

**Report on the Disciplinary Communication Grant:
Improving Scientific Writing through Guided Iteration
Psychology Department, 2017-2018**

This is a final report on the Disciplinary Communication Grant *Improving Scientific Writing through Guided Iteration* awarded to the Psychology Department, 2017-2018. We received \$23,889.60 to fund 21 Tutor II appointments, 48 hours/appointment at \$23.70/hour.

Purpose of Program

The purpose of our program was to help undergraduates improve their writing and to help graduate students learn how to teach writing. Consistent with the intent of the disciplinary communication (DC) requirement, we view effective writing as a central skill that all of our majors should have the opportunity to master. Like other skills, writing skills are best developed through guided apprenticeship in which individuals learn from those with greater experience. In our program, students benefited from the opportunity to develop their disciplinary writing in collaboration with faculty and graduate students.

In Psychology and Cognitive Science, our DC requirement is fulfilled through completion of two courses: Psych 100: Research Methods, which fulfills .5 DC, and capstone senior seminars, which fulfills another .5 DC. This proposal applied to the senior seminar component.

Learning scientific writing is an iterative process, involving multiple drafts and rounds of guidance and feedback. However, the student to instructor ratio at large research universities is often so high that it prevents instructors from engaging in this iterative process of writing and feedback. This is especially true in psychology departments, which typically have very large majors. At UCSC, psychology and cognitive science majors complete the disciplinary communication requirement in senior seminars with up to 30 students and one faculty instructor. Faculty are rarely able to read and comment on more than one full draft before the final version of the class papers are due. This program addressed this problem and provided needed resources to support the development of effective disciplinary communication skills among undergraduate majors in psychology and cognitive science.

A key program learning outcome (PLO) in both psychology and cognitive science centers on communication skills. Students are expected to demonstrate effective communication skills following professional conventions in psychology or cognitive science, appropriate to purpose and context. In addition to this key PLO, it is noteworthy that all of our PLOs are evaluated through writing that occurs in the senior seminar. These other goals include the application of knowledge with critical thinking skills, the application of research methods with values and integrity, and awareness of sociocultural diversity and societal inequality. Therefore, it is especially imperative that our majors communicate effectively in writing. The provision of additional resources to ensure we can meet the expectations of the DC requirement to our maximum potential will have a broader effect on all of our program learning outcomes, revealing the extent to which our majors have met these goals.

Structure of Program

Faculty members trained writing coaches to evaluate writing, working closely with them throughout their courses to develop student writing skills. Graduate students were matched with faculty mentors who worked together with them to discuss goals and progress and to identify a

time and labor management strategy, with the requirement that the time includes faculty-member-to-graduate-student mentoring, graduate student group coaching of undergraduates, graduate-undergraduate individual coaching, and individual feedback on drafts. Graduate students engaged in a number of activities, such as one-on-one tutoring, group writing workshops, open office hours, and feedback on written work.

Program Evaluation

During each quarter of the 2017-2018 year, we conducted surveys of faculty instructors, graduate student writing coaches, and undergraduate students about the writing coach program.

In the Fall quarter, one unanticipated issue was that students thought the writing coaches could help them with their papers for any class. In Winter and Spring we asked instructors to clarify with their classes that the writing coach is there to help them with the writing for their particular .5 DC course. In Fall, we also learned that some faculty needed additional knowledge in order to effectively train writing coaches in evaluating writing. We suggested faculty provide coaches with reading materials about teaching writing, or assist coaches in finding training sessions on learning how to teach writing.

Faculty used a variety of models to implement the writing coach program. One faculty member identified a third of the class as people who needed the assistance of a writing coach. These students were then asked to meet one-on-one with the coach. Later in the quarter, all students were asked to sign up for a meeting with the writing coach. This highlighted that the coach was a benefit for everyone, not just students in need. In addition, the writing coach planned two writing workshops for all the students in the class. The first of these was held in Week 4 to discuss structuring ideas in order to write effectively. The workshop was attended by about half the members of the class. The second was held in Week 9 to discuss the process of revision, and was also well attended. The workshops were advertised in class by the writing coach, where it was highlighted that the material covered would benefit both weak and strong writers. Other faculty relied exclusively on one-on-one meetings between their writing coach and undergraduates, in one case requiring that each undergraduate meet with the coach for a 10-minute tutoring session.

Fourteen faculty members participated in the program and 12 completed program evaluation surveys. Faculty instructors reported that their undergraduate students and their graduate coaches learned about writing and writing instruction. When asked about what undergraduates learned from the program, many faculty reported that the program was helpful for undergraduate learning because coaches gave detailed feedback on undergraduate writing. Some faculty explained that detailed feedback was not possible in other courses, and that many undergraduates have not received such feedback at any point in their undergraduate career. Faculty also noted that the assistance of a writing tutor allowed them more time to focus on course content and instruction.

Graduate student coaches learned how to instruct writing, and also how to improve their own writing. Coaches employed multiple instructional methods, including one-on-one coaching, group coaching, and workshops. Coaches also appreciated clear communication and support from faculty and felt their experience was improved by having a good relationship with the course's faculty instructor. Both coaches and faculty appreciated the flexibility of the program, stating that they could modify aspects of the program to fit the needs of a particular course.

Undergraduates learned general writing mechanics as well as discipline specific writing and developed an appreciation for the revision process. They also appreciated one-on-one contact with the writing coaches and the majority of reported interactions with writing coaches were one-on-one. Undergraduates reported some discrepancies in expectations and grading between their writing coach and faculty instructor that made course requirements unclear, but overall undergraduates were supportive of the program and recognized the need for a writing coach.

Concluding Thoughts

When the University proposed that the Disciplinary Communication requirement would be satisfied in the major, faculty were told there would be additional resources for writing tutors and more teaching assistants. These added resources never materialized.

The need for the writing coaches was apparent in program feedback throughout the year, which included faculty and graduate writing coaches' comments that writing support should be available for all courses, and undergraduate students' comments that they needed writing support. When asked whether the writing coach program should continue, 82% of faculty respondents agreed that it should while the remaining 12% agreed that it should with some modification (for example, requiring undergraduates to meet with the writing coach or implementing the writing coach program for undergraduates earlier in their studies). Similarly, 91% of writing coaches supported the continuation of the writing coach program.

We are disappointed that funding for the writing coach program was not renewed for another year. We have learned a lot from this year with writing coaches, but it was not enough time to develop the best model for the program. With another year of funding, it would have been possible to create a model that would have accommodated individual faculty members' diversity in teaching while providing valuable training for our graduate student writing coaches and improving our undergraduates' writing skills. We hoped it could serve as a model for other departments on campus to enhance the writing skills of their undergraduate students, and the teaching-writing skills of their graduate students.