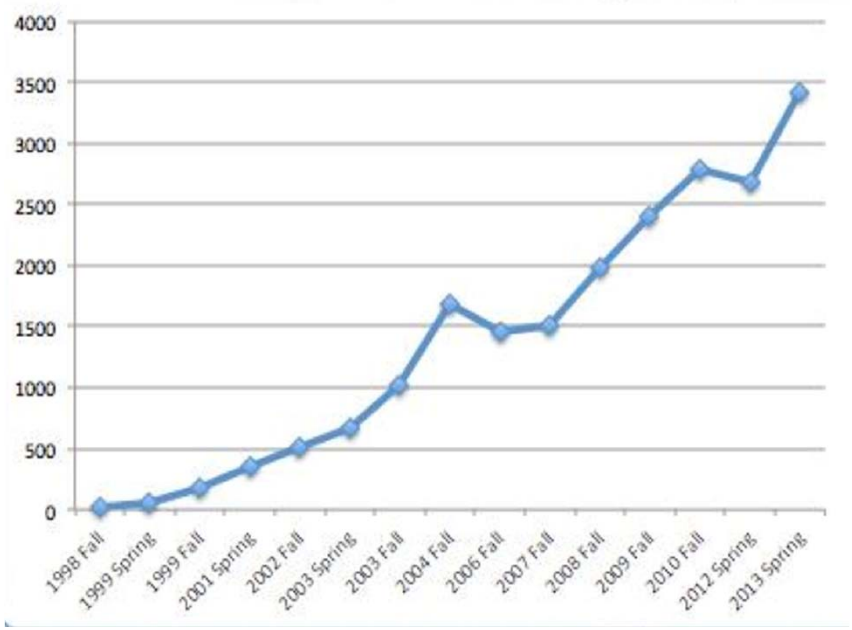
Online Programs - 2012

- Bachelor of Science – 1
- Certificates – 21
- Master of Science – 24
- Doctor of Philosophy – 2

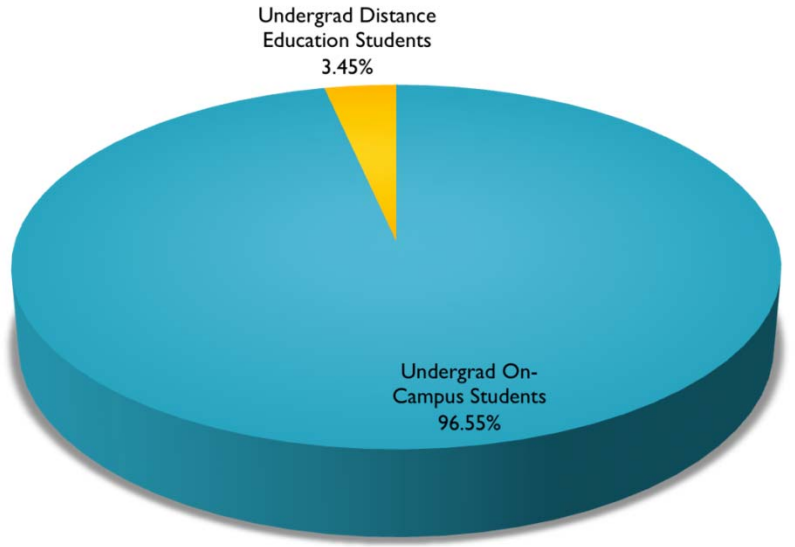


Present: Online Learning – Distance/Campus

Online Learning Management System



Spring 2013
LMS Enrollment



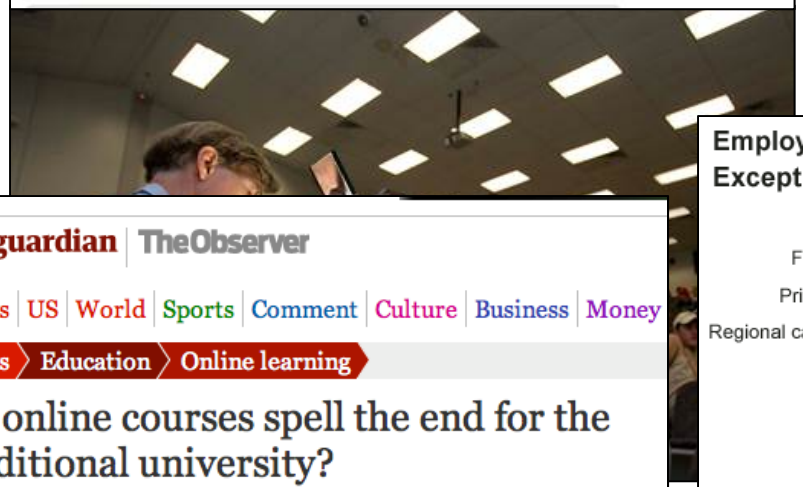
(includes 75% of total SCH)

Online Learning in the News

Education on NBCNEWS.com

Monstrous class sizes unavoidable at colleges

Nobel Prize-winning prof calls for reform, says huge classes cause damage



June 17, 2013

Giving Employers What They Don't Really Want

Brian Taylor for The Chronicle

By Robert J. Sternberg

Often what we think other people think is not what they think. For example, Michael Barnes and I conducted a study some years ago, published in the *Journal of Personality and Social*

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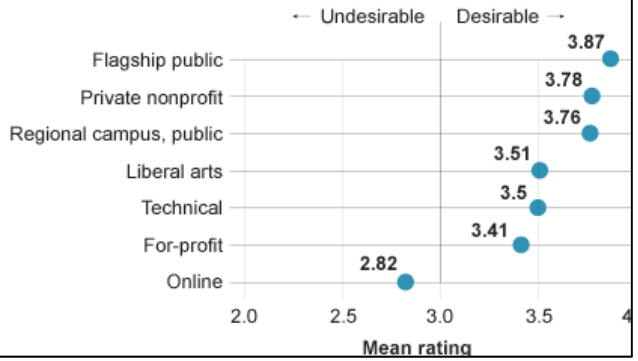
News › Education › Online learning

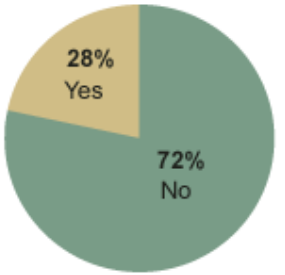
Do online courses spell the end for the traditional university?

Publishing, music, shopping, journalism – all revolutionised by the internet. Next in line? Education. Now US academics are offering world-class tuition – free – to anyone who can log on, anywhere in the world, is this the end of campus life?

Employers Prefer All Types of Colleges—Except Those Online



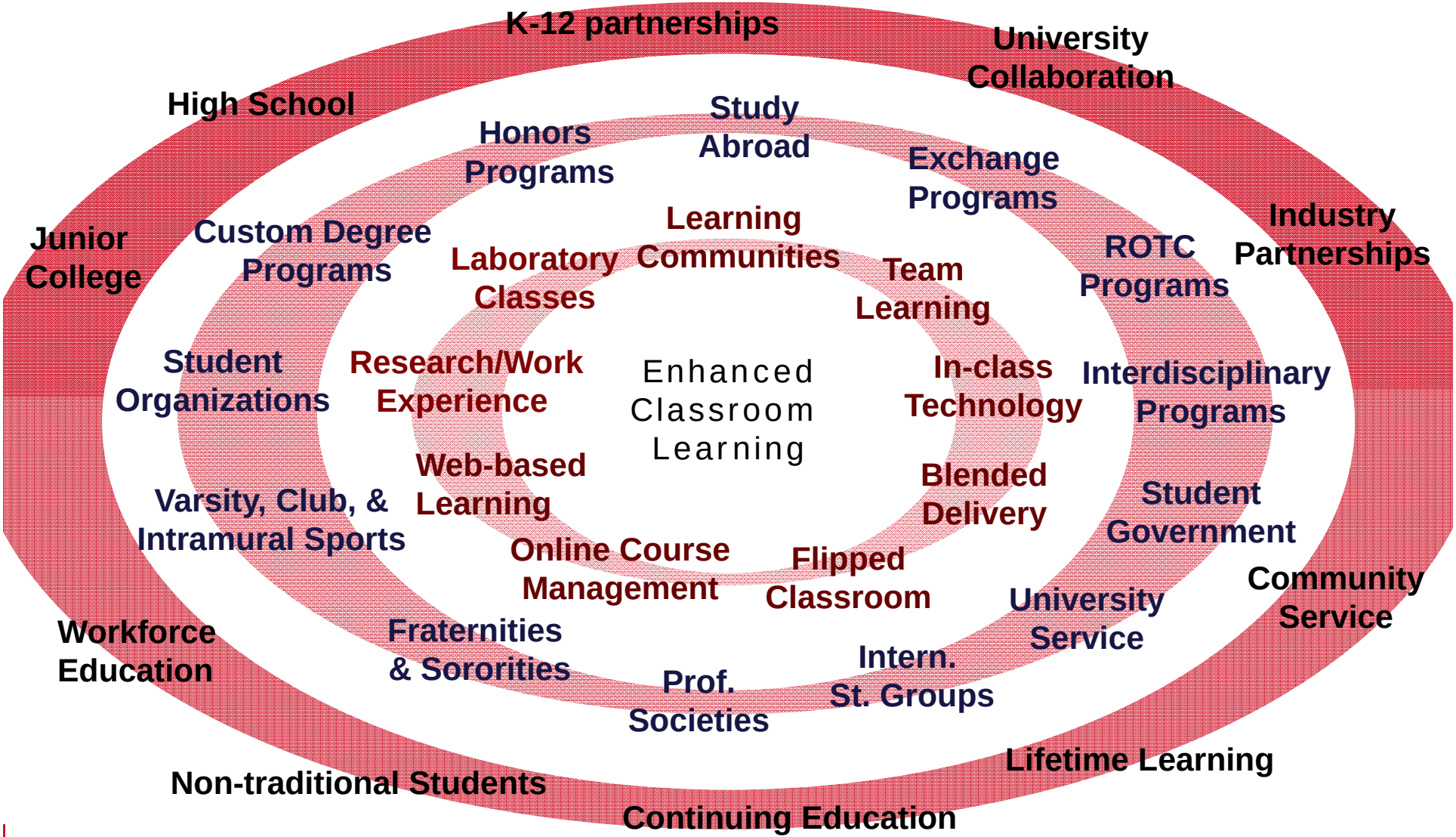
Do you believe students who succeed in your MOOC deserve formal credit from your home institution?



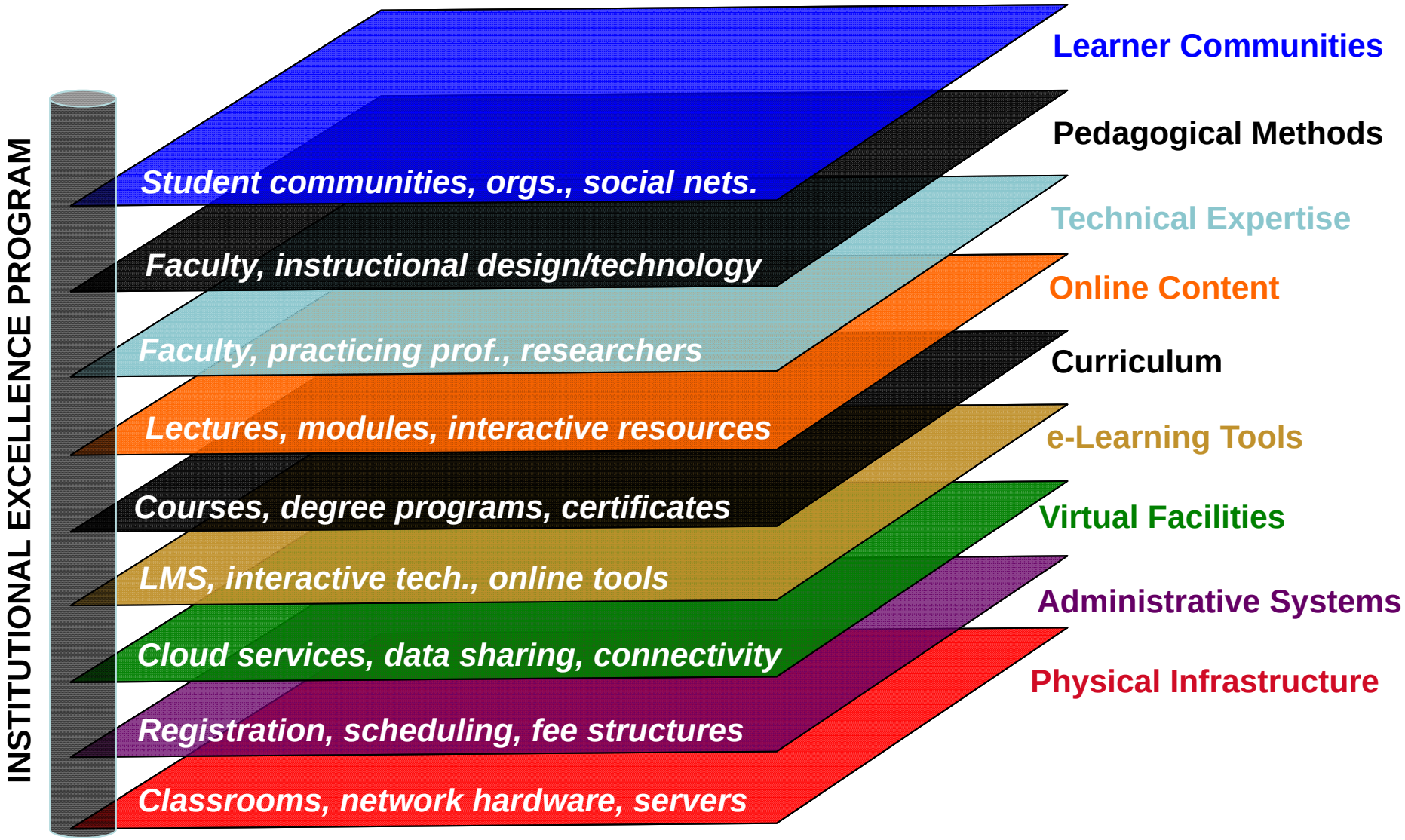
Let’s Rethink This

- How can online learning technologies be integrated to enrich the student experience – on and off campus?
- How can e-learning serve to improve quality, outcomes, and efficiency by increasing high-impact contact time and student engagement?
- What new and broader roles can universities assume through online delivery and e-learning platforms?

How is Online Learning Best Utilized?



E-learning Ecosystem



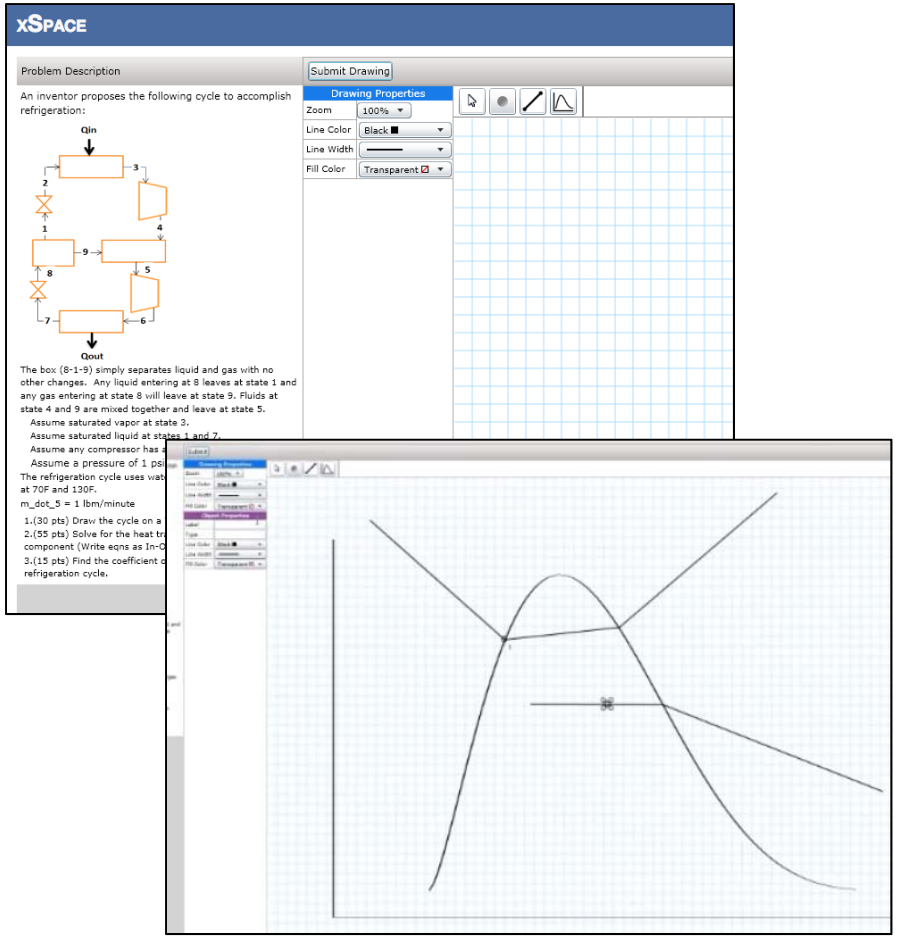
Vision: Provide Clear Value to Every Student

Current initiatives

- Accommodating high-enrollment and large classes
- Blended learning – hybrid and flipped classes
- Team-based learning
- Shared classroom resources
- Cross-university resources
- Mobile technology and social media
- Online technology solutions for lab courses
- Increased online offerings and program flexibility
- Student and faculty support in online learning
- Quality and continuous improvement
- Learning ecosystem needs assessment

Highlights

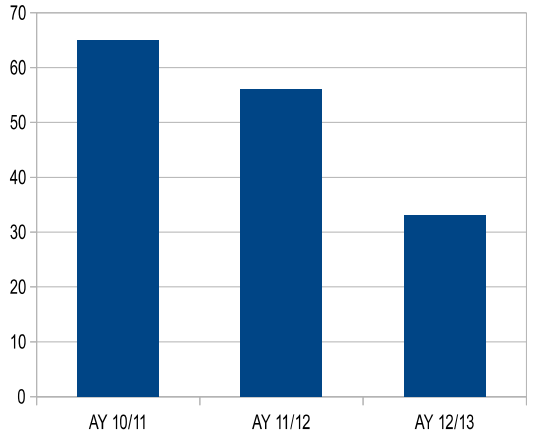
- Online tools for thermodynamic problem solving and evaluation
- Mini-grants for online course development



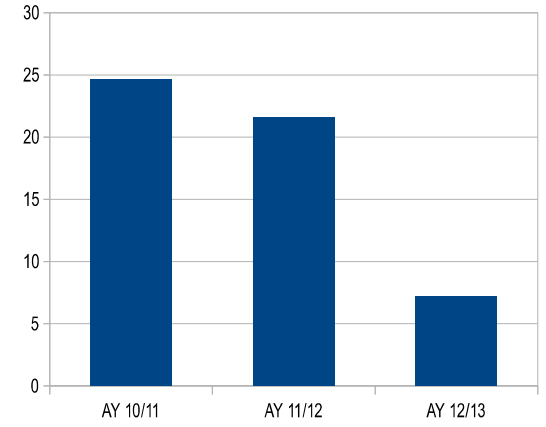
Improving Student Success in Math

- Coordination between sections for exams, quizzes, homework
- Simplified, streamlined syllabi for deeper coverage
- Consistent content between face-to-face and online sections; all lectures on screencast

Combined DFX rate of Math 140 and 142



Combined drop rate of Math 140 and 142



Coming this Fall…

- **Curriculum**: New online courses and programs
- **Quality**: Comprehensive institutional excellence program for online learning
- **Visibility**: A streamlined and unified web presence
- **Innovative design**: New educational products and delivery methods
- **Open access education**: A plan for MOOCs
- **Cyclone e-Nation**: Professional programs, alumni, outreach, etc.