

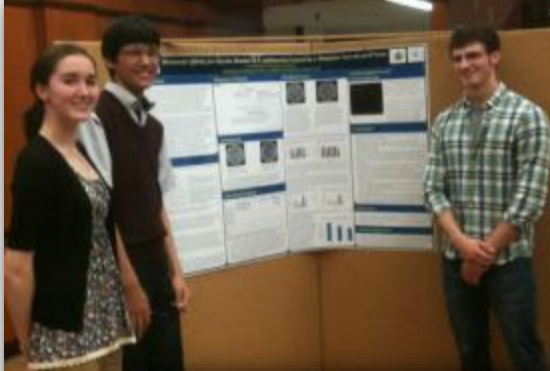
A CURE IS WITHIN REACH EXPANDING ACCESS UNDERGRADUATE

Stephanie M. Gardner, Ph.D.

Associate Professor and Associate Head for Curriculum, Teaching, and Learning
Department of Biological Sciences, Purdue University
Co-Director, CURE– Purdue Program
sgardne@purdue.edu



Undergraduate research experiences*



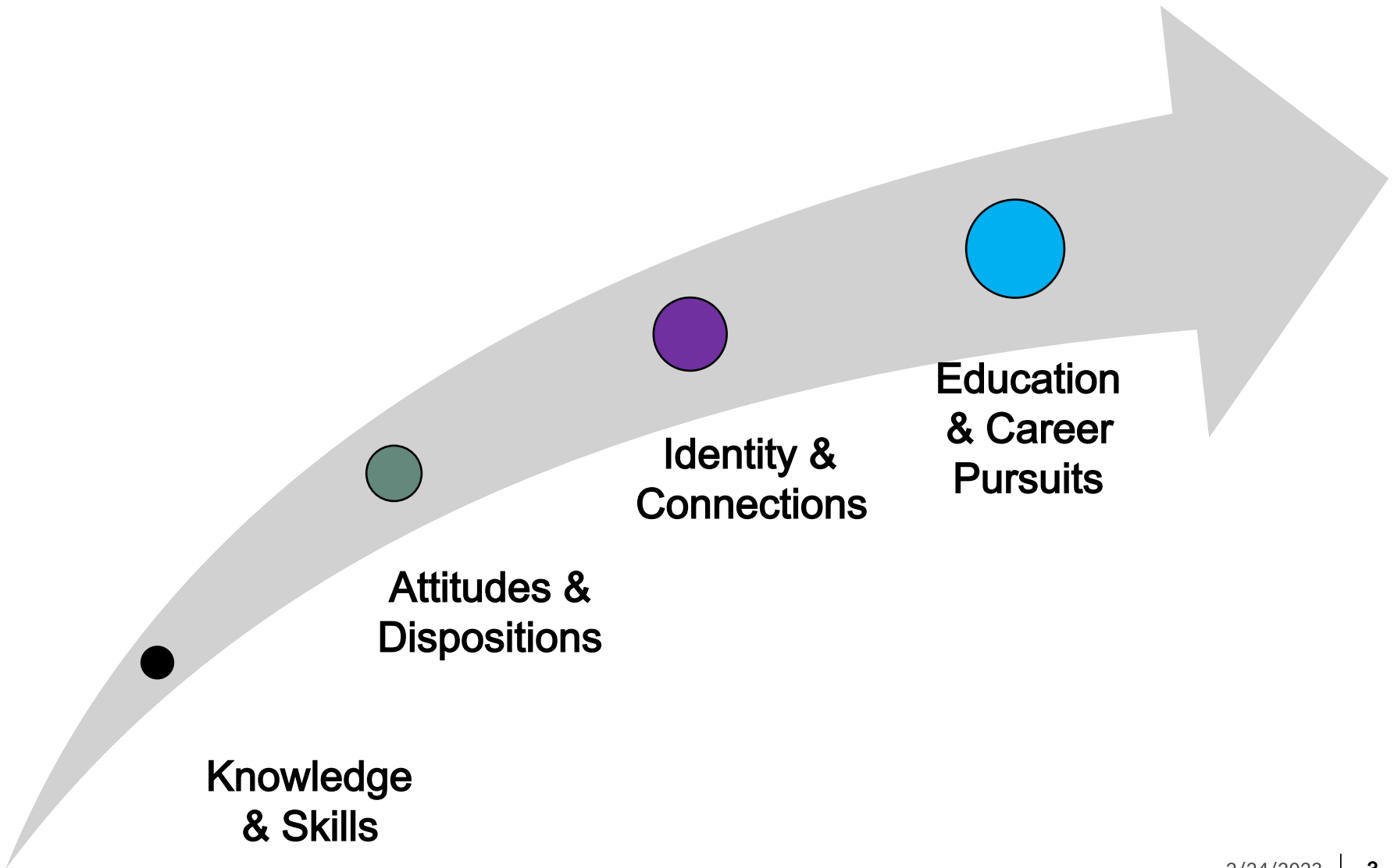
AAC&U (2007): Undergraduate Research is one of 10 “high impact educational practices.”



NSF, AAAS, NIH, HHMI Vision and Change (2011): Introduce research experiences as an integral component of biology education for all students...

*Please note: The word "research" represents any original research, scholarship, or creative work completed in any discipline.

How do students benefit from participating in

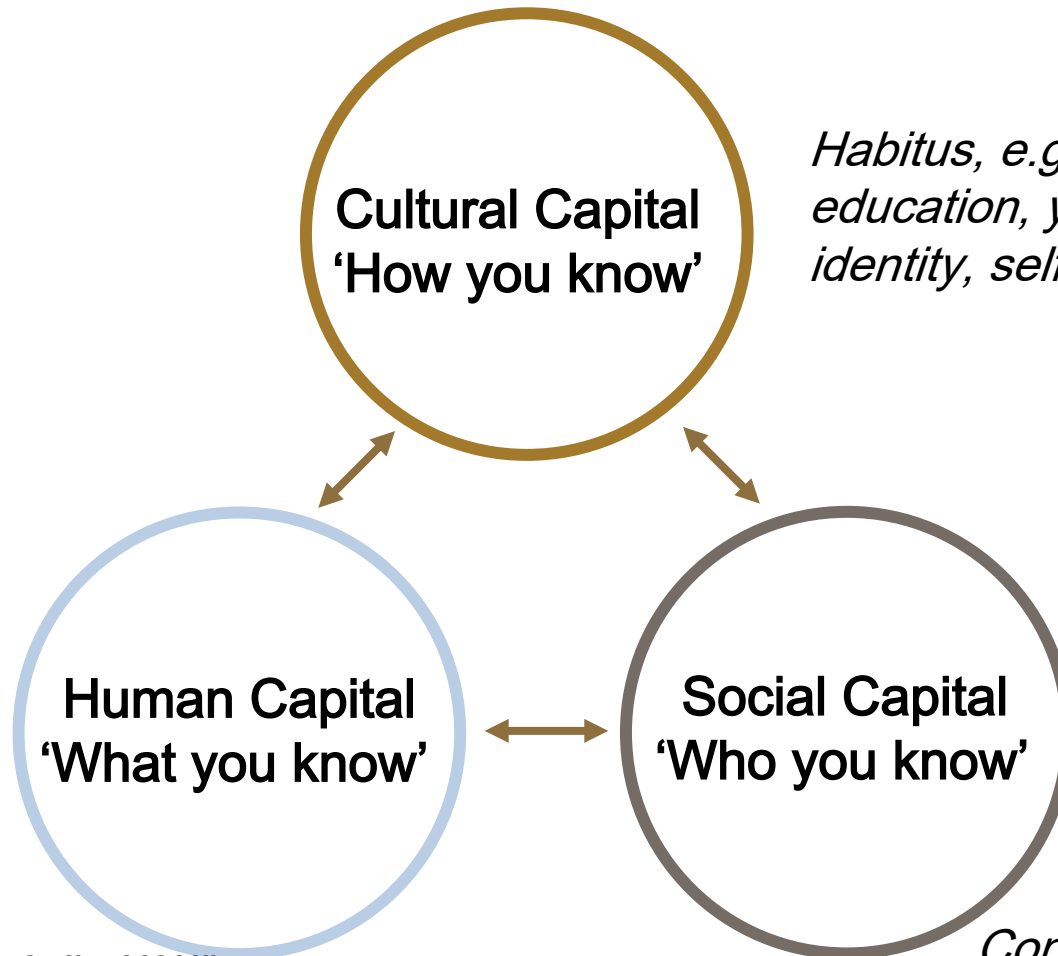


Think...

Which students get access to research experiences?

Consider how faculty find and select undergraduate researchers

Using theories of capital to understand access to educational experiences (e.g. research)



Habitus, e.g. your parents' education, your disciplinary identity, self-efficacy

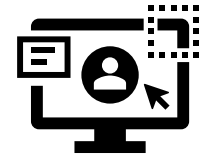
Your credentials, e.g. your grades, test scores, courses, prior experiences

Connections, e.g. special programs, advocates, your major

One solution: ~~base~~ Undergraduate Research Experiences (CUREs)



<https://www.guide2research.com/research/debate> -topics-for-college-students



<https://www.utexas.edu/research/student> -research

When whole classes of students address a research question or problem that is of interest to their disciplinary community

CUREs versus Research Internships

| |
|-------------------|
| |
| Scale |
| Structure |
| Enrollment |
| Timing |
| Setting |
| Mentoring |

| |
|---|
| Research internship |
| Few students |
| One to one |
| Open to a selected or self-selecting few |
| Students invest time primarily outside of class |
| Faculty research group |
| Varied |

Benefits of CUREs for students and ins

- CUREs can broaden access to research to more and diverse students
- Students benefit academically, personally, and professionally
- Faculty benefit by blending their research and teaching
- Disciplinary communities and society benefit from new knowledge generated

CUREs across the disciplines

PRACTICE

Business in a Liberal Arts College: Undergraduate Research Experiences That Cultivate Habits of the Heart and Mind

Vicki L. Baker, John Carlson,
Albion College

Abstract

The authors discuss a course-based undergraduate research (UR) experience in business, seeking to continue a conversation initiated by Miller and DeLoach (2016) regarding undergraduate research in professional fields. The current

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studen
experi
CUREs

The Teacher

Learning by Doing: Mentoring Group-Based Undergraduate Research Projects in an Upper-Level Political Science Course

Benjamin R. Knoll, *Centre College*

ABSTRACT Undergraduate research (UGR) is a “
only shown to effectively promote desirable st
ritten and oral commu
ly among minority and



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Promoting Undergraduate Research in Economics

Gail M. Hoyt

KimMarie McGoldrick

AMERICAN ECONOMIC REVIEW
VOL. 107, NO. 5, MAY 2017
(pp. 655-59)

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Article Information

Abstract

This paper provides a snapshot of undergraduate research at top 30 liberal arts institutions and top 30 national universities (based on U.S. News and World Report rankings, 2017). This description provides a broader perspective than exists in the literature as we identify departmental motivations for providing undergraduate

RESEARCH-ARTICLE



A course-based undergraduate research experience (CURE) in computer science: an experience report

Author: Fahmida Hamid [Authors Info & Claims](#)

Journal of Computing Sciences in Colleges, Volume 35, Issue 6 • April 2020 • pp 56–65

Online: 12 August 2020 [Publication History](#)

0 22



Abstract

This article demonstrates a pedagogy of a research-focused Computer Science course for undergraduates in a liberal arts environment. The long term benefits of Course-based Undergraduate Research Experiences (CUREs) in different STEM fields are the driving forces

Journal of Computing
Sciences in Colleges
Volume 35, Issue 6

← Previous Next →

CUR Purdue Program

Instructor development through :

- Workshop-style training of instructors from a range of disciplines.
- On-going mentoring from peer instructors.
- On-going collaborative support via Communities of Practice.
- Evaluation and assessment of instructor and student participants.
- Consultation and ongoing support for additional course-specific assessment.



Amy Childress
Craig Zywicki

With funding from:

- Office of the Provost
- Libraries and School of Information Studies

Examples of CUREs at Purdue...

Approaches:

- Full-semester courses
- Multi-week units within a course

Examples of the disciplinary and research topic diversity:

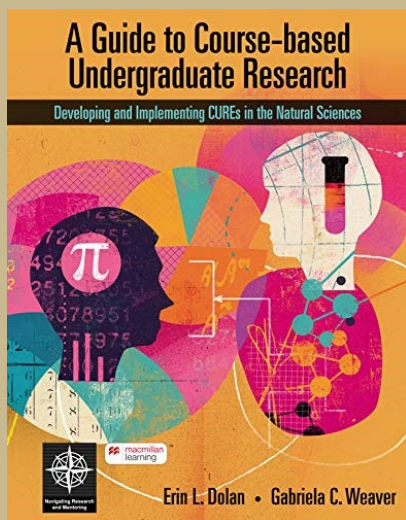
- *Music*– performative autoethnography
- *Communications*– analysis science communication analyzing CSPAN archive footage
- *Theater*– design and testing automation and controls for live entertainment
- *Engineering*– Environmental chemodynamics (environmental sustainability)
- *Education*– action research projects for pre-service special education teachers
- *Biological Sciences*– Biodiversity and Museum Archives Research
- *Physics*– Dark matter research
- And many more!

THANK YOU!

Excited to talk about CUREs broadly and the CURE- Purdue program!

Stephanie M. Gardner (sgardne@purdue.edu)

Additional valuable resources :



CURE – Purdue

<https://www.purdue.edu/undergrad-research/faculty/cure/index.php>



www.cur.org



<https://serc.carleton.edu/curenet/index.html>

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