Academic Program Innovation

Redesigning Offerings to Expand Access and Improve Outcomes

Academic Affairs Forum
1. The Innovation Imperative
2. What Students Are Looking For
3. A Framework for Program Innovation
4. Examples of Innovative Programs
Challenges to the Traditional Model

A Changing Environment Forces a Reexamination

**The Traditional Academic Model**

*Student Population*
- Residential education
- 18-24 year old students who attend full time
- Selective admission of academically prepared students

*Instruction*
- Daytime face-to-face instruction during academic terms
- Comprehensive academic program offerings
- Broad general education requirements taught by faculty
- Most instructors tenure track faculty promoted based on scholarship

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Winners and Losers

Students Move to Health & Engineering, Away from Education & Humanities

Change in Number of BA Degree Completions by Major Group, 2007-2015, All Institutions

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<tr>
<th>Major Group</th>
<th>Change in Number of BA Degree Completions</th>
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Source: EAB analysis of IPEDS data.
In Search of ROI

The Role of Career Outcomes

Study shows 8.7% decline in humanities bachelor’s degrees in 2 years (Inside Higher Ed, 2016)

Meet The Parents Who Won’t Let Their Children Study Literature (Washington Post, 2016)

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The Six Drivers of Engagement

1. Professor that excited them about learning
2. Professors who cared about them as a person
3. Jobs or internships where they applied what they were learning
4. Mentor who encouraged them to pursue their goals and dreams
5. Worked on a long-term project
6. Extremely involved in extra-curricular activities

Source: Gallup Engagement Index; www.gallup.com.
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My Undergraduate Physics Experience

Physics Education Back in the Day

- Lectures by eminent physicists
- Labs supervised by grad students
- Weekly problem sets
- Undergraduate research opportunities
- Pre-professional training— as long as the profession you seek is academic physicist

Image Source: http://infoproc.blogspot.com/2014/12/feynman-lectures-epilogue.html
Physics Education Today
A Broad Spectrum of Innovations in Teaching and Career Support

Goals
- Engage more diverse students
- Increase course enrollments and majors
- Improve learning outcomes
- Expand career opportunities

Active, Problem-Based Learning
- SCALE UP
- TEAL
- Studio Physics
- Simulations
- Collaborative Learning (Mazur)

Experiential Learning
- Industry Mentors
- Internships
- Coops
- Hackathons

Cross-Disciplinary Opportunities
- Medical Physics
- High Performance Computing
- Professional Science Masters

Online Options
- Physics MOOCs
- Virtual Labs
- Adaptive Learning
- Remote Labs

Sources: Mazur Group, http://mazur.harvard.edu/education/educationmenu.php; EAB interviews and analysis.
Redesigning Academic Programs
A Framework for Improving Access and Career Outcomes

Academic Program Features

Student Characteristics
What Factors Are Critical to Expand Access?

Accessibility Drivers

Core Academics

Outcomes Drivers

Career Requirements
What Factors Will Increase Career Success?

Source: EAB interviews and analysis.
Redesigning Academic Programs
A Framework for Improving Access and Career Outcomes

Student Characteristics
What Factors Are Critical to Expand Access?
- Mobility
- Schedule Flexibility
- Career Stage
- Financial Resources
- Academic Preparation
- Prior Experience/Credit
- English Language Proficiency

Accessibility Drivers
- Modality
- Schedule
- Location
- Duration
- Pathways
- Admissions
- Stackability
- Pricing
- Marketing

Core Academics
- Academic Discipline
- Courses
- Curriculum
- Pedagogy
- Instructors

Outcomes Drivers
- Academic Reputation
- Content
- Skills
- Experience
- Reflection
- Capstone Project
- Career Coaching

Career Requirements
What Factors Will Increase Career Success?
- Recognizable Credential
- Occupation Specific Knowledge
- Foundational Skills
- Technical Skills
- Relevant Experience
- Lifelong Learning

Source: EAB interviews and analysis.
Understanding Student Needs

Student Characteristics

What Factors Are Critical to Expand Access?

- Mobility
- Schedule Flexibility
- Career Stage
- Financial Resources
- Academic Preparation
- Prior Experience/Credit
- English Language Proficiency

- Which student segments does the program currently serve?
- What aspects of program delivery are a challenge for the current students?
- Which student segments could benefit from the program if it were delivered in new ways?
- How much could demand for the program be expanded by changing or adding features?
Aligning Outcomes with Career Requirements

- Which careers/occupations do graduates of this program pursue?
- What are the most important qualifications in those careers?
- To what degree does the program help students meet those qualifications?
- What program features would students and employers find most valuable?

Career Requirements

What Factors Will Increase Career Success?

- Recognizable Credential
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- Relevant Experience
- Lifelong Learning
Building New Programs on Existing Courses and Capabilities

- Internship
- Content from Another Discipline
- Capstone Course
- Work Study Leadership Program
- Streamlined Curriculum to Enable Dual Major or 3+2
- Study Abroad Experience
- Adjunct Instructor with Industry Experience
- Alumni Mentor
- Career Exploration Course

Academic Discipline Courses Curriculum Pedagogy Instructors
Core Competencies and Institutional Barriers to Program Innovation

Program innovation depends on the institution’s ability to:

- Recombine Existing Courses and Services
- Expand Faculty Capabilities
- Identify Opportunities
- Develop External Partnerships

But most institutions face internal barriers including:

- Disincentives for sharing resources across academic units
- Lack of expertise/resources in critical areas
- Dearth of useful information about demand and cost
- Inability to create long-term external collaborations

- Budget model
- Org structure (AA, EM, COE, Student Life)
- Scheduling/Staffing
- Program approval process
- Departmental hiring, tenure and promotion
- Course/curriculum refresh
- Technology support/IT infrastructure
- Advising
- Marketing support
- Services for non-traditional students
- Market research
- Program demand analysis
- Cost/capacity analysis
- Long term enrollment planning
- Credit articulation
- Employer partnerships
- Vendor partnerships

Source: EAB interviews and analysis.
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Specializing Without Sacrificing Breadth

Repackaging Liberal Arts Majors (and Minors) for Today’s Careers

**Susquehanna University**

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**English → Publishing and Editing**

- Professional in residence teaches industry specific practicum
- Students required to complete internships in relevant industry
- Core remains the same as English Literature with a few new major courses added
- Program specific capstone

**Prepares Students for Careers in:**

- Editing
- Marketing
- Public Relations
- Arts Journalism
- Library and Information Science
- Media Management
- Production Management
- Communications

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**95%**

School of Arts and Sciences grads employed or continuing education

**80%**

Increase in English enrollments after 2 years

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**Other Career-Oriented Minors Launched Using Alumni Employment Clustering**

- Arts Management
- Museum Studies
- Applied Language
- Public Policy
- Professional and Civic Writing

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Source: Career Development Office, Susquehanna University; “Course Catalog: English – Publishing & Editing”, Susquehanna University; Department of English & Creative Writing, “Publishing & Editing”, Susquehanna University; EAB interviews and analysis.
Meeting the Liberal Arts Halfway

Mount Holyoke’s Nexus Program

Professionally Oriented Tracks Supplement Liberal Arts

- Focused on emerging fields:
  - Development studies
  - Engineering
  - Global business
  - Nonprofit organizations
  - Data science
  - Educational policy and practice
  - Law, public policy, and human rights
- Prepare students for internships, research projects, careers
- Tracks run by interdepartmental faculty advisory groups or rotating chairs

Pre-experience Programming

3 Academic Courses

Practical Experience

Curriculum-to-Career Course

Presentation on Experience

9 Nexus tracks available

100 Students declared a track in 2015

Preselected course options tailored to track

Related internship, research project, or summer job

Intersession Professional Skills Boot Camp

- 4-week summer or winter session
- Team projects simulate the work environment
- Basic business, professional, and entrepreneurship skills
- Initial target: students at liberal arts colleges and elite universities

6-day boot camp required for Professional Program Certificate

6-day boot camp, component of Liberal Arts Plus co-curricular program
Joint Program Across Two Units

Complementary Professional Programs

ELON UNIVERSITY

Business German Program

School of Business + Department of Foreign Languages

- Open to all majors
- Provides language and cultural skills for students to succeed in a German professional setting
- Assignments based on real-life scenarios
- Online components and biweekly labs

Integrating Disciplines

Stanford

CS + Humanities = Bachelor of Arts and Science

Pilot launched in 2014 with Music and English

- Integrated coursework, including senior capstone requiring students to demonstrate an understanding of how the disciplines fit together

14 Departments Participating

- English
- Music
- Classics
- French
- History
- Spanish
- Italian
- Linguistics
- German Studies
- Philosophy
- Art Practice
- Comparative Literature
- Iberian and Latin American Cultures
- Slavic Languages and Literatures

Additional Opportunities Through Program

- Study abroad in Germany
- Complete an internship or other career development opportunity
- Take the Zertifikat Deutsch für den Beruf, internationally recognized examination of German language ability

A Problem Worth Solving

The University of Montana’s Global Leadership Initiative

GLI’s Global Themes

- Culture and Politics
- Natural Resources and Sustainability
- Public and Global Health
- Social Inequality and Human Rights
- Technology and Society

Year One: The Context of Global Challenges
- Large cohort class to introduce them to the five Global Themes
- Small, 3-credit seminars on various Global Themes
- Faculty mentors help students plan next three years

Year Two: Models of Leadership
- One 2-credit seminar on models of leadership
- Weekend retreat focused on leadership skills
- Fellows select a Global Theme area and begin to develop their capstone idea in group forums

Year Three: Beyond the Classroom
- Three upper-division credits of applied learning in their Global Theme
- Funding for travel or research is available by application

Year Four: The Capstone
- Fellows complete an interdisciplinary capstone project on their Global Theme in small teams

Source: EAB interviews and analysis.
Following Student Innovation

Independent Majors Reveal Untapped Enrollment Opportunities

"Build Your Own" Majors Drawn from Existing Offerings

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<th>Foreign Language</th>
<th>History</th>
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<th>Anthropology</th>
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University Launches Repeat Independent Majors as New Programs

- Academic resources already in place
- Interdisciplinary construction makes program unique
- Independent majors already approved by senate, avoid lengthy approval process

Former Independent Majors Now AU’s Top-Yielding Programs
- Communications, Legal Institutions, Economics and Government
- Homeland Security

Source: EAB Interviews and Analysis.
It’s All in the Delivery

Format Increasingly Essential for Program Success

A Tour of Emerging Program Design Options

**Accelerated**
*Shorter than a typical academic program*

- Microcredentials
- Mini-MBA
- Second Bachelor’s
- Bootcamps

**Modular**
*Short modules that combine into credentials*

- DIY Programs
- Modular Master’s
- Tiered Content Portfolio

**Experiential**
*Integrated opportunities to build skills*

- Client-Based Projects
- Team Capstone Projects
- Virtual Internships

**Demonstrated Mastery**
*Progress based on assessment of competencies*

- Project Based Master’s
- MOOC to Master’s
- Course to Assessment
- Competency-Based Education

Source: EAB interviews and analysis.