

Commentaries on Undergraduate Research Participation

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Engaging Research Participants

The nagging thought that ran through my head as I prepared to run my first study with undergraduate participants was “I sure hope they do a better job than I used to do when I was an undergrad!” As an apprehensive freshman participant, I just wanted to get a taste of what it would be like to be a psychology major and also put five or ten bucks in my pocket. I sincerely wanted to help the researchers too, and I certainly didn’t want to disappoint anyone, but on a few occasions I couldn’t help feeling like I had done just that.

Some of those studies were pretty boring, and others seemed unnecessarily taxing (“you want me to read how many pages of instructions?!”). I felt especially bad when a memory researcher asked me earnestly “are you sure that’s all you can remember?” after I had done my best to recall long strings of nonsense syllables. Looking back, of course, I don’t know if his entreaties were a part of his study design or not—I guess I didn’t always read the debriefing sheets too carefully back then, either.

So you would think that, armed with these memories, I would set out to design the most compelling, fun, and educational studies that I could. But of course, that’s not how it really worked out. In my zeal to get the “right” data, it was just too easy to keep adding more and more questionnaires and filler tasks. And I heard my share of complaints about it (“why did you ask the same question over and over?” was a familiar refrain). There were always a few students who protested by responding randomly on questionnaires, or pushing random keys during computer tasks—and then there was the one who refused to take off his headphones, whose guarantee that he would leave his CD player off was not particularly reassuring.

But it seemed that most of the time, even when the tasks themselves weren’t the most inspiring, the student participants were still genuinely interested in what the study was about. I found that the little extra time that I put into making the debriefing sheets and sessions educational, and honestly taking all of students’ questions (and even their study design suggestions) seriously, were qualities that were well appreciated. An occasional student even referred friends to participate—although that might have been because I was conducting narcissism research and they thought their friends were narcissistic!

Of course, I’m not recommending designing long, arduous studies. But in my experience, as long as there is *something* engaging about a study, students who have already gone out of their way to participate in it will leave with a positive attitude.

The educational drive of the undergraduates in these studies makes me particularly confident that they are taking their participation seriously. But it can also have a downside. In my experience, “real world” participants are very likely to take a study at face value, while curious and savvy students (especially the ones who are in psychology classes) are more likely to try to “outwit” your design and hypotheses.

Usually, this means that they try to give you the outcome they believe you're hoping for, but occasionally their motives aren't so benign. Luckily, they're wrong about the details more often than they're right. But whatever their motivation, or how accurate they are about the study's details, the student participants who "analyzed" the studies while they were participating in them caused me great concern about the validity and generalizability of my data (especially when coupled with the demographic outlier status of most of the students). For me, that means that I'm more comfortable using undergraduates in straightforward, correlational research than in cleverly designed experiments. But plenty of my colleagues in graduate school have disagreed with me about that.

Practically speaking, having a good study pool was a tremendous help—in general, participants from psychology classes took their participation more seriously than those who were just there to make a few bucks. As for those paid participants, freshmen in their first few weeks of school, and seniors in their final ones (post-thesis!) were the most reliable. I was also surprised to find that most students prefer a guaranteed small sum of money over a chance to win a big prize in a lottery drawing. But most of all, it seemed that conveying to the undergraduates (implicitly or explicitly) that I was excited about the research, and that I cared about them and their experience as participants, led to the most rewarding experience for them, and the best data for me. And adding a bottomless bowl of candy to the mix didn't hurt either!

– SETH A. ROSENTHAL

Diving Into the Subject Pool

I watched as a fair-skinned, well-built man with sandy blonde hair approached a woman from behind as she crossed the street. In a flash, he grabbed her purse and ran off. The stranger beside me also saw this turn of events and immediately struck up a conversation with me. "Did you see that?" she asked, "I can't believe the guy stole that lady's pink purse! He looked way too skinny to be any kind of threat!"

That's funny, I thought, he looked rather built to me and wasn't the purse red? Had this stranger and I watched the same event?

Minutes later an investigator came into the viewing area and invited me to a back room for some questioning. "What did the thief look like?" "What was his approximate build?" "What was he wearing?" "What color was the purse that was stolen?"

After giving my description, the investigator asked if I would be willing to view a photo array of possible suspects. As I began to flip through the photos, I began to question my memory. Could he have been skinnier than I initially thought? Did he have blonde hair or was it brown? Maybe the purse was purple, not red? After much deliberation, I finally chose someone who I believed resembled the thief. *Close enough*, I thought, knowing full well that I had to be in my next class in 15 minutes.

I was thanked for my time, told that the stranger in the viewing room with me really was a confederate trying to change my memory, and finally given an extra credit slip for participating in my first psychology experiment. As I walked away from that study, I remember musing, *would I have been willing to point the finger if this was real life and I was down at the police station?* And that really is the

question: How differently do people behave in a laboratory experiment versus the real world? Moreover, do students motivated by extra credit points really care about the outcome and behave like everyday people?

The answer is some do and some do not. Ironically, I now study eyewitness memory and rely heavily on the same subject pool I once participated in to get subjects. Being on the other side of the subject pool is a whole different kettle of fish, so to speak.

As a first-year psychology student, my primary motivation was to receive the extra credit points that went along with participating. Every hour of credit equated to .05 grade points. So, six hours of credit (the maximum you could do) equated to a rise of a .3 grade point average. Little did I know that the studies that I took part in would strike a passion in me for conducting interesting research.

As a researcher using the student subject pool, I have learned that there are three types of subject pool subjects. First, there is the “ultra motivated” subject. This individual is motivated by grades, interested in the research matter, and wants to get their extra credit hours out of the way so they can spend more time studying. These subjects sign up at the beginning of the quarter, show up, ask questions when they are done, and — truth be told — are few and far between. The second type is the good intention “no show” subject. These individuals have every intention of finishing their extra credit hours early, so they sign up early and never show. Throughout the quarter, they continually sign up for your study, and continually fail to turn up. The “no-show” subject is extremely frustrating because valuable time is wasted. I hire research assistants and if there are no subjects to run, I still have to pay my research assistants. (Let me take this opportunity to apologize to any researchers whose studies I signed up for and didn’t turn up to when I said I would.)

Finally, there is the “end of quarter” subject who realizes that her grades are suffering and if she doesn’t get extra credit she might not pass the class. As a researcher I have found that these seem to make up the majority of the subject pool, as indicated by the fact that sign up sheets fill up towards the end of the quarter.

As a student, I tended to sign up for studies that had catchy names and sounded interesting. As a researcher, I try to come up with catchy names and make my studies interesting in order to attract students. It is almost a battle of wits among researchers running “competing” studies. I mean really, would you rather participate in a study that boasts the title: “Individual Differences in Remembering and Forgetting” or “Who Dunit? Memory for Crime?” I know which one I would choose.

– SEEMA CLIFASEFI

Making Research Educational

My motivation as a participant in the psychology department subject pool was similar, I suspect, to that of many undergraduates: to fulfill course requirements. I did so somewhat grudgingly, not entirely understanding the benefits of research and thinking mostly about how the extra time commitments were going to burden an already busy schedule. Some of the experiments seemed interesting at the time; most did not.

With a few exceptions, my first experiment was representative of them all. I showed up on a Saturday morning and waiting for me was a bright-eyed research assistant. She was an advanced undergraduate who I had seen in some of my classes. The study, she said, “tests how people think.” (I’m still not sure which studies are not included in that description!). She said I would see a series of words on a computer screen, each printed in a different color. My task was to say the color of the word out loud as quickly as possible. I knew that she was administering some version of the Stroop task because I had read about that in a cognitive psychology text, but that’s the sum of what I gathered intellectually from the experience.

It turns out that the study was actually both socially important and very interesting. The principle investigator was Ian Gotlib, Stanford University, and the goal of the study was to examine how depressed and non-depressed individuals process emotionally-valenced information. The thinking was that depressed individuals might exhibit preferential attention to and memory for depressotypic information, and that these processes may work to maintain one’s negative cognitions and, in turn, the depressive symptoms. The computer tasks that I completed were designed to detect these precise biases in cognitive functioning, which are often measured in milliseconds. Even this brief description, I believe, sounds more interesting than simply saying that the study examines “how people think.”

The research process is much more interesting from the perspective of a graduate student or professor because they understand the theoretical basis for the experimental tasks being administered. They know what the tasks are trying to detect, why certain tasks are more appropriate than others, and how the data derived from the tasks fit into the larger conceptual picture of the phenomenon under study. For these reasons, they also understand why each undergraduate’s time is valuable. Undergraduate research participants do not understand these features of the research process because these features are rarely explained to them. Debriefing forms are mandatory, but almost never interesting, let alone conceptually informative.

The opportunity to partake in the research process as a subject is often framed as an educational experience to undergraduate students. I think this promise is rarely fulfilled. Instead of vague, uninformative, and boring debriefings that say little about why the study is socially relevant and very interesting, why not use the experience as a teaching tool to convey something exciting about research methods and the specific content area under investigation? The opportunities here are endless. Undergraduates could evaluate empirical articles that are related to the experiments, write brief reaction papers to the experiments, and/or design and propose similar experiments in either a written or oral presentation format. We might not be able to make all of the experimental tasks fun, but we can certainly make the overall process of being a participant in the subject pool more exciting and educationally valuable.

– GEORGE SLAVICH

On Both Sides of the Consent Form

I entered a psychology laboratory for the first time during the spring semester of my freshman year at Emory University. Like most of the other students taking introductory psychology, I viewed research participation as another hoop to jump through in the process of procuring a decent grade in the course.

Despite my reluctance to give up part of a Saturday morning, I was filled with rampant curiosity about what was going to transpire during the hour-long session. What sort of tasks would I be required to perform? Would I be in the control or the experimental group? What is the purpose of this experiment? While I had envisioned a scenario involving carefully planned deception and confederate participants (a symptom that commonly manifests itself right after the Milgram experiments are covered in class), the experiment was rather mundane.

Sitting alone in a small room, I filled out a questionnaire about relationships, both romantic and non-romantic. During the debriefing, I asked (hopefully) whether a small mirror on the wall was really a hidden observation window. Amused, the experimenter assured me that it was not. And that was my first experience in a psychological laboratory — nothing too exciting. I went on to participate in about seven more experiments during college. I experienced several different psychological paradigms, ranging from a visual attention task (in which my eye movements were recorded) to an autobiographical memory study.

Now, as a third-year graduate student at Washington University in St. Louis, I have switched roles completely. Instead of offering my brain and behavior for study, it is I who request this of others, most of them unpaid undergraduates. Some people take issue with the practice of requiring undergraduates to participate in psychology experiments for course credit, calling it nothing short of coercion. However, research participation — to invoke a frequently used justification — is an educational experience. During my hours as a participant, I learned a lot about what should and, perhaps more often, should not be done in an experiment. I gained a good understanding of how motivated the average person is to take part in a series of demanding tasks for an unknown purpose. Also, I realized how important it is to always thank participants for their time and describe the rationale behind the experiment in terms that can be easily understood.

Most of all, I gained the invaluable ability to view an experiment from the perspective of a participant. One might argue that the educational benefits of research participation only extend to those who go on to become experimental psychologists, but I disagree. Even for people who pursue an unrelated vocation, participating in an experiment provides an intimate glimpse of the scientific process. Although the knowledge gained, as in much of education, is largely implicit, it helps students to better understand psychology and science as a whole. To be sure, there is a limit to the educational benefits of participation: the marginal utility derived from participating declines sharply after about five or six experiments. Most universities (e.g., Washington University) have a cap on the number of experimental hours that people can amass. With appropriate safeguards and an emphasis on education, undergraduate research participation benefits everyone.

A few hours are a small price to pay for an enlightening experience and the advancement of psychological science. Perhaps I am overly optimistic, but I appreciate my experiences on both sides of the consent form.

– ANDREW BUTLER