Tips and Tools for Mentoring Undergraduates as a Graduate Student

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Mentoring undergraduates as a graduate student can be a great experience for everyone involved. Studies show that undergraduates who participate in research tend to learn to "think like a scientist" and have more knowledge about graduate school and interest in science careers than do their peers (Hunter, Laursen, & Seymour, 2007; Russel, Handcock, & McCollough, 2007). Research also suggests that graduate student mentors gain increased teaching, communication, and supervision skills when mentoring undergraduates (Bettencourt, Bol, & Fraser, 1994; Dolan & Johnson, 2009). These skills increase graduate students' marketability as they transition into the next stage of their career (e.g., faculty position, postdoc, internship). In addition, it can be enjoyable to share your love of the field with a budding psychological scientist. However, as a graduate student mentor it also can be difficult to know how best to support undergraduates. Heather Thiry and Sandra L. Laursen (2011) of the University of Colorado at Boulder identified three types of support — intellectual, professional, and social — that undergraduate research assistants appreciated most from their mentors. In this article, I will discuss methods that graduate students can employ to provide support to undergraduates and to make the mentorship experience enjoyable for both parties.

1. Intellectual Support. Often when undergraduates join a research lab, they have had little or no previous research experience. One study found that undergraduate students often feel they do not understand the "bigger picture" of the projects they work on (Thiry & Laursen, 2011). Meeting one-on-one or in small groups with students to discuss projects is a great way to build your communication and teaching skills while also increasing students' knowledge of the research process. When discussing a project, first provide a general background on the area of research. Narrowing your focus from the broader research to your specific project will give students perspective to understand how the project fits within the field. To engage the students in critical thought about the topic, ask them to provide their guesses about relationships between the variables or about why certain procedures may be utilized in the study. Keeping students engaged will help them make connections between the study and the larger field while also allowing them to practice critically thinking about research.

Once students have an understanding of the project and the larger context of that research domain, assign them specific tasks to help with the project. Research often plays a large role in the day-to-day lives of graduate students; it can be easy to forget that some undergraduates have little experience engaging in basic research activities. You may need to show students how to do things like find university databases for literature searches or navigate SPSS (e.g., entering data, running descriptive statistics). Showing, rather than simply telling, students how to engage in various tasks will ensure that those tasks are being properly completed. For example, when I ask students to run statistical analyses, I first show them how to run the analysis and then have them show me how to do it. Reviewing this process ensures that students understand it and reduces error in the results.

2. Professional Support. Engaging in research is an opportunity for undergraduate researchers to learn

the cultural practices and values of the field (Thiry & Laursen, 2011). As a graduate mentor, you can provide students with information about what the next step in their academic career may entail. Simply talking about your experiences in graduate school, such as what you are doing in your classes or how graduate school is different from undergraduate school, can help students understand the steps involved in becoming a psychological scientist. In addition to providing informal information, holding a lab meeting that covers professional development topics such as applying to graduate school or engaging in external research experiences can help students get a glimpse into what their future careers could look like.

Another way to provide professional support is by encouraging students to attend and present at research conferences. Research conferences afford students the chance to interact with the larger professional community. To help students find a good outlet for their presentation, use your knowledge of conferences and understanding of the projects to find the right fit. You can help students find submission deadlines and help them write abstracts or provide feedback on their abstracts before submission. Once a submission has been accepted, you can help students create posters by sharing your previous posters and talking about how information is best conveyed in poster format. Additionally, talking about your conference experiences will help ease anxiety students may have about presenting their work at a professional conference.

Speaking with students about your experiences can be helpful as they determine if pursuing a research or academic career is right for them. Informing students of the various opportunities to engage in professional development, such as research conferences, will expose them to areas of the field they may not be able to experience at their home institutions.

3. Social Support. When thinking of the mentor–mentee relationship, it is easy to focus on the science and professional development components because they play large roles in our careers. However, it is also important to consider the social encouragement and support that mentors can give their mentees. Creating a supportive and friendly environment will help students feel comfortable asking questions, providing suggestions, and sharing their ideas. In this collegial setting, your mentees will be confident that they can seek you out for advice and suggestions. Moreover, this positive setting can help keep up lab morale when projects do not go as expected.

Research is a challenging process with occasional setbacks along the way; failed experiments may be undergraduate students' first experiences with academic disappointment. Modeling for students how to appropriately respond to nonsignificant results or hiccups in the research process will teach them how to effectively deal with such frustrations. Share your past experiences with problems in your studies as well as methods you used to help deal with the stress and disappointment that may result. Provide students with an outlet to discuss their feelings, but also highlight the benefits of the project (even if it didn't work out), such as learning a new protocol, working with participants, or implementing new statistical analyses.

Overall, mentoring undergraduate students can be a helpful and important role for graduate students. Graduate students can provide insider knowledge of the next stages of a career in psychological science. Although mentoring can be a large time commitment for graduate students, it is a wonderful opportunity to share your excitement about the field, gain skills in communication and organization, and prepare yourself — as well as your mentees — for the next stage in a psychological science career.

References

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