



Reinhardt
University

Course-Based Undergraduate Research

Lydia Ellen Laucella

*Assistant Director, CITEL
Reinhardt University*

Center for Innovative Teaching and Engaged Learning

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Introduction

This white paper edition will explore course-based undergraduate research experiences (CURE) in application at RU. It will offer a brief synopsis of the benefits of undergraduate research (which is an integral component of RU's QEP plan). Then, it will provide the basics of CURE, tips to getting a research conversation started, and will end with a highlight on a successful CURE at RU.

Undergraduate Research

Undergraduate research, a high-impact practice (HIP), encourages problem-solving, innovation, and discovery (Hensel, 2018). Arguably, undergraduate research provides a competitive edge. It also encourages wonder for both the instructor and the student- you never (and should never) know what students will find! According to Hensel (2018, pp.1-2) undergraduate research allows students to build the following skills, which are also some of the top skills that employers are looking for:

- 1. Learn how to do a deep dive.** Students can become “experts” in their topic as they explore it more in depth and as they learn the language of the research discipline.
- 2. Learn how to work independently.** Students learn self-directed learning behaviors as they drive their own research projects.
- 3. Learn how to work in collaboration.** Students learn to work collaboratively toward a common goal.
- 4. Build a tolerance for failure.** As students tackle obstacles that are a natural part of the research process, students learn to practically deal with failure.
- 5. Build relationships.** Students practice building relationships with faculty, other students and even community partners which become important practices life after college.
- 6. Develop critical thinking and problem-solving skills.** Undergraduate research experiences allow students to use higher order thinking (or critical thinking skills) such as analysis, synthesis, evaluation, and creation.
- 7. Develop self-confidence.** Students develop a sense of confidence in their ability to tackle challenging material. Positive experiences with undergraduate could also enhance their sense of belonging in the institution because as they become active contributors to the discipline.

- 8. Improve communication (oral and written skills).** Students can develop more advanced writing skills and increase their digital literacy if engaging with different technologies during the research and write-up process.

CURE

Undergraduate research requires additional time, commitment, and resources, which can be a common deterrent to creating undergraduate research experiences. An easier way to incorporate undergraduate research is to provide students with course-based research experiences (CURE). CUREs facilitate easier undergraduate research experiences because they are tied to a course. They might require additional time requirements, modified course design, additional preparation, and prediction of unforeseen problems. Students might also need to seek Institutional Review Board (IRB) approval, or complete Collaborative Institutional Training Initiative (CITI) training. But CUREs can provide undergraduate research opportunities that are embedded into the curriculum, making it easier for the instructor to facilitate undergraduate research experiences. Additionally, all students in the course can participate, which increases access to undergraduate research experiences (Hensel, 2018). CUREs are flexible and they can be introduced in first- and second-year courses. Students can build upon prior research experiences in previous courses or build new ones; the CURE can also be extended to all four years in the university, with a Capstone project (another HIP) being the culmination of the research experience. Moreover, students can add CUREs to their ePortfolios (another HIP) and to their resumes!

“Overall, the experience was a highlight of my teaching career, as I watched my students do archival research, conduct oral interviews, and write excellent research papers, some of which they presented at undergraduate conferences.”

—Reinhardt University Professor of History, Dr. Kenneth Wheeler (2019)

The Basics of CURE

CUREs should be collaborative, should be situated in the course and in the research methodology of the discipline, and should be aligned to the course learning outcomes. A hands on/ hands off approach is recommended, which allows students to *discover* through self-directed research opportunities, that are performed under the guidance of a faculty member (Hensel, 2019). The end goal of CUREs should be dissemination.

To set the tone for CURE, instructors should set high expectations and transparently outline the CURE on the first day of the course. Instructors should communicate respect for students' capacity to perform the research. Instructors should provide safe environments that encourage both success and failure; a great way to do so is to discuss and model the instructor's own experiences with research. Communication during all stages of the CURE experience is imperative (Hensel, 2018). And the CURE should also provide built-in self-assessment tools and built in times for students to troubleshoot with each other and with the instructor.

Getting the CURE Conversation Started

To get started, instructors should work with students in cohort to “identify a project that is local, relevant, interesting, or understudied and provides a longitudinal platform” (Hensel, 2018, p.97), the answer to which is unknown. Here is a brief list of ways that you can initiate research conversations in your own courses:

- **Annotated bibliographies.** If you are unsure of how to help students start exploring research questions, then annotated bibliographies are a great first step. Not only can they serve as the foundation for the research, but they also introduce the student to the research discipline.
- **Collaborative annotation.** Collaborative annotation on texts (which can be done through Canvas) provides multiple perspectives on a topic and could produce a possible inquiry question.
- **Applied research.** This is a method for solving a specific problem of an individual or group which can create real-world learning experiences for students to solve real-world problems on a feasible scale.
- **Panel discussions/ Faculty-Student Roundtables.** Inviting experts from the field (even from RU) is a great way to provide insight on current research and connects students with faculty and could provide students with research ideas.

CURE Example

In 2019, Dr. Kenneth H. Wheeler published an award-winning article, “Black Student Experiences in the Racial Integration of Reinhardt College, 1966-1972”, that was a result of a CURE in his fall 2017 Interdisciplinary Studies course. The course focused on local history and culture, and brought in the disciplines of history, creative writing, art, and biology. During the course students interviewed some of Reinhardt’s first African American students. Students worked with various, additional print resources to coauthor the article with Dr. Wheeler. Through this CURE, Dr. Wheeler and his students were able to successfully make an outstanding and meaningful “original intellectual or creative contribution to the discipline” (Wenzel, n.d., p.1). His essay, “Understanding Racial Integration with Students” is projected to be published in November in the *Georgia Historical Quarterly*.



Reprint of “Black Student Experiences in the Racial Integration of Reinhardt College, 1966-1972”

Conclusion

CUREs can open the doors to undergraduate research. Aligning CURE with course curriculum provides a way for students to engage in a HIP, that can multiply into other HIPs such as Capstone experiences and ePortfolio pieces. CUREs make undergraduate research a less daunting task for both instructors and students and can be completed within the normal parameters of a course. Dr. Wheeler’s CURE is a fantastic example of how CUREs can provide meaningful, real-world learning experiences for undergraduate students.

*For more reading on CUREs, review: Hensel, N. H. (2018). *Course-based undergraduate research: Educational equity and high-impact practice*. Sterling, VA: Stylus.

References

- Hensel, N. H. (2018). *Course-based undergraduate research: Educational equity and high-impact practice*. Sterling, VA: Stylus.
- Wenzel, T. J. (n.d.). *Conceptual Issues about Undergraduate Research*. Retrieved from <https://www.cur.org/assets/1/7/Wenzel.pdf>
- Wheeler, K. (2019). Understanding racial integration with students. Forthcoming in *Georgia Historical Quarterly*.
- Wheeler, K. H. with Busman, D., Fanczi, J., Gray, M., Guzman-Gomez, G., Merchant, A.M., Montgomery, M., Niday, B.D., Payne, K., Reeves, A. (2019). Black student experiences in the racial integration of Reinhardt College, 1966-1972. *Georgia Historical Quarterly*, CII (4).

