Undergrads Receive Robust Opportunities to Thrive in Nationally Funded Research Projects

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Mentors and research assistants field questions at the annual USU undergraduate research fair in September 2024.

In early September, departments within in the Emma Eccles Jones College of Education and Human Services (CEHS) participated in an annual university-sponsored research fair that enabled students to engage with possible mentors and apply for a myriad of open research positions at USU. Creating undergraduate research opportunities has been a priority for both university and college leadership at USU for the past fifty years.

“CEHS is dedicated to providing rich training experiences for undergraduate students, including participation in cutting-edge research,” says Shawn Whiteman, CEHS associate dean for research and innovation. “Through their engagement in research activities—both self-initiated and participation in faculty-led research programs—students apply the knowledge they have gained in coursework to specific problems, develop critical thinking and problem-solving skills, and develop meaningful relationships with leading researchers.”

Whiteman continues, “Critically, undergraduate research participation equips students with the skills and experiences needed to flourish in graduate school and future careers.”

Neuroscience Research in HDFS

Anna Bailey, who graduated in May 2024 with a BS in psychology, had her interest in research piqued early in her senior year when her research methods professor mentioned a colleague investigating how trauma affects the brain. “I wanted to research childhood trauma for my PhD, so I asked if she could connect me to her friend,” recalls Bailey.

Anna Bailey and mentor Dr Lisa Boyce.

Bailey ultimately joined Spencer Bradshaw’s lab as well as Lisa Boyce’s lab and volunteered countless hours there. Both Bradshaw and Boyce are professors in the Department of Human Development and Family Studies and are investigating questions related to child development and neuroscience.

“There is so much that goes into research behind the scenes—the proposals, the grants, the IRB, scheduling participants, collecting data, statistical analysis, writing papers,” says Bailey. “It all seemed so overwhelming at first. But I participated in almost all of these facets of research and realized that, with the help of a good mentor, they are not only doable but also are extremely rewarding.”

In time, Bailey acquired a skillset that is now enabling her to do graduate-level work—asking her own questions and conducting her own research. “Anna is bright, plus she went above and beyond to ensure that our study was moving forward. She gave so much to the project that I was very invested in making sure she got the best possible experience,” explains Boyce. “In fact, we were able to add an amendment to the larger study to look at her research question, which we’re gathering data for this semester.”

Boyce continues, “Anna is technically doing graduate research now, even though she’s just in the application process for graduate school. What she’s proposing could absolutely be a thesis. She will author a publication.”

Bailey’s participation in the professors’ labs has evolved into a passion for neuroscience that altered the trajectory of her career path. “I went into psychology knowing I wanted to help children, but this research really sparked my interest in neuroscience,” says Bailey. “I found out that

I love research, so now I'm planning to get a research-based degree with an emphasis in clinical assessment."

Project UNITE

Each semester, Lu Lawrence, assistant professor in the Department of Instructional Technology and Learning Services (ITLS), hires undergraduates to assist in an ongoing collaborative research project, Project UNITE, that aims to impact the lives of young adults with disabilities who are transitioning from high school.

Malin Scharmann and mentor Dr Lu Lawrence.

Malin Scharmann, a senior majoring in human experience design and interaction in ITLS, joined Lawrence's team in Spring 2024. "I was applying for a variety of internship opportunities," she recalls. "I saw the Undergrad Research Assistant position through my college, and it was exactly what I was looking for. I was excited to learn more about instructional design in an educational setting."

"I love having undergrads work with us," says Lawrence. "They support a lot of different aspects of our community-engaged research. They collect and transcribe data, make videos and representations to share with our community partners, work on analysis, and contribute to the writing of research papers. We are intentional in including undergrads in all aspects of the research process."

Lawrence explains, "Malin has helped us come up with research questions and helped to write a conference proposal that is currently under review. If it gets accepted, my goal is to have her present with me. She's a second author on the paper."

Scharmann recognizes the value of her research experience. "I've learned a lot from working with Lu Lawrence over these past months," she says. "My behind-the-scenes knowledge of the education system has grown so much, and it's super fun to learn more about the educational system from a researcher's perspective."

The Factotum Lab

Psychology undergrads looking for self-guided research opportunities need look no further than the Factotum Lab (Latin for "do everything"), mentored by psychology professors Jennifer Grewe and Crissa Draper. The lab was designed to give undergraduates more opportunities within the Department of Psychology to get involved in research. It serves undergrads exclusively, regardless of major, and the projects are student driven.

Tessa Richardson and mentor Dr Jennifer Grewe

Tessa Richardson, a psychology major with a minor in organizational communication, will graduate in May 2026. She joined the Factotum Lab a year ago and is returning this year to build out phase two of her project. "We are currently researching perspectives on AI in academia. We conducted a survey on students last year to get their perspective on AI and how it is being used in academics (phase 1). Now, we're working on a survey to get faculty perspectives, which is phase 2."

Richardson initially felt insecure about pursuing research. "Before I joined the lab, I felt like I wasn't qualified enough to conduct research," she explains. "It felt like such a daunting task. But I've learned that undergraduate research is supposed to be a learning experience where I can grow my skills."

"Students are supported throughout the duration of their projects," says Grewe, Richardson's mentor on the AI project. "We help them select studies that can be done within a fairly limited timeframe, and we help them to scaffold their ideas into manageable topics. Our goal is for every undergrad to get a presentation or publication out of their research."

To see the most benefit, Grewe encourages sophomores and juniors to join the lab. "The earlier we get them started the more we can do for them and the more they will get out of it."

Students who join the lab are paired with team members who share similar interests, and the teams meet regularly with their mentor either via Zoom or in person.

In addition to perceptions of AI usage, projects in the Factotum Lab range from assessing gender bias in education and surveying students on mental health impacts during the pandemic to evaluating affordable housing and studying the trends in graduate school admissions.

Next Steps for Undergrads

Getting involved early on, maintaining a curious and open mind, and putting in hard work is the ticket to success. Boyce encourages CEHS undergrads who are interested in pursuing research to reach out to their departments to find the most relevant opportunities for them.

“Research is a huge opportunity for undergraduate students, but they need to be aware of it and reach out early to faculty who share similar interests,” advises Boyce. “Students who get involved early have more time to learn about all aspects of the research process, including presenting their research at university and national conferences.”

Bailey sees the greatest value of participating in research as the research itself. “Research is figuring out something that is not known to anyone yet, not just learning something for yourself,” she says. “Being able to ask a new question and having that lead to increased knowledge for everyone is probably the coolest thing ever.”

CEHS undergraduate students seeking funding for their research interests can apply for a CEHS Undergraduate Research Grant and/or an Undergraduate Research and Creative Opportunities (URCO) grant and scholarship, which are funded by the USU Office of Research. URCO grants are now in their fiftieth year and more than 1,000 grants have been awarded to undergrads in that time. CEHS undergraduate research grants can independently support undergraduate research or be used to complement the URCO program. Details on the CEHS Undergraduate Research Grant program may be found here. Learn more about the URCO grant here.