
14 The Learning Research and Development Center Summer Undergraduate Research Internship

A Diversity Internship in the Learning Sciences

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Nooses. Nooses holding bananas with hateful messages hanging from trees on a college campus. A noose at an exhibit about segregation at the Museum of African American History and Culture. A noose hanging outside of a middle school. A black teddy bear hanging from a noose outside a high school. Such was the context when the first cohort of the Learning Research and Development Center Summer Undergraduate Research Internship began in May 2017—just four months after a presidential inauguration that coincided with ever-increasing instances of bigotry and social injustice on a national scale. According to the Southern Poverty Law Center (2017), bias incidents increased dramatically after the 2016 presidential election. Academia can already seem unwelcoming for students from underrepresented and marginalized backgrounds—thus, supporting and encouraging our students is even more important as the country wrestles with these threats.

To work toward this goal, at the University of Pittsburgh, we developed a 6-week internship program that aimed to increase diversity in the Learning Sciences by pairing undergraduates (ideally, rising seniors) with faculty in our Center to conduct a research project and engage in professional development activities. Thus far, we have had two cohorts of interns—five in 2017 (see Figure 14.1) and six in 2018 (see Figure 14.2). Interns were recruited via a flyer that was distributed as widely as possible (see more details in the Lessons Learned section), and on our website. Interns were selected based on their qualifications, their goals as expressed in their application, and their interest in the broad research program of the mentors participating in the program that year. Interns were also chosen based on their fit to the program goals; a strong emphasis was placed on the



FIGURE 14.1 The 2017 cohort of interns with the internship director (3rd from left).

Source: Photo courtesy of Elizabeth Rangel.



FIGURE 14.2 The 2018 cohort of interns.

Source: Photo courtesy of Elizabeth Rangel.

goal of increasing diversity in the learning sciences. Across the two years, the interns did research in a variety of areas in the learning sciences including: motivation and the flipped classroom, race and school engagement, confrontation and majority/minority status, adolescent brain development, adolescent physical health, mindfulness training, aphasia and its relation to math skills, number talk between parents and children, cognitive flexibility in online reading, adult word reading's sensitivity to frequency and contextual diversity, and adult second language vocabulary learning. We sought to help students strengthen their skills and graduate application materials; for some of the interns, this was their first research experience.

PROFESSIONAL DEVELOPMENT

Multiple professional development opportunities were designed to address career and personal topics, and potentially the intersection of the two. As one may expect, we included sessions on applying to graduate school and writing a research statement (with input from graduate student role models). Because these events may have been a bit early for the interns, we continue to provide feedback following the program. The university's career center offered a resume and CV workshop that was incredibly helpful in describing how these two documents differ and what should or shouldn't be in each, and also provided concrete feedback on drafts. Interns reported that the concrete feedback was particularly helpful. Finally, we also discussed how to present research in a poster format, and the interns presented their research at a culminating poster brunch in their final week. The poster session was well attended both years by Center personnel and interns from other programs.

Because the internship program sought to explicitly support diversity and inclusion, other professional development activities directly tackled the intersection of academia and identity. We provided interns with the book *Whistling Vivaldi* by Claude Steele (2011) upon their arrival for a later discussion of *stereotype threat*, the finding that people activate stereotypes and then perform in accordance with them unless remediation steps are taken. I also led a discussion of the *imposter syndrome*, the phenomenon that individuals often feel that they are not as capable as others think they are. We discussed that this feeling is common even among highly successful individuals, referring to a book on the topic by Valerie Young (2011). One participant reported that this session helped overcome some anxieties about the program.

PROGRAM EVALUATION

Interns from both cohorts were asked to evaluate the program overall and the professional development sessions via a survey sent shortly after their respective programs ended. Table 14.1 summarizes mean ratings of program elements, followed by select quotes about the program in interns' own words.

TABLE 14.1
Mean Participant Ratings of Internship Program Components

Aspect of Program	Mean Rating (<i>n</i> = 11)	Standard Deviation
Applying to grad school discussion	6.91	.30
CV workshop	6.68	.64
Impostor phenomenon discussion	6.73	.65
Poster session	6.91	.30
Weekly check-in meetings	6.73	.65
<i>Whistling Vivaldi</i> discussion	5.55	1.81
Writing a research statement session	6.45	.82
Overall program rating	6.91	.30

Note. Ratings were made on a scale from 1 (“extremely dissatisfied”) to 7 (“extremely satisfied”). Ratings are from all 11 interns.

In accord with consistently positive ratings, students’ reflections further demonstrated their value in and growth through the program:

(reflection 1) For minority students and women, having the research background that helps them stand out among their white, male peers is especially vital. As a student of color, being able to say that I not only led my own research project but also presented my findings at a poster session, allows me to say that I’ve developed and enhanced the research expertise that I would’ve not had without the LRDC.

(reflection 2) Participation in the program this summer meant that I was able to get a unique experience. This experience was important because, as of late, there has been a huge push toward diversifying academia and this program, in my opinion, is at the forefront of this initiative and has potential to be a national model for programs helping historically marginalized groups of students. I was able to get mentored by prominent professors in my field, get my CV checked by certified professionals, get practical tips regarding applying to graduate school and writing a personal statement, be in a real lab with real graduate students doing real research, explore a great American city, among other things, for free. It was because of this program that I feel more prepared and more competitive for graduate study at the Ph.D level.

(reflection 3) . . . the LRDC Summer Internship program was the most transformative experience of my life. I can honestly say that left a better version of myself, personally and professionally. There is research that show that black students are less prepared for college than their white peers. As a black man trying to navigate the ivory tower that is academia, it sometimes feels like the space was never meant for me. It was through this summer experience that I was able to gain renewed self-confidence and tools necessary to succeed in graduate school. Again, the LRDC Summer Internship Program has incredible potential to become the premiere summer internship experience for historically marginalized groups of students. I am confident that the people entering this program will go on to make waves in their respective fields.

Another way of assessing an internship’s impact is to ask, “Where are the interns now?” This is somewhat early for our program because it is relatively new. At present, two of the interns are enrolled in PhD programs, one is enrolled in a master’s

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program, and one is teaching English and earning an English as a Second Language Teaching Certificate. Two are finishing college now and have applied to post-baccalaureate programs, and one is applying to master's programs. Four are taking gap years before applying to graduate programs.

A FEW LESSONS LEARNED

As a cognitive psychologist who studies adult second language acquisition, I had no formal training in mentoring or in developing or running this type of program. Therefore, this was also a learning experience for me. Three of the most powerful lessons I learned relate to identity, nurturing, and reaching your audience.

First, I grew in my appreciation of racial and ethnic identity as complex constructs. Importantly, if you are not sufficiently knowledgeable in this arena, you can and should ask for input from someone who is! For instance, it was critical to take nuances of racial and ethnic identity into account when asking about them in program applications. We initially used the racial/ethnic categories selected by a National Science Foundation diversity internship program, but we got feedback from our interns that we should have included a broader set of categories (e.g., West Indian/Afro-Caribbean). Our initial labels did not allow students to identify themselves as they wished. It's best not to alienate potential interns before they even apply to your program.

Second, I found that it was crucial for the program to nurture its interns as human beings who were affected by their social climate, prior experiences, and immediate context, as well as mentoring them as scientists and researchers in a discipline. Given the experiences of individuals entering the program, their unique needs, and especially the world as it was (and is), the interns needed an outlet to talk about life. Without building this forum into such programs, there is a danger that the interns won't do this on their own. In turn, the lack of dialog can lead to missed opportunities for the interns to bond with each other, and for faculty to learn more about them and to provide a complete and well-rounded professional development experience.

Fortunately, we already had a mechanism in place that offered an outlet to discuss current events and their impact. Specifically, as Internship Director, interns could schedule individual meetings with me for any purpose—which was an opportunity to support students personally and professionally, but also privately. And, I held a weekly one-hour check-in meeting with the entire group. This discussion was *separate* from other professional development sessions or research meetings. The check-in meetings started with us going around the room to ask what each person had worked on since our last meeting, but there was also open discussion, and current events were frequently discussed. Interns liked that they were free to talk about anything. One participant reported: “The weekly check-in meetings were the highlight of my week in the program.” It was also the highlight of the week for me.

I eventually realized that it began to take an emotional toll on me, in that I was internalizing some of the difficulties that the interns were facing or had faced in the past. As mentioned earlier, the first cohort of interns arrived at a difficult time for our country, and we spent some time discussing troublesome issues. Although learning about challenges that the interns dealt with was very emotional for me, I was glad to have had the opportunity to learn about them. It made me feel part of the interns’

experience. As someone with a different background, a different set of life experiences, and being at a different stage of life, it was important and meaningful for me to see the world from the interns' perspective.

Finally, I also learned about advertising and reaching the population you want to reach. We advertised our internship in a variety of locations, but getting the word out is not trivial. I created a flyer and started sending it out, beginning with people I knew, and then to as many schools I could, focusing on schools with a large enrollment of students from diverse backgrounds. I can't stress enough the use of social media outlets (e.g., Facebook) to reach out to a broad audience (be sure to make your post public and shareable!). We received 75 applicants in the first year for five slots and 115 applicants in the second year for six slots. Although these were very healthy numbers to choose from, we faced a major challenge in that a very small percentage of our applicants were males from diverse backgrounds. This was a major obstacle for us, and unfortunately one that we have yet to solve.

I would like to take this opportunity to note that this type of program could relatively easily be adapted to fields other than the learning sciences, such as human factors. Importantly, such a program could be tailored to the needs of the students in that field if there are particular issues that affect those students. And, I am open to providing input to others who are hoping to start such programs.

CONCLUSION

I learned a number of lessons from directing the LRDC Undergraduate Research Internship—most were things I was able to learn from and adapt to in the second year, but there will always be challenges. As I write this, the country is reeling from multiple mass shootings and hate crimes that are increasing at a furious pace—the Pittsburgh community was recently devastated very directly. I can only imagine what the national context will be as the next crop of interns arrives at LRDC; these circumstances make programs like these even more important.

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REFERENCES

- Southern Poverty Law Center. (2017, June 5). *Frequency of noose hate crime incidents surges*. Retrieved from www.splcenter.org/hatewatch/2017/06/05/frequency-noose-hate-crime-incidents-surges
- Steele, C. M. (2011). *Whistling Vivaldi: How stereotypes affect us and what we can do*. New York, NY: W. W. Norton & Company.
- Young, V. (2011). *The secret thoughts of successful women: Why capable people suffer from the impostor syndrome and how to thrive in spite of it*. New York, NY: Crown Publishing.