Online Learning Initiatives at Iowa State University

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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

[Bar chart showing student enrollment from 2007 to 2012, with online and face-to-face enrollments indicated.]
Present: Online Learning – Distance/Campus

Online Learning Management System

Spring 2013 LMS Enrollment

Undergrad Distance Education Students: 3.45%
Undergrad On-Campus Students: 96.55%
(includes 75% of total SCH)

IOWA STATE UNIVERSITY
Online Learning in the News

Monstrous class sizes unavoidable at colleges
Nobel Prize-winning prof calls for reform, says huge classes cause damage

Giving Employers What They Don't Really Want
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

Employers Prefer All Types of Colleges—Except Those Online

<table>
<thead>
<tr>
<th>College Type</th>
<th>Undesirable</th>
<th>Desirable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flagship public</td>
<td>3.87</td>
<td>3.76</td>
</tr>
<tr>
<td>Private nonprofit</td>
<td>3.87</td>
<td>3.76</td>
</tr>
<tr>
<td>Regional campus, public</td>
<td>3.51</td>
<td>3.41</td>
</tr>
<tr>
<td>Liberal arts</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>Technical</td>
<td>2.82</td>
<td></td>
</tr>
<tr>
<td>For-profit</td>
<td>3.41</td>
<td></td>
</tr>
<tr>
<td>Online</td>
<td>2.82</td>
<td></td>
</tr>
</tbody>
</table>

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

- Yes: 28%
- No: 72%
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?
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](chart1.png)

![Combined drop rate of Math 140 and 142](chart2.png)
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.