

Part VII: Undergraduate Research Across the Disciplines

1. SOCIAL SCIENCES

Lessons I've Learned from Mentoring Undergraduate Students in Research

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I have been heavily involved in mentoring undergraduate students in research since graduate school. At the time, I felt more confident in the classroom than in the laboratory and considered myself to be more of a teacher than a researcher. Training undergraduate research assistants, however, combined the best of both worlds for me; I was able to collect data for my dissertation while still playing the role of a teacher. Over the last several years, dozens of undergraduate students have earned research credit by working with me. The results of these endeavors and the quality of the educational experience for the students have varied from exceptional to mediocre. As I continue recruiting research assistants, I remind myself of the lessons I've learned from this process.

Interest and Expertise

A high level of interest in a research topic on my part can make up for a lack of expertise, but one or the other has to be present. I have made the mistake of agreeing to oversee student projects that I am not personally interested in, figuring that my general knowledge of research design would be sufficient to help the student out. However, supervising student research often involves reading many drafts of a student's work; without a high level of interest in the topic, this task becomes too easy to procrastinate or rush through. In hindsight, some of my students may have been better off finding another advisor who was more intrinsically interested in helping them test their hypotheses.



Faculty mentor Gwen Lupfer-Johnson and student Kari L. Hanson learning in dwarf hamsters.

On the other hand, I have had success working with students on projects that were outside of my primary research area but still appealing to me. One case in particular stands out. A student came to me wanting to investigate a research topic with which I had no experience. I work with animals; she wanted to study teenagers. I agreed to supervise her because I truly found her research question interesting. The project was a success, probably in part because reading the literature reviews was enjoyable for me rather than a chore.

Ideally, the student assistant also needs to be genuinely interested in the data he or she collects. I maximize the chances of this happening by creating a list of several projects I plan to work on each semester. Undergraduates who sign up to assist me choose from that list the project that suits them best. I believe that allowing research assistants to select the study they would most like to work on increases their motivation and productivity.

Clear and Dual Goals

Every research venture that involves undergraduate students leads to two separate goals: mine and theirs. My goal is usually to collect publishable data. However, the publication process can take years, and students generally only stay with me for a semester or two. Therefore, while I inform students of my hopes of eventually publishing what they are working on, I also provide short-term goals for them. For example, I tell students who come to work with me that they are expected to present the data they collect at the Behavioral Sciences Conference of the North, a regional conference sponsored by UAA's Psychology Department. Even if one experiment or part of one experiment cannot stand alone in a peer-reviewed journal, the results can usually be presented as a poster somewhere, giving the student researcher an opportunity to enhance their professional development.

Personality Matters, and Friendship is OK

When I began enlisting undergraduates to assist me in graduate school, I resisted using individuals with whom I was already close. My graduate ethics course taught me to avoid dual roles, so it felt inappropriate for me to have a research assistant who was also my friend. Eventually, however, I grew to genuinely like my more productive assistants. I also noticed that the students I liked when they began a project ended up producing the best work. I no longer believe that a warm or even friendly relationship between me and my students is something to be avoided. I have not forgotten about the potential dangers of dual roles. Having too close of a relationship with an undergraduate can complicate evaluating them objectively, which is especially troublesome if your research assistant is also your student in another course. I avoid this pitfall by employing a code number system

in my classes so that I am able to grade blindly whenever possible. This allows me to feel comfortable being friendly with my assistants, which I believe facilitates meeting my research goals. Finding the time to schedule meetings, train student researchers, review written work, and discuss journal articles is difficult even under the best circumstances. If you do not enjoy the company of the individuals you are supposed to be training, the process becomes aversive and in my experience less likely to be completed in a satisfactory manner.

Of course being a professor requires one to teach students whether one likes them or not—in regular classes. When it comes to enrolling student researchers, however, one has the luxury of being more selective. I believe in taking advantage of this luxury to make research an enjoyable activity for all those involved.