Deconstructing “Race” in (Re)constructing Change
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Undergraduate research is rooted in developing a collaborative relationship between faculty and students within a discipline. This vignette illustrates how our research improved academics and aided students’ personal growth.

In examining “race,” I recognize there can be resistance in some educational circles that stifle undergraduate teacher candidates’ preparation. Despite the reality of the consequences of racial “silences” and its impact on learning, discussions of “race” in teacher education remain marginalized or amalgamated with other topics like gender and class. Undergraduate research on “race” and education requires a willingness to be uncomfortable yet motivated to work within that discomfort to understand our social and political histories. Our research used qualitative data along with our personal narratives as tools for meaning making and a form of empirical evidence to think about education and teacher praxis.

Holly Copot: When as a student I was offered the position of research assistant to Dr. Brown in the Department of Education, I did not truly understand the scope of what would be happening. I expected to simply code the data of how other students talked about race. I had no idea that I would be deconstructing my own views of race and reconstructing a new meaning. I was simply developing a qualitative coding process to use with other undergraduates’ reflections, yet it was my own thoughts about “race” that I began to question. I learned that nuanced and passive racism could be very present in our lives, even when we thought ourselves to be open-minded.

Ayanna F. Brown: Working with Holly, I was able to understand barriers teacher candidates face. These barriers are not just in discussing “race,” but also in the reflective process, which allows us to critical question our choices and how we’ve engaged communities. Holly and I discussed our coding procedures as well as our frames of reference, which guided how we saw the data. From these dialogues, we pushed both the social constructions of “race” and our personal assumptions, which enriched our findings. My undergraduate students now participate in similar sociolinguistic coding as a course component. Undergraduate research was more than sets of procedures, but also a commitment to helping teacher candidates rethink their roles in the education profession and the needed changes that might most impact the lives of children they have yet to teach.

Copot is now an elementary-school teacher, and since their collaboration, Brown has presented findings from their research at three national conferences.

Students’ Commitment to Undergraduate Research
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For nearly 15 years, UW-Eau Claire has funded much of its faculty-mentored undergraduate research, scholarship, and creative activity through “differential tuition.” This student-led and student-supported program of supplemental tuition has had a major impact on the level and breadth of undergraduate research activity on our campus.

Before differential tuition was instituted, the University of Wisconsin System had designated our regional comprehensive university as “The Center of Excellence for Faculty and Undergraduate Student Research Collaboration.” This status reflected UW-Eau Claire’s strong tradition of engaging students in collaborative research with faculty scholars.

The center’s funding, which was from both state and donor funding through the UW-Eau Claire Foundation, eventually was not sufficient to support student demand for involvement in research. Campus supporters worked with student government to create a plan for a tuition supplement, initially $100 per student per year. These additional tuition funds, accounted for separately from regular tuition, were used to support value-added experiential learning opportunities on campus, with undergraduate research as a major component. A central research office solicits research proposals and manages their review. In 2011-12, 380 students working on 225 projects were supported with stipends, travel, and supplies; 87 faculty received stipends for mentoring students on summer projects. In addition, 250 students received support for travel to conferences to present their results.

In 2010, the student government voted to raise the tuition supplement, in increments, to a level of $1200 per student per year by 2013-14. This will allow undergraduate research to continue to grow, and this will enhance many other high-impact educational practices, including global and intercultural immersion experiences and internships. The increased support from differential tuition funds has already supported a new program for international research and research/service learning, which has sent 100 students and 26 faculty members to 19 countries in its first two years.
Students have been instrumental in developing the plan, allocating funding, and evaluating the outcomes. They recognize the passion in student and faculty voices when they recount how students are transformed by research experiences. Raising supplemental tuition was not an easy decision for students, but they are committed to investing directly in learning opportunities that add value to their UW-Eau Claire degree.

Undergraduate Research Training Blossoms at VCU: Pollinated by Students
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In November 2010 we attended the Annual Biomedical Research Conference for Minority Students (ABRCMS), and our two student attendees noticed with surprise that some other institutions had brought more than 30 people. They also noticed that some of these campus groups acted as “communities” that actively supported and coached each other—“behaving more like athletes than researchers,” in the words of one student. Said another, “We vowed to go to VCU, promote that culture, and return in 2011 with more students, and win awards”

Throughout the following year, these two students actively engaged peers interested in undergraduate research at VCU, recruited faculty advisors, and formed the Student Research Organization (SRO). The first meeting attracted 85 students from nine departments, even though the organizers initially intended to focus on students interested in biomedical research and had booked a 40-seat room. Membership now exceeds 130, and the student leaders have expanded the focus to all areas of scholarship, naming chairpersons for specific disciplines.

The student leaders have solicited sponsorship from professional organizations, hosted seminars, and sponsored a showcase of undergraduate research. The broad student participation prompted faculty members to listen and think about how to meet the ever-increasing demands of the student body. As a result of student and faculty effort, in November 2011, twenty-two VCU students attended ABRCMS. Prior to and during the trip they acted as a unit, supporting each other’s work. They presented seventeen posters and five talks, one of which won a top award.

It has been an exciting and productive start for the SRO, which is poised to make substantial contributions to VCU’s strategic plan, called “Quest for Distinction.” The impetus can be traced back to two undergraduate researchers who pursued a dream that started at the 2010 ABRCMS meeting.

Student Research on Concept Mapping Informs My Teaching
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Literature on learning in science is increasingly focused on making connections between science and students’ everyday lives. Last year during the first and last day of class, I had students in my biochemistry class create concept maps answering the question, “What is biochemistry?” Drawing on the literature, one focus of this course was to emphasize connections between biochemistry and students’ lives. My hope was that through concept mapping I would be able to see evidence of connections students were making between biochemistry concepts, as well as connections they were forming between biochemistry and their own lives.

I enlisted the help of Camilla Misa, an undergraduate in biology, to analyze this data set of pre-class and post-class concept maps. Although I have mentored many students in basic scientific research, this was my first adventure into mentoring a student in biology-education research. Misa used the rich data set to make observations and determine methods for analyzing changes in the students’ concept maps.

This project generated in my student tremendous independence, excitement, and ownership of a research endeavor that has impacted both her study habits and my classroom practices. She found that although I thought I was emphasizing connections between biochemistry and the lives of students, not a single example appeared on the maps. Her findings have prompted me to use a concept-mapping exercise as homework midway through the quarter to force students to articulate connections between scientific concepts and their everyday lives. My experiences with mentoring Camilla Misa and her findings have changed how I utilize concept maps and have made me eager to engage students in future research into biology education.