From CUR's President

It is with great pleasure that I commence my term as CUR's president. I begin this role at a time when CUR has adopted a strategic plan to assist in setting the organization's agenda for the next three years. At an invigorating annual business meeting held June 23-25, strategies for achieving our strategic goals of *raising the profile of CUR, enhancing engagement of membership, and contributing to the assessment of undergraduate research* were discussed. During one session, the room was filled with more than 200 CUR Councilors talking with enthusiasm about making CUR a better, stronger organization and, in doing so, helping the undergraduate research community make such work an increasingly valued learning experience for greater numbers of students. The business meeting was followed by an exceptional CUR Biennial Conference during which faculty and administrators learned from each other, networked, and shared their passion for undergraduate research. I always return to my home campus from CUR meetings energized by my colleagues, excited about doing more for my own students, and filled with ideas for enhancing my campus's commitment to undergraduate research.

One key approach to enhancing undergraduate research is through integrating and building undergraduate research into curricula and coursework, one of the themes of the biennial conference. Research tells us that students engaging in a high-level research experience as undergraduates experience intellectual and personal gains. Students improve in making use of primary literature, interpreting data, and communicating results. They also experience personal gains such as increased ability to work independently, enhanced self-confidence and self-reliance, and greater tolerance for obstacles (e.g., Laursen, Hunter, Seymour, Thiry and Melton 2010; Lopatto 2009).

Given the numerous benefits of undergraduate research, institutions are working to develop and enhance research opportunities, making them accessible to as many students as possible. But in many cases, the high enrollment in undergraduate programs remains a significant challenge to providing research experiences to all or even most students. Many institutions are turning to course-based research to provide the benefits of undergraduate research to more students. A growing body of literature suggests that course-based research increases students' interest in science, improves self-confidence and deepens understanding of course content (e.g., Brownell et al. 2012, Miller et al. 2013; Burnette and Wessler 2013). Integrating research into the curriculum produces some of the same gains seen from more intensive student-faculty collaborative research.

The articles that comprise this edition of the *CUR Quarterly* are excellent contributions to the work on curricular integration of undergraduate research. Together they highlight common challenges to integrating research into the curriculum, such as budgetary and technological needs, and provide insights into how to scale up curricular-based undergraduate research. The contributions speak to the

value of assessment of undergraduate research so that we can determine if our scaled up efforts are producing the desired learning outcomes. We learn of the importance of administrative support and of revisiting learning outcomes when undertaking curricular reform. We are offered tips on how to make the integration of research into the curriculum sustained and accessible. The pieces in the *Quarterly* are instructive and inspirational examples of how to use research in the curriculum to enhance student learning and improve outcomes. They also remind us that early research experiences are beneficial for student retention, particularly for retaining students typically underserved in higher education, and indicate that integration of research into coursework may be one way of making undergraduate research accessible to all.

There is little doubt that integrating research into coursework is beneficial for students. But it can also be valuable for faculty. The research-based courses I have taught have been the most rewarding teaching experiences of my career. Courses that incorporate a significant research experience are dynamic, engaging, and invigorating (and sometimes a bit messy). As students work on unscripted and important problems, I have the chance to do the things I most love to do—guiding students as they learn to ask important questions and to think like researchers. There is little more professionally rewarding than that.

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