

# CEHS Achieves \$46M in Extramural Expenditures in FY2024



Stephanie Borrie discusses her study with graduate research assistants.

The Emma Eccles Jones College of Education and Human Services (CEHS) recognizes its researchers for the \$46M in extramural expenditures they generated in FY2024. These monies are provided by external agencies and spent by researchers in support of their grants and contracts activities. The funding comes from external sources such as federal and state governments, private industries, as well as foundations and non-profits.

Shawn Whiteman, associate dean of research for CEHS, said, “We are thankful for the support from the various federal and state agencies as well as private foundations that provide the opportunity for CEHS scholars to address critical problems and drive research and practice that improves the lives of individuals and their families across the state of Utah and the nation.”

Extramural funding plays a critical role in advancing research at higher education institutions, allowing them to engage in innovative projects and contribute to scientific, social, and technological advancements. It can also enhance a university’s reputation and attract additional funding.

The Office of Research Services (ORS) is housed in the Dean’s Office in CEHS and provides supportive services to all CEHS faculty interested in applying for grants, contracts, or awards. Expert grant writers and a statistician are available to guide faculty members through the grant writing process.

“These expenditures reflect numerous innovations in research and practice across the diverse areas of

scholarship within the CEHS, ranging from advances in technology in education, increasing belonging in schools and communities, and improving health and wellness across the lifespan,” says Whiteman.

Currently, there are several research grants that are exemplars of how expenditures enhance the work being done in the college. Two research projects to highlight are from Stephanie Borrie, associate professor in Communicative Disorders and Deaf Education, and from Jessica Shumway, associate professor in the School of Teacher Education and Leadership, and Jody Clarke-Midura, associate professor in Informational Technology and Learning Sciences.

Borrie received a grant for \$2.3M from the National Institutes of Health (NIH). Her research focuses on improving conversation for people with Parkinson’s disease and other neurological disorders. The work examines the impact of neurological conditions, such as stroke, brain injury, and Parkinson’s disease on conversation as well as the ways communication partners can work together to improve conversations.

Borrie has used a portion of the extramural funding for her lab setup to create an area for collecting experimental conversations and generating quantitative data. A mobile recording kit was also developed to interview participants in rural communities. Expenditures are crucial in compensating research participants for their time, hiring post-docs and graduate and undergraduate students to compile the data and process the results.

“This NIH funding is instrumental in advancing our research to improve communication for individuals with neurological disorders like Parkinson’s disease. To successfully carry out this work, we need to collect hundreds of conversations,” says Borrie. “The funding has enabled our team to travel across Utah, Idaho, and Arizona, ensuring that our data represents the many communities affected by these conditions. It also supports a dedicated team of student researchers who code and analyze the conversations, gaining invaluable experience in the process. I view this financial support as essential to bridging cutting-edge science with real-world impact.”

For their \$1.5M grant funded by the National Science Foundation (NSF), researchers Shumway and Clarke-Midura are exploring how children develop computational thinking in their early elementary school settings. To help young students develop a solid foundation in an increasingly digital world, there has been a push for elementary students to learn basic computer science. However, educators and researchers do not yet have

research-based frameworks to understand how children develop computer science skills and ways of thinking, making it difficult to create and evaluate effective curriculum to teach these skills. Shumway and Clarke-Midura's research is necessary to understand how children's computational thinking develops.

Since this research project primarily engages with first- and second-grade teachers, Shumway and Clarke-Midura wanted to work with tangible robot coding toys to use individual design studies and entire class studies, which required multiple sets of toys and batteries to gather the data. Additionally, to implement innovative lessons and document how students interact with the lessons, the professors needed to include tools and other resources in their budget.

"We purchased tangible coding toys for the integrated lessons and tablets for some of the toys and for administering assessments. We also used video cameras and external microphones for capturing data in classrooms, software for analyzing video data, and laptops for our post-doctoral fellows and graduate research assistants to use for all stages of research—from collecting data, analyzing data, writing results, and disseminating our findings," says Clarke-Midura.

These are only two examples of the many impactful grant funded projects that are ongoing in the college.