Introduction

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Representing a wide range of fields and institutions, this issue of *Scholarship and Practice of Undergraduate Research* features eight articles spanning the areas of assessment, practice, and international perspectives. Highlights include a longitudinal story about a summer undergraduate research program that grew to shape the strategic plans of a college, two examples of international research programs, lessons learned from an international network, and innovations in STEM learning experiences.

Following up on a recent publication (Palmer et al. 2015), Ruth J. Palmer and collaborators present the results and analysis from a 2015 survey of undergraduate research students. Unlike in previous assessments of this population, Palmer and colleagues sought to explicitly explore the factors that led to students' understanding of themselves as individuals and as participants in the community of researchers. Data was collected from students at four diverse universities in the United States and Canada using a cross-sectional survey design, and results were analyzed using both quantitative and qualitative approaches. Analysis revealed that the traditional mentor-apprentice model was less common than expected, and students identified a vast array of mentors who influenced their personal and professional development. The findings here are consistent with previous results that reveal undergraduate research mentoring is a holistic process, not solely an academic one, and programs aimed to support positive student research outcomes should also consider methods of fostering "whole-person mentoring."

Two additional articles relate to assessment of undergraduate research, with one connected to a common challenge for students: writing a literature review. Karen M. Travis and Priscilla Cooke St. Clair offer an analysis of pedagogical changes that supported undergraduate students in a capstone economics course. The authors analyzed the final research papers from an 11-year sample of students for the number of citations, a coherent synthesis of ideas, and characteristic summary paragraph. Controlling for variables such as gender, race, instructor, and GPA, a multiple regression analysis showed that the added in-class literature review activities and targeted feedback significantly improved the quality of student work. As many capstone research classes include a similar component of the final paper, readers will benefit from seeing this particular course evolve over time with the purpose and effect of improving student outcomes.

Considering another perspective on student writing, Shearon Roberts and Ross Louis explore how African American students pursue research experiences both within and outside their major subject area by evaluating the submissions to their university's undergraduate research journal. Prior publications (e.g., Jones, Barlow, and Villarejo 2010; Lopatto 2004) have shown that the learning outcomes associated with undergraduate research are amplified for underrepresented minorities, and this article adds to the story. Interestingly, the study of Roberts and Louis reveals that more STEM students selected research outside of their subject area than within, which suggests an increased level of agency among these students. Although limited to project articles submitted to the undergraduate journal, the nine years of data suggest some noteworthy trends, which may (or may not) be replicable at other institutions that do not have a STEM or underrepresented minority focus.

Effectively merging the two high-impact practices of undergraduate research and study abroad (Kuh 2008), this issue features two articles describing programs that aim to enhance global competencies. Bringing a story from the only women's college in Los Angeles, Lia Roberts and colleagues describe a unique interdisciplinary research-training program intended to create globally aware and technically skilled STEM graduates. The comprehensive program weaves together political science, chemistry, and biology to explore the geopolitical and socioeconomic factors related to cancer. The addition of modules on policy and leadership is particularly valuable as counterpoint to the laboratory and scientific skills acquired. A final portion of the program took the participants to Peru to collect firsthand survey data in an international setting, effectively merging the two high-impact practices of undergraduate research and study abroad (Kuh 2008). Initial observations indicate that Roberts and colleagues have created a sustainable and meaningful avenue for these integrated research experiences. Future work will include evaluation of the program's influence on retention and success for the female students.

Drexel University has an early undergraduate research program, including full-time summer research (STAR), and recently piloted an international version (iSTAR), which transported a portion of the participants to research sites abroad. Initial assessment of these two programs reveals that the international research experience has learning gains similar to the domestic version. Although the sample of students from the international program is small, Haizhi Wang and colleagues share results that demonstrate positive outcomes related to working with diverse groups. Additional qualitative research will elucidate the specific

gains from this new program. The authors conclude by providing helpful suggestions for other institutions that wish to offer international research experiences.

The culminating focus of Vicki Baker and John Carlson's article is a description of a capstone course for fourth-year business students that included an inquiry-based project. The problem tackled here is also one that many readers will recognize as important: how do we stay connected to alumni after they graduate? The findings described here expose the importance of developing and maintaining a network between alumni and current students. Preceding this story is a lucid and established perspective on business education in the context of liberal arts colleges. Moreover, integrating research into an undergraduate business curriculum provides opportunity for students to explore three different cognitive approaches valued in a liberal arts eduction: analytical thinking, multiple framing, and reflective exploration. Ultimately, these approaches (and the corresponding undergraduate research experience) effectively prepare students for life after graduation.

Contributing an expansive study of Smith College's longstanding summer undergraduate research program (SURF), Patricia Marten DiBartolo and colleagues highlight the summative assessment of the program outcomes and describe how these were leveraged to increase institutional support over time. Issues of scale, expense, and access had to be overcome at various points in the college's history, and the authors describe how efforts to improve visibility and establish need influenced the stakeholders. Over the decades, SURF has become a part of the strategic planning process at Smith, evidenced by the increase of research experiences in the classroom; incorporation into retention, tenure, and promotion processes; and institutional investment. With a thriving program and long history of well-documented outcomes, Smith serves as a model of what is possible. Colleges and universities interested in expanding undergraduate research experiences will benefit from this thoughtful narrative.

Finally, Rachel Spronken-Smith and colleagues share a valuable perspective on the challenges of an international undergraduate research network. In a collaborative effort, faculty from Australia, Canada, New Zealand, and the United Kingdom aimed to provide a unique opportunity for international students to work together on research projects. Students participated in a research methods course and designed individual projects; however, given the challenges of time zones and divergent academic calendars, there was very little true collaboration. One of the most significant obstacles was technology, which may become less of a barrier as methods of digital collaboration improve. Although the authors acknowledge that the outcomes contained some disappointments, the team assuredly learned much from the two years of the network and succinctly offer recommendations to others who may be interested in building such networks across international boundaries.

As a newly appointed issue editor for SPUR, I am pleased to introduce this diverse and interesting collection. I hope readers find both lofty inspiration and practical suggestions in these pages.

References

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