

Abstract

The research conducted for this project focused on undergraduate research opportunities. Topics included the general areas of study where research is prevalent; perceived advantages and disadvantages of conducting undergraduate research; and restraints that may make conducting research difficult. The findings indicate that undergraduate research is most often conducted in various fields, with a tendency to stray toward sciences. Our research also indicates that undergraduate students benefit greatly from research experiences, mostly in terms of intrinsic attitude toward academia and their field of study. Few perceived limitations were found, and there was no evidence that undergraduate research opportunities have any negative effects. However, some sources suggested that research opportunities may not benefit an undergraduate student depending on several factors such as time and personality.

Faculty and Undergraduate Research Collaboration

Presenting at Made in Millersville (MIM) was only my second time presenting any research that I had conducted. Previously, Dr. Powers and I presented the same research at the 2014 PASSHE Summit Conference. At the time, it was my first semester at Millersville after transferring from Franklin and Marshall College, thus my experience in conducting research was lacking, especially in the field of education. I had helped Dr. Powers conduct literature reviews in her office on topics that were interesting to both of us, but we later decided that I should have a more engaging experience with research. That is when we decided to pursue a faculty-undergraduate research collaboration.

Dr. Powers and I have comparable interests and motives in education; we enjoy social justice, diversity, and play. Naturally, we had similar intents for our collaboration. Spending many hours in her office in Stayer Hall, we selected a topic that would be both interesting and relevant. The idea of examining faculty-undergraduate research collaborations was one that would be suitable for both of us, as it would be applicable to each of our positions at The University. Thinking retrospectively, I would have rather elected a topic that was more relevant to me as a future elementary educator—one that focused on young learners rather than college students.

Research and Findings

The research I presented during the Made in Millersville conference focused on the perceived perks of faculty-undergraduate research collaborations. The research tended to focus on how students benefit from working with professors to conduct research in their fields of study. Speaking generally, the data Dr. Powers and I collected indicated that there are many positive benefits to participating in research collaboration. We uncovered what some limitations to collaborations may be, but we did not find any evidence that a research collaboration can have negative effects on either student or faculty.

As mentioned in the Introduction, the semester during which Dr. Powers and I chose to engage in a research collaboration was my first at Millersville University. Because I was still adjusting to my new university, and a completely different field of study, I rallied for a method

of research that would be balanced in rigor and time consumption. Dr. Powers suggested a literature review, in which we used the Millersville Library's database to find relevant articles. A literature review would provide a structure for research that I could work on at any time, at school or at home. This research method is also one of the first steps in a larger research project. Thus, it gave me a glance into the world of research beyond what high-school assignments gave me.

Once we had selected a number of peer-reviewed and recent articles, we began coding them—an entirely new experience for me, but something that I do often now as I continue my work with Dr. Powers. Coding is the process of categorizing sources—in our case, articles—based on the idea(s) that they address. For example, we found a number of articles that concentrated on how participating in a research collaboration can boost an undergraduate's motivation.¹ After coding, we were able to select which articles would be of benefit to our topic, and discard the others. Each article was then reviewed and their most essential statements were compiled in a separate document. Later in the process, Dr. Powers and I took the findings of our research and organized them into a PowerPoint Presentation to be given during the 2014 PASSHE Summit Conference.

The findings of our research were valuable to me because I was in the same position as the students who were the focus of the research projects that Dr. Powers and I searched for. We discovered that undergraduate students who partake in research with faculty have an enhanced educational experience.² The various benefits that constitute a greater overall education include a stronger connection between theory, practice, and research.³ In addition, students form and maintain stronger bonds with faculty, and exhibit an increase in motivation and perceived self-efficacy.⁴

I can personally attest to many of our findings. I certainly feel that conducting research alongside Dr. Powers has given me a more substantial education experience. As an education major, I am going into a field where research is conducted every single day, from small-scale observations to larger scope experiments. Becoming familiar with some of the research techniques used in education will certainly be a skill I can use for the entirety of my career. Not only have I gotten a deeper, more profound education, but I have also become acquainted with many individuals and faculty members. Dr. Powers has an unbelievable web of connections, and I was lucky enough to be introduced to many of the professionals that she knows and works with. Many of the professors in the Early, Middle, and Exceptional Education department know me by name, and that truly adds to the comfort of being a student in the Early Childhood Education major. As Bender, Sechrest, and Yaffe describe it, our collaboration fostered my sense of loyalty and belonging at The University.⁵

1 Bailey, K.G.D., & Helm, H.W. (2013). Perceived benefits of presenting undergraduate research at a professional conference. *North American Journal of Psychology*,15(3), 527-536.

2 Zhan, W. (2014). Research experience for undergraduate students and its impact on STEM Education. *Journal of STEM Education: Innovations & Research*,15 (1), 32-38.

3 Saldaña, J. (2012) *The coding manual for qualitative researchers*. Thousand Oaks, CA: Sage Publications.

4 Bailey, K.G.D., & Helm, H.W. (2013). Perceived benefits of presenting undergraduate research at a professional conference. *North American Journal of Psychology*,15(3), 527-536.

5 Bender, C., Sechrest, L., & Yaffe, K. (2014). How does undergraduate research experience impact career trajectories and level of career satisfaction: A comparative survey. *Journal of College Science Teaching*, 44(1), 25-33. 5

When Dr. Powers suggested a research collaboration, I was hesitant. I had no experience conducting college-level research, and was new to the field of education. Knowing I could grow from the experience, I agreed. After all was said and done, I knew that I had accomplished something that I was previously concerned about, and I was no longer worried—a definite boost in my self-efficacy.

Conclusion

Concluding my research collaboration with the Made in Millersville conference was the ideal way to finish up my first semester at Millersville. I had something to be proud of, something to go home and tell my parents, and I had the internal joy of knowing that I was one step closer to being a great student and future teacher.

References

- Bailey, K.G.D., & Helm, H.W. (2013). Perceived benefits of presenting undergraduate research at a professional conference. *North American Journal of Psychology*, 15(3), 527-536.
- Bender, C., Sechrest, L., & Yaffe, K. (2014). How does undergraduate research experience impact career trajectories and level of career satisfaction: A comparative survey. *Journal of College Science Teaching*, 44(1), 25-33.
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