Getting Involved in Biological Research

Hannah Langenfeld

Every concept taught in a biology course was uncovered due to the power of research. 60% of biology majors at the University of Iowa are involved in research on campus. Since research is so important, why are there not more students involved in research? My project focuses on the undergraduate experience in biological research to reach the 40% not involved.

My goal was to reach first- and second-year undergraduate students who are interested in biological research. First- and second-year undergraduate students feel that since they are not proficient in lab techniques and have taken only one or two biology courses. But it has been shown that starting research early in your undergraduate career promotes better relationships and can lead to more success in the lab.

Implementation & Process

My project’s activity was fairly simple. There are five parts to my activity; interviewing the undergraduates, interviewing the professors, the writing up the interviews, uploading the documents, and marketing.

When developing the project, I had originally just wanted to interview different professors in the STEM departments about their research to make students in other fields understand it. Thankfully, Dr. Lori Adams advised me to look at a webpage on the biology department’s webpage that mirrored my goal but was more realistic.

During the process of implementing, I reached out to more than seven
Once the professors agreed to meet with me, I reached out to their undergraduate research assistants. I interviewed the professors and their undergraduates separately. During the undergraduates’ interviews, I asked them a series of questions; When do they start working in the lab, what is their major, had they worked in any research labs before joining their current lab, why did they reach out to this lab, what they do in the lab, what they want to do in the future, and what they had wished they known before beginning research. After the interview, I take photos of the students doing normal lab tasks. During professors’ interviews, I asked them one question to get the interview started; how many undergraduates work in your lab, and let the main question start a discussion between the professor and me.

The process of writing and editing the interviews to convert them into text was difficult. The writing process was complex because I had to decide on a perfect format to keep my audience’s attention and match their comprehension. Once the format was chosen, the writing process was easy. The editing process included checking with the undergraduates and professors and reviewing with the Writing Center. The next part included uploading the writing onto the webpage and marketing it. Uploading the writing took a week and I worked with Steve Kehoe, who is granted access to edit the department’s webpage (figure 1). During the uploading process, I marketed the webpage by putting up flyers in the biology buildings and the Iowa Memorial Union (figure 2).

Impact
I collaborated with the biology department to update the webpage. Through this collaboration, I have a permanent webpage on a website that has high web traffic. I am hoping to analyze the traffic in June 2018 and continually monitoring the traffic to see if the traffic on the webpage gradually increases to understand the digital outreach. Since my project is continual and long-term, I hope to monitor the webpage for six months.

**Future Direction & Sustainability**

Since I was only able to interview seven professors, I hope someone could continue my project in the biology department and interview all the professors. I feel this project is ubiquitous in any science department because the undergraduate profiles’ questions do not contain biological language and could easily be applied in a chemistry or physics lab.

**Conclusion**

From this project, I learned to be patient when it comes to scheduling and interviewing people. I had originally thought I was going to able to finish the project in a month but due to scheduling, it took me two and half months to finish the project.
Figure 1: Before and after on the website. The top is still included on the webpage but it is hyperlinked on the professor’s name and the profile featuring the undergraduate is on its own webpage. The update version focuses on the experiences of current undergraduate student and contains less text and a lower level of writing.
Figure 2: Flyer posted in the biology buildings and the Iowa Memorial Union. The flyer highlights the positives of doing research as an undergraduate.