Engaging Every Discipline in Undergraduate Research, Scholarship & Creative Activity

Jenny Shanahan, Ph.D.
Director of Undergraduate Research at Bridgewater State University, MA
The Benefits of Participating in Undergraduate Research for Students of any Major

Retention & Persistence to Graduation

Critical Thinking & Problem-Solving

Written & Oral Communication

Disciplinary Excitement

Logic & Analysis

Leadership

Collaboration

Intellectual Curiosity
Students who learn research skills do better than their peers in the areas we—and employers—value most.
Half of employers surveyed in 2012 by *The Chronicle of Higher Ed* and public radio’s *Marketplace* said they had trouble finding college grads qualified to fill positions.  

(Fischer, 2013)
They say bachelor's-degree holders lack basic proficiencies:

- Adaptability
- Communication skills
- Ability to solve complex problems

(Fischer, 2013)
"It's not a matter of technical skill but of knowing how to think."

Skill areas in which college graduates are said to be lacking

Written and oral communication
Decision-making
Problem-solving
Analysis

Research skills
Applying knowledge to new situations
Adaptability
Managing multiple priorities

(Fischer, 2013)
Compare those skill areas with those of students who engage in research

Creativity
Critical thinking
Independent thought
Logic
Problem solving
Disciplinary excitement
Intellectual curiosity
Analysis
Communication
Leadership

(Bauer & Bennett, 2003; Brownell & Swaner, 2008; Kuh, 2008; Lei & Chuang, 2009)
Given the outstanding benefits of UR, we cannot afford to leave out some disciplines, especially those with large numbers of majors.
Which disciplines on this campus have not been involved in URSCA? What are the barriers to their participation?
An inquiry or investigation conducted by an undergraduate that makes an original intellectual or creative contribution to the discipline
Characteristics of Undergraduate Research

1. **Mentored by faculty** with a focus on student learning process
2. **Original**: More than a report on others’ research; a meaningful contribution by the student
3. **Acceptable in the discipline**: Appropriate and recognized disciplinary methods/processes
4. **Disseminated/Shared**: Final product is reviewed by peers, experts, and/or community

(Malachowski, 2012)
Strategies for Engaging All Disciplines in URSCA

1. Define/Characterize URSCA in ways that truly include the scholarly work of any discipline.

Language matters!

Undergraduate Research, Scholarship, and Creative Activity

“Mentored” rather than “Collaborative”

Methods/Process, Research Question or Project Goal
Strategies for Engaging All Disciplines in URSCA

2. Model your campus URSCA symposium on NCUR.

Modes of Presentation matter!

- Oral presentation panels
- Performances and lecture-recitals
- Art displays and gallery talks
3. Get some key faculty to NCUR or a regional URSCA conference that is truly multidisciplinary.
Strategies for Engaging All Disciplines in URSCA

4. Advocate for URSCA mentoring to *count in faculty workload* and *count as excellence in teaching* in tenure & promotion considerations, especially in disciplines in which URSCA does not contribute to faculty scholarship.
5. Advocate for institutional/internal grants to support URSCA in disciplines that do not typically qualify for external funding for work involving undergraduates.
Strategies for Engaging All Disciplines in URSCA

6. Learn about inquiry-based work that students are doing in departments under-represented in URSCA—and *draw the connection* from that work to URSCA.
Faculty who are mentoring URSCA in underrepresented fields stress the importance of **disciplinary models**.
URSCA in Business Management, Marketing, and International Business
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- Business Case Studies
- Market Research/Market Analysis
- SWOT analysis
- Consumer Research/Consumer Attitudes
- Supply Chain Strategies
- Cultural/Social/Legal Practices affecting marketplace
- Inventory/Category/ABC/EOQ Analysis
Examples of Business URSCA Projects in the Curriculum

- Supply Chain Case Studies of national & international companies (e.g., Sysco Systems, Starbucks, Stop & Shop)

- Marketing Plans for local, independent businesses
Examples of Grant-Funded Business URSCA Projects

The Future of the American Aviation Industry in International Markets – A Case Study of the New Bedford Regional Airport

Emma Hao

Inspiration from the Competition Of Taobao and eBay: A Strategy for the E-Commerce Market in China

Yueqiao Chi & Zhoujing Zhou

An Analysis of Chinese High-Speed Rail from U.S. Perspectives

Yuan Chen, Pamela Farias, Corinne Hunter, & Neala Menz
URSCA in Elementary, Secondary, and Special Education
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- Student-Teachers’ Action Research
- Innovative Pedagogy/Intervention/Software/Teaching Tool
- Augmentative Communication Device
- Analysis of Archival Research
- Lesson/Unit Design
- Student Case Studies
- Classroom Observations (informed by Lit Review)
Examples of Grant-Funded Elementary Education URSCA Projects

The Pursuit of American Independence: Integrating Children’s Literature into Social Studies Curricula
Nicole Coughlin

The Social Construction of Literary Understanding in a 3rd Grade Classroom during Interactive Read-Alouds
Adriann Flint
Examples of Grant-Funded URSCA Projects in Special Education & Communication Disorders

What Was That Again, Congenital Disorder of Glycosylation?

   Janelle Roberts

Speech Fluency in Bilingual Preschool Children

   Jenna DeChristopher
Mathematics
Mathematics

- Mathematical models (e.g., using Mathematica algorithms to create models)
- Analyzing/Testing mathematical theories
- Pattern identification (e.g., of integers, angles, etc.)
- Application of mathematical principles to other areas, such as electronics, biological processes, and art
- Proofs
Graphic Design
Graphic Design

- Students’ own designs based on theme and grounded in theory (“Typography Design: Creating an Ideal Font—Fluid, Uniform, and Appealing”)

- Methodical visual inquiry (“Motion + Time” conceptual inquiry)

- Articulation of student-designer’s purpose and choices

- Analysis of audience needs and context

- Product for students’ portfolios

- Social issues posters/ads
“We do research in order to produce scholarship.”
–Ed Ayers, Historian and President of the University of Richmond
Humanities

- Archives/Museum textual analysis

- Discrete parts of faculty mentor’s scholarship—
  *ranging from research assistantship to analysis of part/some of the texts*

- Interviews of authors & scholars; investigations of cultural material

- Digital Humanities: 
  *creating databases, curating online collections, writing & publishing for the web*

- Translations (with scholarly reflection)

- Digital documentaries
Strategies to Involve Business
Strategies to Involve Education
Strategies to Involve Arts
Reference