From the *CURQ* Issue Editor

Undergraduate research can be a transformative experience for students as they progress through their educational careers. The extant literature reveals that undergraduates who engage in research grow academically and also experience significant personal gains, including increased confidence and the ability to work independently.

As members of CUR who strive to provide our students with the best educational experience possible, we are often fortunate to witness the transformative power of undergraduate research firsthand. However, with shrinking college and university budgets and increased faculty workloads, providing opportunities for students to work on research projects is a struggle for many of us. In the Fall 2016 *CUR Quarterly* we explore a number of innovative ways to increase undergraduate research by integrating such activities into the curriculum.

In our print issue, Leah Olson-McBride, Holly Hassemmer and Jerry Hoepner (University of Wisconsin-Eau Claire) provide a model for integrating undergraduate research into the core curriculum. In "Broadening Participation: Engaging Academically At-Risk Freshmen in Undergraduate Research," these authors demonstrate that students need not wait until their junior or senior year to gain exposure to the research process. They describe the Collegiate Bridge program at UW-Eau Claire, a two-semester course sequence that serves traditionally underrepresented groups (first-generation college students and racial/ethnic minorities) and is designed to prepare at-risk freshmen for the rigors of a college education. In addition to learning valuable life skills, students learn about the research process and then apply that knowledge in a group research project. The article explains how this approach broadens exposure to research and can inspire students to engage in further research later in their college careers.

Models for scaffolding undergraduate research experiences throughout the curriculum are presented in two articles. "Undergraduate Research for All: Addressing the Elephant in the Room," by Judy Awong-Taylor and colleagues, describes the Four-year Undergraduate Research and Creative Experience Model, a pilot program at Georgia Gwinnett College designed to provide research opportunities to all STEM majors. By redesigning existing courses to include required research components, the program has led to higher retention rates, increases in overall GPAs, and broadened participation in undergraduate research among traditionally underserved populations. Chantal Frankenbach presents an additional model as she discusses the benefits and challenges of redesigning the music history curriculum at California State University-Sacramento to include a sequence of reading, writing, and research-intensive courses, culminating in a senior capstone research project. She reminds us that institutional support for undergraduate research is critical to the success of research-focused curricular development or redesign.

In one vignette in the Fall *Quarterly*, Cynthia Allen (Carthage College) describes the innovative methods she employed to increase the rigor of the Exercise and Sport Science Program by incorporating undergraduate research into three courses. In another, "Directed Undergraduate Research Courses: A Viable Option for Academic Year Experiences," Mary Walczak and Matthew Richey at St. Olaf College

explore the use of directed research courses to increase opportunities for undergraduate research, while still ensuring that these courses count in faculty teaching loads. And Catherine Villanueva Gardner discusses the use of "reusable learning objectives" (RLO's) at the University of Massachusetts-Dartmouth. These are videotaped presentations (similar to a TED Talk) in which faculty members introduce students to their research agendas and methodological specialties. These videos are stored on university servers and are available for download to course websites or use in the classroom, thus enabling the content to be used in a variety of courses and contexts.

The *CURQ on the Web* features three articles, a teaching note, and two extended vignettes. Karen Resendes and colleagues from Westminster College explore the challenges often associated with senior capstone courses, particularly the disconnect between faculty expectations of students' research skills and many students' lack of preparedness to complete high-quality capstone research. They describe curricular changes that provide early exposure to the elements of research design in introductory courses, as well as the modification of upper-division electives to incorporate research, thus significantly improving the quality of senior capstone projects.

Mary C. Stenson and Amy Olsen from the College of Saint Benedict/Saint John's University describe the development of a new Integrative Health Science interdisciplinary major that incorporates undergraduate research using a course-scaffolding model. They provide insights about the challenges, as well as valuable lessons learned along the way.

In "Building Research into Undergraduate Curricula: Georgia College and State University Moves Full STEAM Ahead," Doreen Sams and colleagues provide case studies from two departments that help illustrate how internal grants can be effectively utilized to include undergraduate research throughout the curriculum.

In her teaching note, Barbara Welker from SUNY Geneseo describes her efforts to embed undergraduate research into the anthropology curriculum by developing a series of research-focused courses. Welker includes sample course syllabi, detailed course materials, and examples of student projects. Further, two extended vignettes, one describing peer mentoring at the University of Central Oklahoma and the other a research track for biology students at the University of Wisconsin-Eau Claire, also address a variety of ways to incorporate undergraduate research into the curriculum.

The articles and vignettes in the Fall *CURQ* print and web editions demonstrate that undergraduate research can be successfully integrated into the curriculum in a variety of disciplines and at all academic levels. We hope that they provide valuable insights into how we can increase student access to the enormous academic and personal benefits that undergraduate research offers.

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