

THE DANGEROUS FIELD OF OUTREACH PROGRAM ADVISOR

Kip Ault

Lewis & Clark College

Vexation

Rodney Dangerfield was fond of saying, “I don’t get no respect.” On several occasions spanning my career I have heard my inner Rodney making this very lament. Being a teacher educator holds less stature on campus than being a distinguished professor of natural science. At the same time, college faculty status engenders a bit of distrust among veteran classroom teachers. What is the status of an outreach program advisor? It seems somewhat less than an educational researcher.

I have come to acknowledge that I do work at a crossroads. There are schools with graduation rates hovering at 50% where I supervise intern teachers. On campus there are efforts to recruit physics and mathematics majors into teaching. These are different cultures: one of vulnerable, marginalized, poor, and minority students who attend school sporadically; the other of educated elites, academic honors, rigorous competition, and educational excellence. One earns respect differently in these different situations. Building trust, establishing caring relationships, and providing support earns recognition in schools while polished credentials, research awards, and respected publications earn stature on campus.

Each summer for the next few years, the crossroads between these two cultures will become quite busy as Lewis & Clark invites 10 secondary students from underrepresented populations and backgrounds of poverty (the first in their families to plan on attending college) to an immersion experience in research science. I have been drafted as a faculty advisor for this outreach effort and now face the daunting task of educating the elitist culture of campus on how to welcome and support students from a very different world. At the same time, I must work with partnering schools to prepare their students to succeed in culture of rigor and research.

Clearly, students, whatever their ethnicity, class, gender, first language, religion or race, bring to the study of science and mathematics ways of expressing and explaining as practiced among their families and neighborhoods. They hold worldviews. They understand how to navigate some social contexts but not others. Their home life may be less or more congruent with the habits of mind, ways of knowing, and worldview of school science. Different cultural backgrounds may serve as resources for making sense of the natural world in different ways. Appropriate understanding of these points underscores that blindness to differences often serves only to reinforce privilege (Settlage & Southerland, 2007). And privilege permeates private liberal arts colleges.

I am worried that my colleagues in the natural sciences do not appreciate the challenge they will face when hosting in their labs students from new and different populations. I am not confident that I am up to the task of preparing them for this responsibility—that I have the necessary respect to be heard. More importantly, I fear that the students we invite will not have the stature, in terms of campus culture and research science, to be heard either. By definition, they lack the credentials that define status on campus.

The College seems anxious to recruit from those who have demonstrated high academic potential but remain in financial need or subject to discrimination. The outreach program from this perspective is a way for the College to diversify its student body—to compete with similar institutions to recruit outstanding talent regardless of race, ethnicity, or class. However, skimming talent does little more than skim talent.

Among underrepresented populations, in all ethnic and racial communities, and in poor neighborhoods, there are students who succeed at school. Some make outstanding progress in science and mathematics, others in arts and literature. Many have achieved stellar track records of academic accomplishment among difficult circumstances, even discrimination. Their talents do not go unnoticed and their successes will gain them access to opportunity.

These are students “on their way” and not the students the Lewis & Clark outreach program intends to encourage and support in making a border crossing to science and mathematics. (I use “border crossing” in the sense developed by Aikenhead & Jegede, 1999.) Instead, the aim is to demonstrate how to increase, even if in just a small way, the pool of potential future scientists, engineers, and mathematicians. To do so means drawing students not from the top tier of performers, but from the ranks of those students for whom academic learning, school success, and prospects of a four year degree are slight. A true increase in opportunity means opening access to a new population, students historically shunted aside from career paths dependent upon college admissions and math, science, and technological expertise.

The goal is to make a successful research experience accessible to students whose academic profiles, until very recently, would suggest there was no such milestone in sight. *How do I prepare the scientists (and their undergraduate science majors) to accept and encourage these students? What responsibilities might the*

THE DANGEROUS FIELD OF OUTREACH PROGRAM ADVISOR

Kip Ault
Lewis & Clark College

secondary teachers from the partner schools assume? How does an outreach faculty advisor bridge these cultures?

Venture

To find, encourage, support, and guide secondary students through a summer of immersion in research, the College must depend upon a small number of partners in secondary education who work to restore hope and instill ambition among adolescents. Among these are The Centennial Learning Center, Rosemary Anderson Alternative High School (and its proposed College Prep Academy), the Open Meadows School and its Step-Up program, and the Beaverton Science and Health Magnet School. These institutions work to promote access to higher education among students who have not demonstrated, through the structure of traditional secondary school, promise in math and science. These are schools that build confidence and pride—renewing potential and opening the door to college. Their programs look for opportunities to engage minority and other students from backgrounds of poverty in transition programs between high school and college, encouraging them to think not only of post-secondary education but of earning a bachelor's degree—in all likelihood, the first in their family's tradition. Some are white, poor, and troubled by traditional schooling. Many are from minority populations in Portland: Black, Hispanic, and possibly Native American.

Beginning in summer, 2009, 10 labs will open their doors to students from these schools. Each student will work in tandem with a science or mathematics major and a faculty scientist, with seminars, and a field excursion to study the fossil record of climate. In the fall, each lab will present a poster of the summer's project, and teachers and students from the secondary partner schools will be invited to attend. There will be a two week window in the summer prior to the arrival of the secondary students for their undergraduate counterparts and their faculty mentors to get started on their research—and prepare for their secondary recruits. I anticipate that the undergraduates and scientists will be male and female, mostly white, with a few Asian (Chinese) participants.

During the fall and spring, as faculty advisor to this outreach program, I will also organize workshops to prepare six undergraduate students as tutors, presenters, and classroom assistants in the partner schools. Also during fall and spring, I must find 10 scientists (and mathematicians) willing to host an undergraduate major and a secondary student partner.

Faculty members are going to need to think through an entirely different learner culture and welcome into their labs students possibly quite different from previous apprentices. *Will the scientists open their doors for this purpose? Will they be receptive early in the year and ready to learn about the cultural dimensions of the responsibilities they assume?*

The intent is to work with students lacking an exemplary record of achievement. *How will student academic backgrounds from alternative high schools dovetail with the demands of laboratory research in science and mathematics at an elite liberal arts college? What forms of support will they require emotionally and academically?*

Clearly, the College has an infrastructure in place to support such work (Office of Multicultural Affairs, Office of Campus and Community Connections). The partner schools are very anxious to introduce their student populations to four-year, college institutions. Yet I fear some hazardous border crossings—missteps that will reinforce stereotypes and refuel prejudices, in both directions. Success, on the other hand, will mean mutual respect among all parties, with no one left feeling like Rodney Dangerfield. As Chair of the Faculty Advisory Board for Outreach in Science and Mathematics, my aim is to avoid such missteps while encouraging both faculty and undergraduates to mentor students from populations truly underrepresented in liberal arts colleges, especially within natural sciences and mathematics.