We are very pleased to present the Journal of Purdue Undergraduate Research, a professional, scholarly publication featuring the work of our talented Boilermaker students.

The positive effects of undergraduate research have been well documented. We know that when students conduct research, they develop critical-thinking skills, become analytical problem-solvers, and learn to work well in teams. Research experience helps students strengthen oral and written communication skills, deepen their understanding of their disciplines, and, in some cases, clarify career goals. Self-confidence grows as students advance new knowledge and build resiliency in the face of setbacks that are a near certainty in the ebb and flow of the discovery process.

Because of these great benefits, we encourage all of our undergraduates to include research as part of their academic experience wherever they can. The positive outcomes from a research learning opportunity will serve them well for a lifetime, and the skills these students develop align beautifully with attributes that today’s employers are seeking.

Each year, the National Association of Colleges and Employers asks members of hiring organizations to identify the key attributes they look for in college graduates. The 2021 respondents indicated that the skills they sought most were: the ability to work in a team (81%), problem-solving skills (79%), analytical/quantitative skills (76%), verbal communication skills (73%), and written communication skills (72%).

The data tell the story—the parallel of employer needs and the capabilities developed through undergraduate research is striking. Purdue alumni bear this out. In this issue of JPUR, you will find some exciting interviews with alumni who describe how their own undergraduate research experiences at Purdue served them well in their careers.

We’re extremely proud that Purdue undergraduates from every college and the School of Management participate in research. You’ll find fascinating articles in this publication that cover a broad range of subjects.

For the first time, JPUR includes an inside look at the publishing process. Of course, COVID-19 had a big effect here as it did in all areas of our lives. In-person meetings had to be moved to digital connections for the student editorial board, proposal reviews, and faculty decision making. Student researchers needed to develop innovative ways to continue their research programs and connect with their mentors and peers. Flexibility, creativity, and perseverance quickly became the watchwords for all of us at Purdue in 2020 and 2021—and especially so for undergraduate researchers and their advisors.

The Journal of Purdue Undergraduate Research is a student-run publication with professional support from members of the Purdue University Press, Purdue Libraries and School of Information Studies, the Online Writing Lab, and Purdue Marketing and Communications. My thanks and congratulations to everyone involved with the excellent content and outstanding quality again represented in this edition.

Undergraduate research is one of the many, many ways we engage with—and challenge—our students every day. We emphasize these high-impact experiences because we believe they help our students maximize their full potential and reach their highest professional and personal aspirations. At Purdue, we want our students to experience a transformative undergraduate education. We believe they deserve nothing less.

* Source: Job Outlook 2021 Spring Update, National Association of Colleges and Employers.