Building Undergraduate Research, Scholarship, and Creative Activities (URSCA)

JULIO RIVERA Concordia University--Wisconsin April 10, 2018



Plan for Today

A little more of my history
 Why undergraduate research, scholarship, and creativity matter
 Challenges with undergraduate research, scholarship, and creativity (URSCA) and faculty workload
 Challenges for your future and final thoughts

How did he get here?

B.A.—Journalism and Theology

- M.A.—Higher Education and Student Affairs
 Ph.D.—Geography
- Carthage (both sides now)
- (both sides now)
- Post-doc-Business



What I do (and have done)

Geo-demographic Analysis using "Big Data"

 Real Estate Value
 Undergraduate research where students ask the counter-intuitive question



The educational benefits of incorporating authentic research in curriculum

WHY WOULD WE DO THIS THING?

Why should we do Undergraduate Research?

Fair Question

- Others will offer a range of reasons (advancing knowledge, building graduate students, etc.)
- Mine come from Student Affairs
- We do it to affect change in students



Research is Good for Students

High Impact Practice

- Biggest Impacts
- **1**st Generation Students
- Underrepresented Groups
- 1st and 2nd year students



High Impact Practices

First Year Seminars and ExperiencesCommon Intellectual

- Experiences

 Learning Communities

 Writing Intensive
- Courses
- Collaborative Projects

Liberal Education CAmerica's Promise

Undergraduate Research Diversity/Global

Diversity/Global Learning

A A C U

- Community Based Learning/Service Learning
- Internships
- Capstone Courses and Projects

High Impact Practices (HIPsbeyond trendy and cliché

Deep Learning

Higher GradesStudent Development

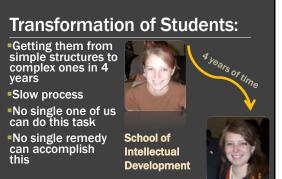
 Intellectual Development



Researchig Based of Carl

 Apprenticeship in learning how to learn
 Transferable knowledge

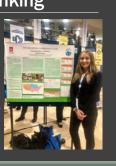
Among all the good things we do for students HIPs are the most profound

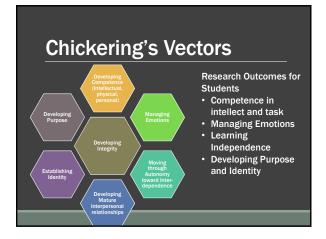


Change in my Thinking

 All these years in the intellectual development camp (still haven't left)

 Finally joined the Education and Identity camp (Chickering)





We are out to affect students

 Intellectual development for sure

- Psychosocial
- Developing <u>Competence</u> (physical,
- intellectual, interpersonal)
- Managing Emotions (anxiety, failure, success)
- Autonomy to Independence (problem solving, initative)

What are the developmental outcomes you want for students?



All Well and Good, but. . .

THE IMPACT IS HIGH, BUT THE RANGE IS LIMITED-OUR LOAD IS HEAVY

Yes–Limited impact for just a few

- Needs to expand beyond our "elite" students to the pedestrian level
- •Needs to be woven into the curriculum.
- What would that look like?
- What if you built an undergraduate research curriculum that looked like this?

Revising existing courses to include scaffolded undergraduate research projects



So What are we talking about?

•Undergraduate Research, Scholarship and Creative Activity is an inquiry, investigation, or creative work conducted by an undergraduate student that makes an original, intellectual, or creative contribution to the discipline.

Process is the key idea

 CUR and the larger URSCA movement is focused on more than just the final output (although important)—the entire process of development is the focus.

Research-rich curriculum

 The prevailing thought is that research is woven into the curriculum (Malachowski & Osborn)
 Expands opportunities for students
 Reexamines the idea of faculty load/work

 Builds out of work from NSF and HHMI grants



Scaffolding



Scaffolding is a metaphor borrowed from building construction to indicate supports provided early in a process—and gradually removed as progress is made

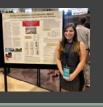
Scaffolding for what?

Senior Capstone/Thesis?

- Independent Research Projects?
- Summer Research?

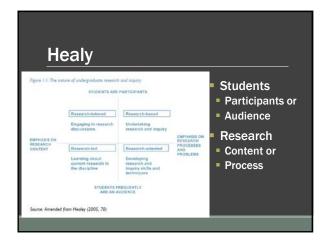
External Research?

Just because?

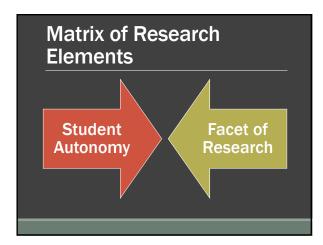


Thinking about models

NO NEED TO BE LIKE THE NATURAL SCIENTISTS



| ckman and Hensel nsider a set of cont | | | ble |
|--|-----------------------|------------------------------|-----|
| Student, process centered | \leftrightarrow | Outcome, product centered | |
| Student initiated | \longleftrightarrow | Faculty initiated | |
| All students | ↔ | Honors students | |
| Curriculum based | \longleftrightarrow | Co-curricular fellowships | |
| Collaborative | \longleftrightarrow | Individual | |
| Original to the student | \leftrightarrow | Original to the discipline | |
| Multi-or interdisciplinary | \longleftrightarrow | Discipline based | |
| Campus/community audience | \leftrightarrow | Professional audience | _ |



| | KSU . | Extent of Students' Autonomy | | | | | | |
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Elements of a Research Rich Curriculum

- Early and frequent exposure to research opportunities
- Searching, reading, evaluating the literature
- Articulating appropriate research questions with an understanding of context
- Designing and executing experimental approaches to a research question
- Employing appropriate instrumentation and techniques

Wenzel & Karukstis

Elements of a Research Rich Curriculum

- Critically interpreting data and utilizing data in iterative ways to devise new questions or experiments
- Solving problems as they arise during an investigation
- Appreciation of ethical, environmental, and safety issues
- Collection, assessment, and communication of data
- Communicating clearly the nature of the work and its significance

Wenzel & Karukstis

Places for Experiences

Adding or revising inquiry-based assignments

Creating new research-intensive courses

 Redesigning an entire program to create a research-supportive, inquirybased curriculum

 (Discipline/Department, General Education, Multidisciplinary)

Places for Experiences

Research connected with practicum/internship experience

- Field observations based on particular theory or in comparison to "best practices"
- Community-based research
- Business Research

Places for Undergraduate Research in the Curriculum

- Archival research
- Policy analyses
- Program evaluation
- •Case studies
- Oral histories
- Secondary Data Analysis (Big Data)
- research

 Literature review / grant writing

Public scholarship

Problem-focused

 Scholarship of teaching and learning

Embedding Examples

- Building a Literature Review
- Research/Grant Proposal
- Formal Research/scholarship with product
- Research Proposal
- Literature Reviews
- Stats as Embedded Research
- Business Research as Creative Activity

What are your goals and how do you want to get there

- Capstone Project or Thesis?
- Increasing Capacity for UR
- Courses with Research Outcomes
- Research Internships
- Creativity Projects (URSCA)
- Literature Review or Research Proposal?
- Summer Program

Practicing what I preach

- Embedded
- Undergraduate Research (Statistics—happy to share anything from this) • Teaching Partner and I expect real change next year
- Marketing Plan in Marketing Principles
- New Market Research Class

Adio Rivera Boompan So my research students gave me candy yesterday. @CURinAction



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What are you going to do to scaffold research for your students?

EVEN IF YOU DON'T KNOW RIGHT NOW-

Example institutions

- The College of New Jersey
- UNC-Asheville
- The College of Wooster
- •Wisconsin-Eau Claire
- Bridgewater State College
- Allegheny College
- tate College
- Florida Southern College





 To promote and support high quality undergraduate studentfaculty research and scholarship

CUR

 To help institutions build and enhance the infrastructure that increases undergraduate research

 You are an enhanced institutional member

