Higher education is at an inflection point. Data analytics, experiential education, and advanced technologies are expanding and redefining our concepts of a classroom, course modality, content delivery, learner engagement, and student success. At Purdue, we are redefining the residential undergraduate experience so that our students can maximize their full potential and achieve their highest aspirations. We believe that every Purdue student deserves a transformative educational experience.

In support of this ambitious goal, we have designed a campus-wide portfolio of initiatives; included among these are research opportunities for students in every college and school on our campus. Theresa Burress describes the transformative nature of undergraduate research in the College & Research Libraries journal: “When students first engage in original research, they cross the threshold from being knowledge consumers to becoming knowledge creators.”

Through the process of creative inquiry—and with a faculty guide at their side—Purdue’s student “knowledge creators” define a researchable problem, use primary sources, become proficient in the lab or field, think independently, and tell factual, objective, and compelling stories with data.

Through research, our students gain academic, professional, and personal skills that will last a lifetime. They develop critical-thinking skills. Self-confidence grows as they apply theory to practice. They learn to cultivate flexibility, patience, and the capacity to embrace change. They strengthen oral and written communication skills, deepen their understanding of their disciplines, and even clarify their longer-term goals as they consider a research career in academia or industry.

You will find a wide range of undergraduate research in this twelfth edition of the Journal of Purdue Undergraduate Research. I know you’ll enjoy learning from the talented Purdue students who sought answers to their questions, assembled and carefully analyzed their data, and summarized their work in these fascinating articles.

The Office of Undergraduate Research (OUR) provides vital support by facilitating the development and sharing of resources, enhancing research collaboration and grant development, and working with all colleges and schools to promote student engagement in research. OUR also manages three annual research conferences—the Fall Research Expo, Spring Undergraduate Research Conference, and Summer Symposium—where more than 1,200 students presented their research to students, members of the community, and faculty judges during the 2021–22 academic year.

JPUR is a student-run publication with outstanding support from members of the Purdue University Press, Libraries and School of Information Studies, the Online Writing Lab, and Marketing and Communications. My thanks and congratulations to everyone involved with the excellent content and impressive quality represented in JPUR year after year.

You can be sure that we will continue to encourage our undergraduate students to participate in original research. These opportunities contribute to a transformative educational experience—and that’s important, because we know that Boilermakers who become knowledge creators today, very likely could be creating the next giant leap for tomorrow.