Scaffolding Research Skills Across the Curriculum

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Moving URSCA from the Periphery to the Center

Engaged learning experiences are offered predominantly in independent study courses, honors programs, and "boutique" experiences

(Osborn)
Moving URSCA from the Periphery to the Center

URSCA experiences are too often

• Optional or Exclusive—for the few students who have the time, self-confidence, or GPA to pursue special projects

• Missing the very students who could benefit most

• Non-credit-bearing, at least in terms of faculty load

(Osborn)
Integrating URSCA into coursework ensures that all students have opportunities to reap the benefits of engaged learning.
Building URSCA in the Curriculum could mean...

1. Adding or revising inquiry-based assignments

2. Creating new research-intensive or inquiry-based courses

3. Redesigning an entire program to create a research-rich or inquiry-based curriculum
1. Adding or Revising URSCA assignments

- Usually short-term research/creative projects that go beyond “research paper” assignment
- Inquiry-based learning
- Individual or small-group endeavors
- Any discipline and any level of the curriculum
Inquiry-Based Learning

• approaches to learning based on students’ investigations of questions, scenarios or problems, with instructor as facilitator

• not merely “having students do projects,” but encouraging deep, discipline-based ways of thinking and doing

(Stephenson)
“Undergraduate education should adopt the ‘Student as Scholar’ Model throughout the curriculum, where scholar is conceived in terms of an attitude, an intellectual posture, and a frame of mind.

With this framework, not only each research project, but also each course, is viewed as an integrated, and integrating, part of the student experience.”

(Hodge, Pasquesi, Hirsh, and LePore)
Discussion: **Examples of Innovative Research or Creative Assignments You’ve Added to Your Courses?**
Examples of Inquiry-Based Learning Assignments/Units

merlot.org

socrative.com

Journals on Inquiry-based Learning (by discipline)
The key is to provide **varied opportunities** for URSC, in gateway courses as well as senior projects…

allowing students to work with **library archives and online galleries**, to **create wiki files** and **lead class**
2. Creating new research-intensive or inquiry-based courses

Capstones:

- One- or two-semester senior thesis or senior project course
- Research/creative portfolio
- Research methods course

Although concentrated in the last year, preparation begins early
First-Year URSCA projects:

- URSCA projects mentored by upper-division students
- Research-Intensive First-Year Writing
- Campus-based assignments (e.g., Projects double as orientation to campus; Call-to-action on campus issue)

Introductory URSCA skills intentionally developed
Elements of Research-Intensive Courses

- Confronting novel & important ideas
- Collecting and analyzing original “data”
- Applying research to real contexts or problems
- Working iteratively, with frequent and meaningful feedback
- Working collaboratively with prof and peers
- Increasing student ownership over time
- Sharing work in writing and oral presentations
Bridgewater State University of MA
Sculpture 1 course

- Infused creative process with scholarly research
- Students research effective toy design & development in the literature and through interviews at Hasbro (RI headquarters)
- Research findings are applied to modeling and creating toys
- Toys donated to orphanage in Tanzania where professor leads an annual service-learning trip
Literature of the Harlem Renaissance
“Flipped Classroom” course

• Some traditional lecture content accessed online outside of class (podcast lectures, documentary films)

• Most class time spent in active learning:
  – teams of three working on collaborative projects (e.g., wiki pages about authors)
  – research, writing, professor and peer review of drafts
3. Redesigning an entire program to create a research-rich, inquiry-based curriculum
Components of a Research-Rich Curriculum

1. Early and frequent exposure to research opportunities
2. Searching, reading, evaluating primary and/or secondary sources
3. Articulating appropriate research questions with an understanding of context
4. Designing and executing various approaches to a research question
5. Critically interpreting information and utilizing data/texts/information in iterative ways to devise new questions

(adapted from Karukstis and Wenzel)
Components of a Research-Rich Curriculum

6. Solving problems as they arise during a study or investigation

7. Collecting, assessing, and communicating complex information

8. Communicating clearly the nature of the work and its significance

(adapted from Karukstis and Wenzel)
Scaffolding curricula
Scaffolding is a metaphor borrowed from building construction to indicate supports provided early in a process—and gradually removed as progress is made.
St. Mary’s University of Minnesota
Department of English

- Required Senior Thesis for all majors had high rate of DFWI grades & other problems
- Efforts to improve thesis course eventually led to overhaul of entire curriculum
- “Backward Design” (Wiggins and McTighe) curriculum revision created scaffolded research courses—from introductory to content-rich courses, to seminars and theory/methods, to thesis
- Added “gateway” course and graduated, varied research assignments throughout curriculum
An inquiry-based research process taught throughout the curriculum results in

higher assessment scores

greater content knowledge

stronger research skills

than when students “learn” research in one or two Methods courses

(Harkness)
Along with goals for content, critical thinking, writing, etc., develop *goals for research or creative inquiry* for each course in a program, *graduating and interrelating* them from the 100 to 400 level
1. What do we want students to be able to do, particularly in terms of research or creative inquiry, by the time they graduate from our programs?
2. If a capstone project, senior thesis, or senior show represents students’ final stage of undergraduate learning, what are the stages that lead up to it?
3. How does the curriculum, from the first year to the capstone project, constitute a meaningful, consistent initiation into a culture of inquiry in the discipline?
Create curriculum maps to determine at which stage and in which courses those URSCA objectives are **introduced, developed, and mastered**.
Work with colleagues to figure out how to build those URSCA skills, from the first course in the program to a capstone.
Review URSCA Skills Scaffold
(handout)
Also scaffold URSCA skills and writing tasks within each significant assignment—
…outlining the steps an inexperienced scholar needs to take to complete the assignment successfully


