

## RIO Program Narrative

### **Overview**

Numerous studies have demonstrated the benefits of undergraduate student research. It has been shown to inspire students to engage in future research (Tan, 2007, Adamsen et al., 2003). Furthermore, students who participate in undergraduate research are more likely to seek advanced degrees in STEM and in Social and Behavioral Sciences (Russell et al., 2007). Research helps students develop confidence, and build social and leadership skills (Hawkins, 2010). However, many students lack the awareness and the tools to get started in research. In particular, students who are first generation, low income, or belong to a minority are often underrepresented in undergraduate research. The RIO program (Research through Inclusive Opportunities), run by the Office of Undergraduate Research at Cal Poly Pomona, is designed for such students, who may not otherwise have the opportunity to participate in research. It targets sophomores and first-year transfer students. The foremost goals of RIO are to provide underrepresented students with research experience, and to foster a greater interest in research.

### **Program Components**

In RIO, students are supported by staff, peer mentors, and a faculty mentor, whom students work with on a yearlong research project. This faculty mentor plays an instrumental role in guiding students in their research. To further assist in their understanding of the research process, students attend research centered workshops that go over topics such as the peer review process. In addition to the research component, there is also a strong cultural element to RIO. Students attend two culturally relevant activities throughout the year, with the goals of creating awareness about other cultures, and fostering interest in one's own culture. To support their

financial needs, RIO provides students with a stipend, distributed twice throughout the academic year. Through the program, students are expected to write a literature review, abstract, final paper, and present at the RSCA conference in the spring. Students' abstracts and research papers are published in Bronco Scholar Works. Students may also apply for the Conference Presentation Award, which provides funding for students to present their research at conferences outside of Cal Poly Pomona.

### **Objectives**

In addition to the main goals of fostering interest in research, and providing research experience to students, the RIO Program has a list of objectives that it seeks to fulfill, which include increasing students' sense of belonging at CPP's community, creating an environment that is conducive to research development, educating students about the research/creative projects process, and assessing students' individual struggles and stories over the academic year. To gauge how effectively the RIO program has met these objectives over the 2020-21 year, an evaluation was performed in April 2021, which includes a survey completed by RIO students.

### **Evaluation**

The results of the survey were overwhelmingly positive, illustrating RIO's commitment to meeting its objectives. Firstly, students felt as though RIO met its goal of fostering a feeling of interconnectedness.

- 98 % of students said that RIO helped created a sense of belonging.
- 93.5% felt as though RIO helped them to connect to the CPP community.

Results also showed that students felt supported in their research.

- 90% of students believe that RIO helped them achieve their goals to pursue research or creative activities.
- 96.8% of students would recommend the RIO program to future students.

Furthermore, the RIO program increased students' understanding of research.

- 93.5% of students felt a greater sense of confidence in their research writing and in their ability to set up and present projects at future conferences.
- 93.5% said that RIO helped them to improve their analytical and investigative skills.
- 90.3% of students expressed a desire to present research at future conferences.

Finally, from a cultural perspective, RIO has been shown to help students feel connected to their culture.

- 78.6% of students felt as though RIO's culturally relevant activities helped them connect with their culture.
- 80.7% of students agreed that RIO encouraged them to think about their culture and identity.

While these numbers are quite high, it is recognized that there could be even more engagement with the cultural aspect of RIO, and thus there are multiple proposals for the upcoming year, including adding a multicultural psychology course component, a wider variety of culturally relevant activities, and the opportunity for student researchers to share their own cultural heritages, through creative venues such as poems, art, and stories.

### **Testimonies**

In addition to the evaluation, student researcher testimonies have provided us with an opportunity to highlight individual experiences within RIO. Jessica Coronel is a first-generation student who says that her research journey was filled with support by her faculty mentor, peer mentor, and RIO staff. She feels as though RIO gave her a sense of belonging among her peers and the greater CPP community. She now possesses a greater understanding of both the research process, and the field of Chemistry. Coronel noted that although she faced hurdles in her research, due in large part to the Pandemic, she was ultimately able to succeed. Agatha Brenda Yaghoobi, another student researcher, says that the research process gave her a sense of purpose and the means to pursue her goals. In addition, she says that RIO invigorated her excitement about higher education and made her feel that rather than simply taking classes to fulfill a degree program, she is doing something worthwhile, which adds to the knowledge and culture of Cal Poly. Additionally, she says that the RIO program enhanced her sense of belonging as a transfer student, where she may have otherwise felt left out and isolated.

## References

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