Occasionally I am asked why Purdue students consistently make a positive difference in their work and communities. What is responsible for their creativity, insight, critical thought, disciplined analysis, and can-do approach? In essence, what is the “secret sauce” in the Purdue experience?

The answers are complex, but I believe that you can gain some insight in the second issue of JPUR. You will read ideas that have never been thought before. You also will learn subtle answers to problems that many of us wonder about, but that these authors have carefully investigated using well-structured methods and defensible analyses. In these 11 articles, you will see the generation of new knowledge.

What are some of the ingredients in the secret sauce? Why do almost 50% of our students report that they engaged in undergraduate research during their time at Purdue? Why do one out of three indicate it had the greatest impact on their academic success? Why do so many professors say that undergraduate research was the reason they decided to pursue an academic career? Let’s take a look.

**Substantive interaction with faculty and graduate students.** The student authors spend hours one-on-one with the graduate students, post-doctoral researchers, and faculty highlighted in each article. In those meetings, claims are challenged, disciplinary standards are learned, experiments are designed, ways of visualizing and communicating results are sharpened, and students are intellectually stretched.

**Sustained attention over a long period of time.** These are not problems that can be solved in an evening like a homework assignment, or in a month like a term paper. In fact, as one digs deeper, there becomes more to learn, more questions to test. The articles in this issue describe projects that may have taken from a semester to a couple of years to bring to the point of publication. These students learned to be both persistent and flexible.

**Open-ended, unstructured problems.** Unlike homework, but like so many real-life challenges, the topics in this issue were wide-ranging, interdisciplinary, unstructured, with no “right” answer. The student researchers learned to clarify the issues, synthesize knowledge from diverse sources, posit an original thought, and create a product directed at a real audience.

This research publication is created by students and for students. Eighty undergraduates submitted abstracts this year, which resulted in 11 articles and 35 research snapshots ranging from the humanities to agriculture. Students were involved in every aspect of publishing this issue, including serving on the editorial board, working with authors to write for a lay audience, copyediting, design, and production. They were supported by professionals including librarians, professors, writing lab staff, designers, and production staff. This has been a team effort.

So what is in the secret sauce? You will discover the ingredients in the stories behind this year’s issue of JPUR.

**FIND OUT MORE ABOUT UNDERGRADUATE RESEARCH AT PURDUE**

Read more about student Discovery Makers at Purdue, and their experiences of undergraduate research:

http://go.lib.purdue.edu/pup/fivestudents

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