

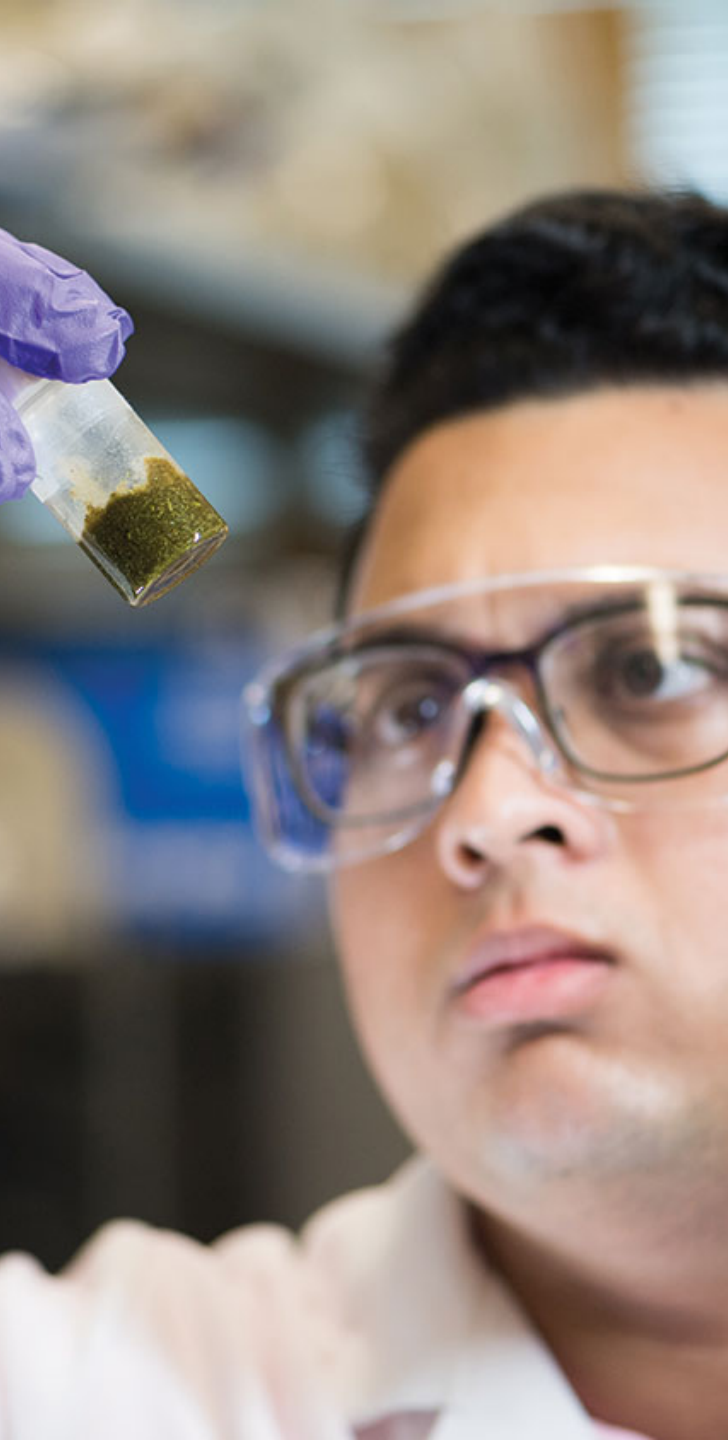


FGCUScholars
Think
Discover
Write



Undergraduate Research Develops Transferable Skills
More Successfully Than Other High Impact Practices

Charles (billy) Gunnels, Florida Gulf Coast University



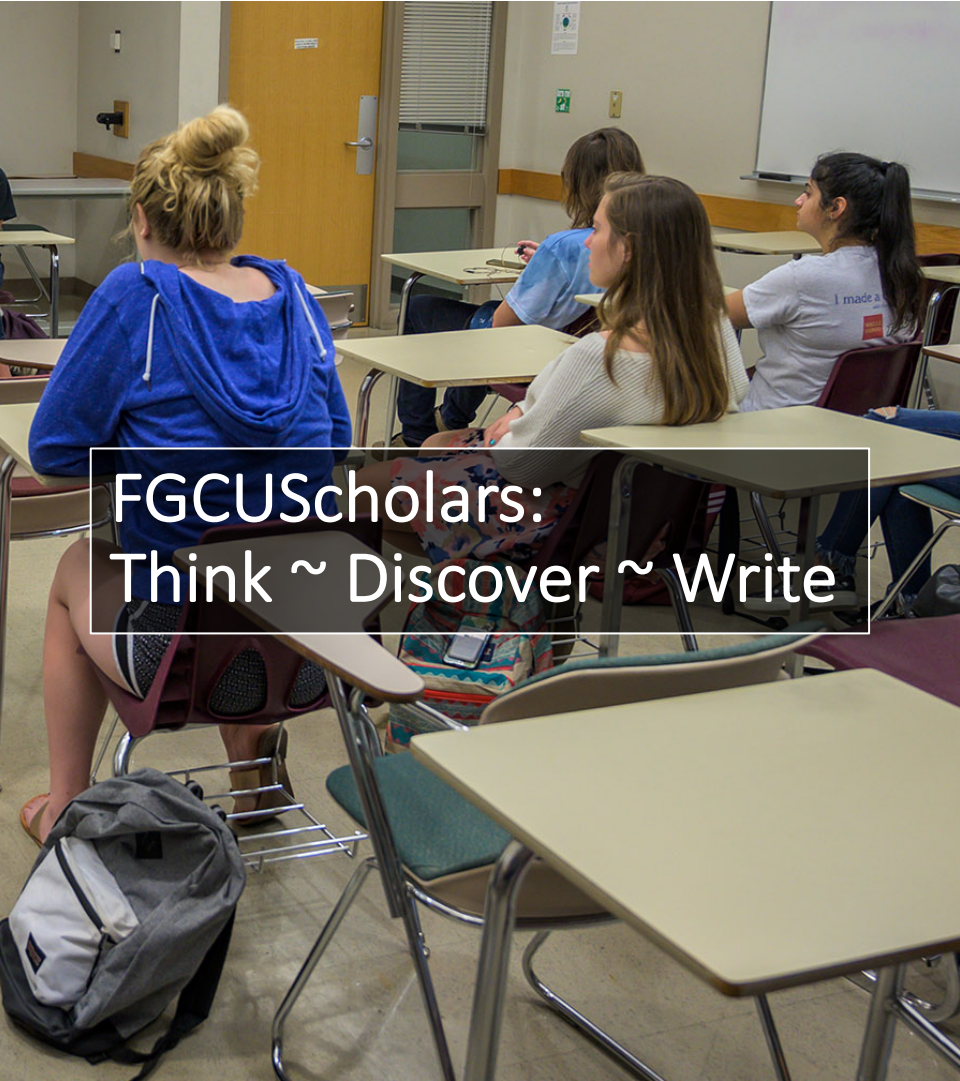
Undergraduate Research

- Undergraduate research, creative, and other scholarly opportunities appear to have tremendous impacts on student success as students **gain real-world experiences** that help them **translate** their **classroom** education into **professional** and **academic** fields.
 - Solidify career goals & improve self-efficacy
 - Lopatto 2003 & 2004, Russell et al. 2007, & Craney et al. 2011
 - Persist & graduate in a timely fashion
 - Nagda et al. 1998, Ishiyama 2002, Jones et al. 2010
 - Self-Reported Learning Gains - enhanced critical thinking, communication, and analytical reasoning skills
 - Bender 2012



Unclear Impacts

- Limited Impact
 - Graduation Rate
 - No Impact at Selective & Moderately Selective Institutes
 - Positive Impact at Least Selective Schools
- Self-Selected Populations



FGCUScholars:
Think ~ Discover ~ Write

- Advance student critical thinking, information literacy, and writing skills within their majors as students become **scholars in their disciplines**
 - Integrate a common understanding of critical thinking, information literacy, and writing across all four years.
 - Build on a foundation of General Education toward the creation of scholarly products in capstone courses.
 - Assess student learning across four years of study and in every major.

FGCUScholars: Think ~ Discover ~ Write

- Rising Sophomores
 - 2,174 students
 - Disciplinary Sections
 - Wildlife, Sustainability, Nutrition, and Ethics
- Graduating Seniors
 - 15,976 students took at least one QEP course in their major
 - 611 sections

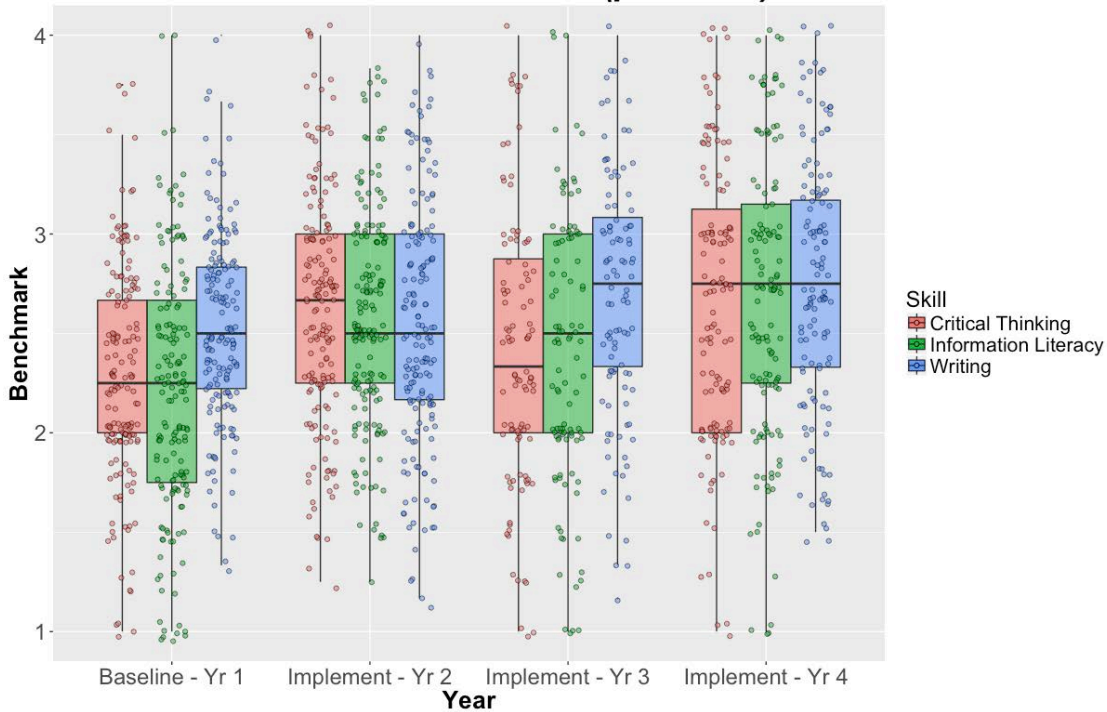


University-Wide Assessment

- **Assessors**
 - 52 Faculty
 - 20 Students
 - All Colleges
- **Assessed**
 - 115 First Years
 - 136 Seniors
 - 15 majors



Graduating Seniors Show Steady Improvement Since the Start of the QEP ($p < 0.001$)

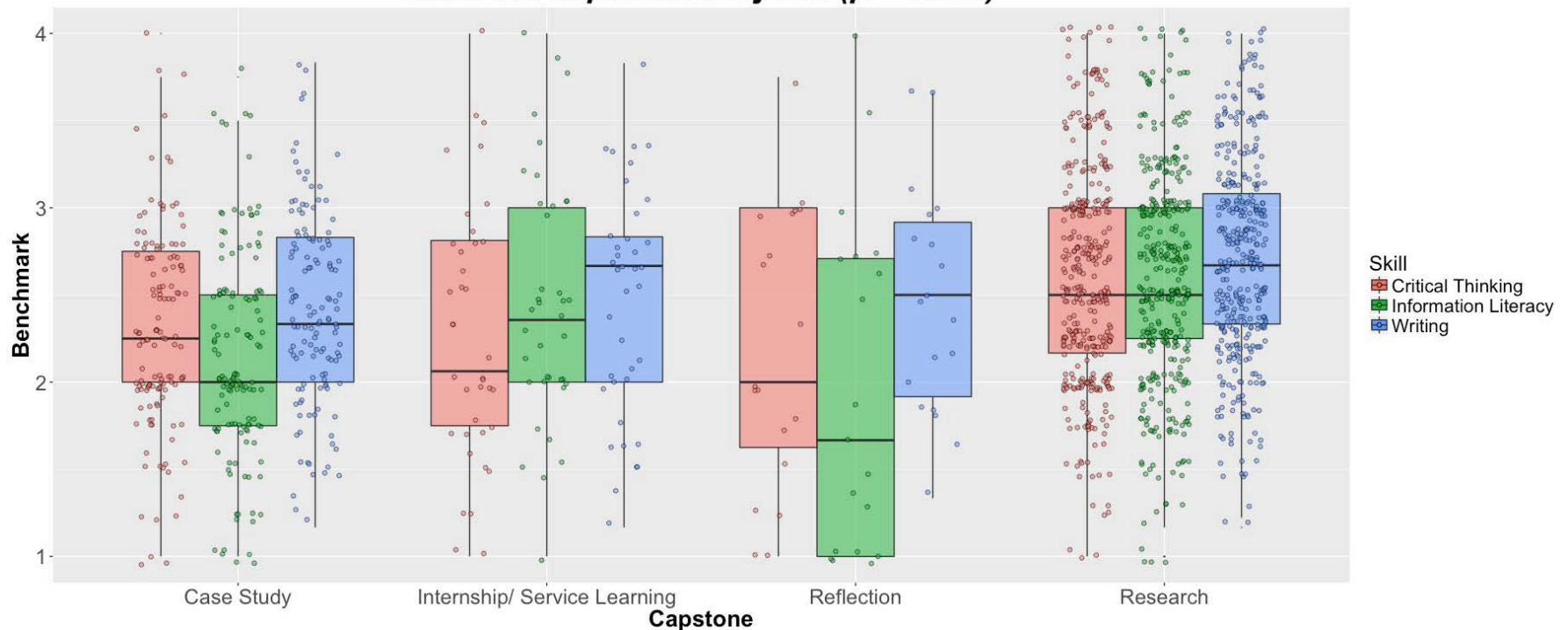


QEP Assessment
OVERALL GROWTH

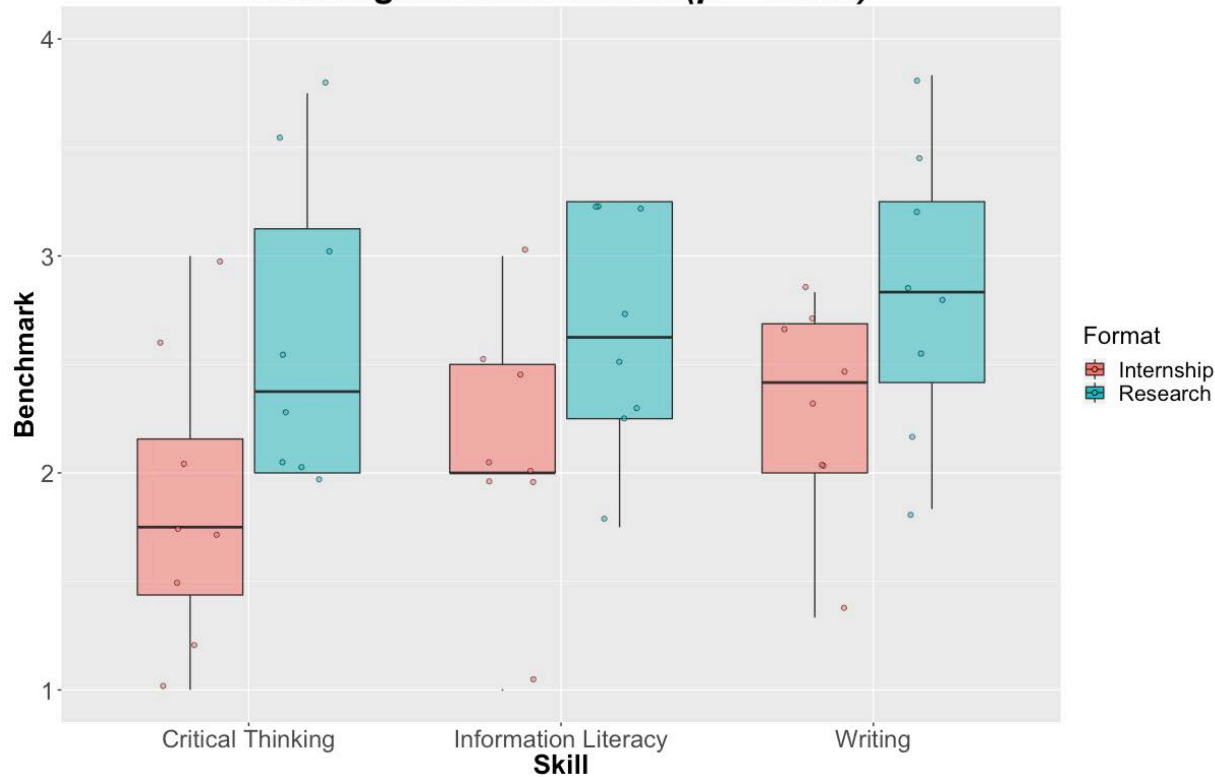
- **Critical Thinking**
 - Content Development
 - Evaluation of Information; Conclusion
- **Information Literacy**
 - Identification and Access of Information / Evidence
 - Use Information Effectively to Accomplish a Specific Purpose
- **Writing**
 - Context of and Purpose for Writing
 - Genre and Disciplinary Conventions
 - Control of Syntax and Mechanics
- **Benchmark**
 - 1 = Incoming Student
 - 4 = Aspirational Graduate

Research Experiences Affect Desired Learning Outcomes More than Other HIPs

**Students that Produced Research Artifacts
Performed 15% Higher than Students who Developed
Different Capstone Projects ($p < 0.001$)**



**Research Students Performed
29% Higher than Interns ($p < 0.001$)**



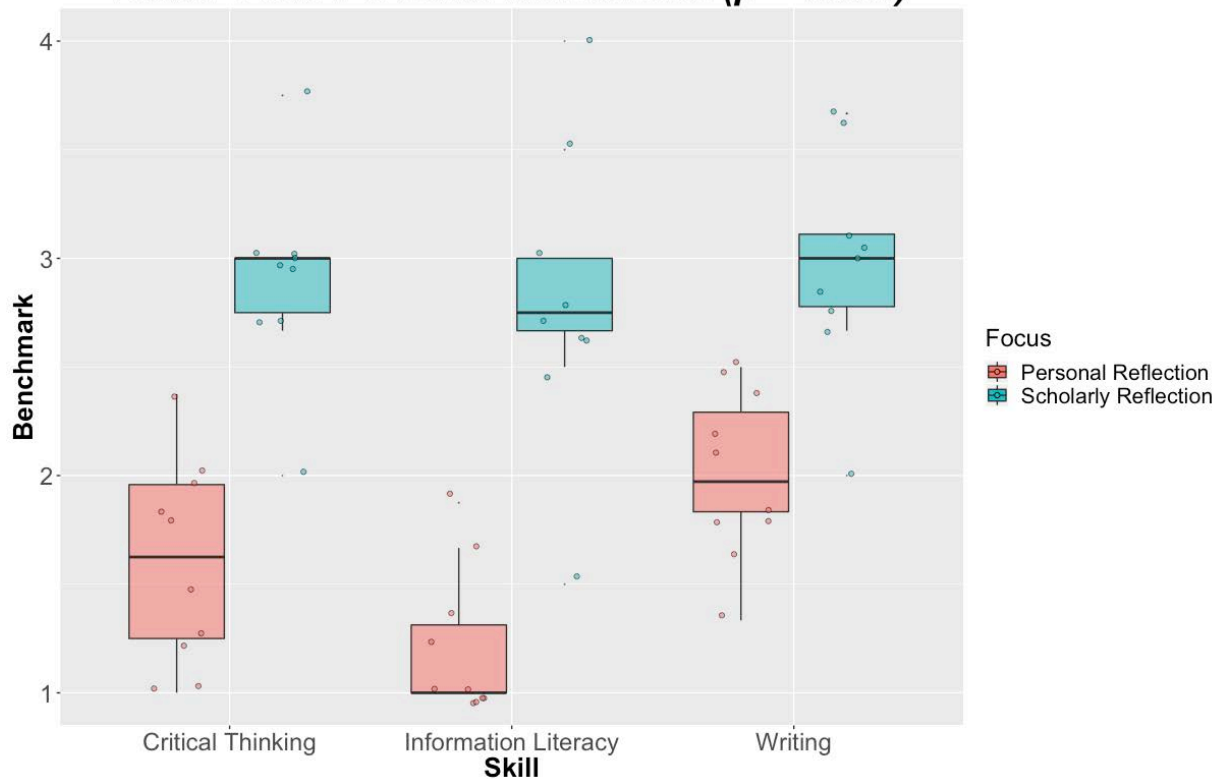
Within Major

- Students that completed a research-oriented capstone showed higher learning gains than students that completed an internship

Engaging Evidence Appears to be Critical

Among Majors

**Scholarly Reflections were 80%
Better Than Personal Reflections ($p < 0.001$)**



Explicit Learning Gains Are Integrated All Initiatives WiSER Eagles (Research Work Study)

Scholarly Employment



Professional Development



Use these Findings to Enhance Other High Impact Practices

Internships & Service-Learning



Questions

References

- Bender, C. (2012). The University of Arizona undergraduate biology research program. In J. Kinkead & Blockus L. Undergraduate Research Offices & Programs: Models & Practices (pp. 149-164). Washington, DC: CUR Press.
- Craney, C., McKay, T., Mazzeo, A., Morris, J., Prigodich, C., & De Groot, R. (2011). Cross-discipline perceptions of the undergraduate research experience. *The Journal of Higher Education*, 82(1), 92-113.
- Helm, H. W., & Bailey, K. G. (2013). Perceived benefits of presenting undergraduate research at a professional conference. *North American Journal of Psychology*, 15(3).
- Houlden, R. L., Raja, J. B., Collier, C. P., Clark, A. F., & Waugh, J. M. (2004). Medical students' perceptions of an undergraduate research elective. *Medical Teacher*, 26(7), 659-661.
- Ishiyama, J. (2002). Does early participation in undergraduate research benefit social science and humanities students? *College Student Journal*, 36(3), 381-387.
- Landrum, R. E., & Nelsen, L. R. (2002). The undergraduate research assistantship: An analysis of the benefits. *Teaching of Psychology*, 29(1), 15-19.
- Lopatto, D. (2003). The essential features of undergraduate research. *Council on Undergraduate Research Quarterly*, 24(139-142).
- Johnson, S.A. & Stage, F.K. (2018). Academic engagement and student success: do high-impact practices mean higher graduation rates?, *The Journal of Higher Education*, 89:5, 753-781, DOI: [10.1080/00221546.2018.1441107](https://doi.org/10.1080/00221546.2018.1441107)