

## Recommendations for Recruiting and Managing Undergraduate Research Assistants

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Undergraduate students are often integral to the execution of behavioral research. Their assistance can range from data entry and library research to conducting sessions and data analysis. Through their involvement, undergraduate students can acquire valuable skills, learn firsthand about the research process, make important contacts with faculty members and graduate students, and earn letters of recommendation for employment and graduate school.

Despite the ubiquity of undergraduate research assistants in behavioral psychology, it is often challenging to recruit them and manage their behavior during the course of a research study. A number of authors have explored various aspects of the undergraduate research experience from which a number of recommendations can be extracted. Gibson, Kahn, and Mothi (1996) evaluated two different models of training experiences for undergraduate research assistants. The authors recommended that faculty members who conduct closely related studies allow students to participate in a greater number of research projects, based on the premise that this would optimize the number of resources and ideas for each study. The converse was recommended for labs in which studies are not closely related. DiBartolo and Shutts (2000) recommended that faculty supervisors provide research assistants with a lab manual, and use a written contract to define the supervisor-assistant relationship. Starke (1985) recommended scheduling weekly meetings with undergraduate research assistants in which study-specific duties can be discussed along with more general academic topics (e.g., research methodology). Gant, Dillon, and Malott (1980) described a behavioral system for supervising undergraduate research. Some of the authors' recommendations included written descriptions of tasks, clearly defined criteria for task completion, and deadlines for the completion of mandatory tasks. In addition, Gant et al. recom-

mended the delivery of rewards for completing tasks and aversive consequences for failure to complete tasks, keeping performance records of the number of complete and incomplete tasks, and weekly meetings between undergraduate research assistants and a graduate-student supervisor.

Collectively, the aforementioned articles provide helpful recommendations regarding working with undergraduate research assistants. The purpose of the present article is to describe a more comprehensive system that addresses issues from recruitment of research assistants to their supervision during a study's execution. Our recommendations are intended for junior faculty and graduate students (hereafter referred to "supervisors") because, although overseeing research assistants is a common and important duty, these repertoires are rarely explicitly taught in graduate school.

### The Recruitment Process

#### *Recruiting From Classrooms*

Recruitment might be the most critical step in the process of acquiring and maintaining a team of undergraduate research assistants. The first point of consideration is the timing of your recruitment efforts. Recruit students 2 to 3 weeks before registration opens as they will likely know their schedules for the following semester at that time. A common method of recruitment is to contact students in upper-level courses related to the major (Starke, 1985). While actively recruiting students in the classroom, use a script to ensure that important details are presented and ensure consistency between different recruiters. We also recommend developing and requiring the completion of an application by students interested in becoming research assistants. The application may include prior experience relevant to research, grade point average (GPA), academic status, and professional goals and interests. It is important to make students aware of the applications, where they can obtain them, where

they should be returned, and the deadline for submitting them. How carefully a student completes the application and whether it is submitted on time can be useful indicators of existing professional behavior. It may be useful to bring a sign-up sheet when recruiting in a classroom should e-mailing the application to interested students be a viable option. If a graduate student is recruiting from courses taught by other faculty members, the process for obtaining approval to do so should be carried out in a respectful manner. In addition, keep any in-class recruitment presentation as brief as possible to avoid the loss of valuable instructional time.

In addition to recruiting research assistants directly from courses, supervisors may also contact former high-performing students whom they have taught, recruit from meetings of Psi Chi and psychology clubs, and post recruitment flyers throughout the building. Regardless of the method of initial contact, however, it is important to thoroughly screen applicants carefully and eventually invite the most promising of them to a face-to-face interview.

#### *Interviews*

Interviewing potential research assistants can be challenging. We believe it is important to address the following topics in an interview: (a) undergraduate major status, (b) plans for attending graduate school and primary area of interest within psychology, (c) previous experience on research or practicum teams, (d) GPA, (e) questions with respect to experience with the population of interest in the study, (f) transportation, (g) reasons for wanting to participate on a particular research team, and (h) student availability during the semester in question. We recommend that students selected for interviews have a strong passing grade in a prerequisite research methods course and exhibit appropriate professional behavior during the interview (e.g., on-time arrival, noncolloquial language, appropriate attire). Junior graduate students should conduct their first few interviews with a more experienced peer or faculty member. To increase the likelihood of selecting high-quality research assistants, interview two to three times the number of potential research assistants needed for the project.

Finally, we recommend developing a syllabus for the research experience before conducting interviews. The syllabus should describe the research assistant's responsibilities, performance expectations, procedures for emergency absences and lateness, and a

grading system in which specific point values are awarded for appropriate performance (e.g., participation in team meetings, accurate data collection) and withdrawn for inappropriate performance (e.g., missed sessions, unprofessional attire at the research site). Show the interviewees the syllabus so they can be aware that the experience is structured with clearly stated expectations of performance. This may further impress upon them the importance of their role within the research infrastructure.

### *Enrollment*

Students often assist with research for course credit, which requires several considerations. Make certain that students know how to register for research or elective credit, especially if special permissions are required. The supervisor should make certain that students are registered for research credit at the beginning of the semester to ensure they are covered under the university's umbrella liability policy during the research project. We recommend allowing students to serve as volunteer research assistants only when they have prior experience working in the lab and when a volunteer can meet the conditions for university liability coverage. Our hesitation regarding volunteer research assistants is a result of a history of excellent volunteers leaving midway through the project to pursue more attractive experiences. One can easily avoid this quite intrusive problem by having research assistants register for course credit. Finally, it is necessary to consider institutional review board (IRB) and site requirements as part of the enrollment process. If research assistants have contact with human participants, investigate the IRB's requirements regarding training, screening, and other related issues. If data collection is conducted outside of the lab, check whether the research site has its own requirements for research assistants (e.g., background checks). This step is important to ensure that the research assistant is eligible and able to fully participate on the research project. Ideally, all paperwork related to these issues is completed before the semester begins.

### *Research Team Meetings*

Regularly scheduled research team meetings facilitate open and clear communication between team members and can optimize the learning environment for all parties involved (Gant et al., 1980). The agenda for the first team meeting is critically important because it sets the tone for

the working environment for the remainder of the semester. The first portion of the meeting should be dedicated to discussing structural issues such as the syllabus, grading policy, general duties, etc. The second portion of the initial team meeting should be dedicated to discussing the importance of the students' role in the research process and their ethical responsibilities as a research assistant (e.g., confidentiality, data integrity) under the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2002) and the university's IRB protocol. You might also find it useful to describe potential consequences to the research team (including the principal investigator) for scientific misconduct and violations to the IRB protocol. We believe that such a "big picture" overview of the research team and the research assistant's role within it underscores the importance of teamwork and compliance with the research protocol.

### *The Semester's Activities*

#### *Primary Duties*

Early in the semester, research assistants should be introduced to the relevant research question(s), as well as the main concepts addressed in the line of research. This will provide a framework for discussions of assigned articles on the topic and subsequent training of primary research duties. We recommend that research assistant duties be prioritized and that training intensity and proficiency standards be established accordingly (see section on Obtaining Optimal Performance). Research duties may include, but are not limited to: (a) data collection; (b) implementation of the independent variable; (c) calculation of interobserver agreement and procedural fidelity; (d) data entry and analysis; (e) how to interact appropriately with participants, families, and other professionals; (f) developing data sheets; (g) creating research materials; and (h) problem solving research-related difficulties.

#### *Enrichment Activities*

After the primary research-related duties are addressed, we have found it beneficial to include several enrichment activities during the semester. These activities, although inherently valuable, are particularly helpful in maintaining a meaningful educational experience throughout the semester, especially during lulls in research activity. Potential enrichment activities may include: curriculum vitae development, graduate school preparation (e.g., interview

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skills), professional skill development (e.g., delivering presentations, writing a personal statement), and the research process in general (e.g., conducting literature searches). The types of activities and the frequency with which they are scheduled may depend on the topic of the research study, the number of hours research assistants have committed to the project during enrollment, the number of semesters research assistants have worked on the team, how often the research team meets, and the number of hours research assistants spend performing primary research duties.

### *Obtaining Optimal Performance*

It is important to establish the relevant contingencies to obtain optimal performances from research assistants. The supervisor should provide a task analysis for each of the duties associated with participation on the research team so that research assistants can perform them competently. In addition to providing a written task analysis, we recommend that research assistants be trained on each primary duty, with modeling and rehearsal when appropriate, and that they meet a predetermined proficiency standard during training for all skill areas germane to the project (e.g., data collection). Additionally, the consequences for not performing a duty as expected (e.g., point loss, dismissal from the research team) as well as consequences for exemplary performance (e.g., letter of recommendation, promotion within the team) should be outlined for the research assistants.

In our experience, providing research assistants with regular feedback on their performance helps them maintain and improve their performance across research-related activities (Gant et al., 1980). We also recommend providing feedback in a timely manner (e.g., about 1 week) for homework assignments and research-related activities, and conducting formal performance evaluations at the middle and end of the semester. Finally, the supervisor should model professional behavior. Professional behavior includes, but is not limited to, punctuality, deportment (e.g., dress, appearance), and collegial behavior during meetings.

### *Social Validity*

We e-mailed a link to a 5-item Internet survey (with Likert-scale response options) to everyone who had participated as a graduate-student supervisor within the system described in this article. Eleven of the 13 (84.6%) individuals responded to the survey. Ninety percent of respondents indi-

cated that they found this system valuable with respect to recruiting and supervising a team of undergraduate research assistants. Furthermore, the results indicate that these individuals had a positive experience working within this system and would recommend it to other supervisors.

We also e-mailed a link to a 10-item Internet survey (with Likert-scale response options) to the 40 most recent undergraduate research assistants who had been recipients of the system. Sixteen (40%) of the assistants responded to the survey. Ninety-four percent of respondents indicated that the research experience increased their knowledge and expertise with respect to research-related activities such as data collection, calculating interobserver agreement, and implementation of independent variables. Ninety-four percent of respondents reported that the experience prepared them to apply to a graduate program or gain employment in a related area. Eighty-one percent of respondents indicated that regularly scheduled team meetings enhanced their experiences as a research assistant with respect to assisting with planning the next course of action on the study, discussing concepts relevant to the study, and interacting effectively with their peers and supervisor. Eighty-eight percent of respondents reported that the feedback they received from their supervisors was beneficial to their performance. Finally, 94% of respondents indicated that they would recommend this specific research assistant experience to other undergraduate students.

The survey results should be viewed in the context of at least limitations. First, demand characteristics may have influenced responding as all respondents were former undergraduate or graduate students of the third author. However, this limitation is likely mitigated by the fact that all surveys were completed anonymously. Second, the survey response rate for former undergraduate research assistants was low. Thus, data from that survey may not be representative of the 60% individuals who did not respond. Limitations notwithstanding, the social validity surveys do indicate a generally high level of consumer satisfaction with the system from both graduate-student supervisors and undergraduate research assistants.

### **Conclusion**

Recruiting and maintaining a strong team of undergraduate research assistants is vital to the execution of research. We hope the system described in this article, which

has proven useful to our former undergraduate students and their graduate-student supervisors, will provide junior faculty members and graduate students who find themselves in the position of executing these tasks a clear and helpful guide to successfully achieving this goal. However, the system described in this article was developed in the context of a specific psychology department, research lab, and group of researchers. As such, all of the present recommendations may not be appropriate for other research circumstances. For example, one would reasonably expect differences in recruiting and managing research assistants between (a) liberal arts colleges and major research universities, (b) large and small research labs, (c) basic and applied research labs, and (d) departments with and without academically strong undergraduate students. Thus, potential adopters of the system presented herein might focus less on its specific tactics and more on its general strategy of explicitly designing the undergraduate research assistant experience across the areas of recruitment, performance management, and mentorship.

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