



KARRN and ACAT updates March and April 2024

1. Appalachian Center for Assistive Technology (ACAT)

- a. In March we celebrated Disability Awareness month.
 - i. We held DME drop-off Fridays all month long.
 - ii. We held a demo day in the CERH lobby and had several people stop by.
- b. Our Pre-Ets program is continuing to grow. We now have 14 students and Crystal does weekly lessons with them.
- c. Keisha and Crystal continue to do a monthly activity with the LKLP adult daycare and the Veterans center.
 - i. In March, we made maracas for March madness and in April, we made kites to fly.
- d. We attended Appalachian Research Day conference where we had an exhibit and Keisha was a facilitator for a round table discussion centered around people of all abilities.
- e. Pat, Keisha, and Crystal participated in a podcast where ACAT was discussed.
- f. Keisha and Crystal have continued working with Perry Central and Buckhorn High School students coming into the lab.
- g. Keisha has been working with a teacher at a local elementary school to go work with a 2nd grade class and work on adapting books.
 - i. This is a class Keisha read to during Dr. Seuss week and they had amazing ideas and plan to go back and actually do some adapting with this group of students.
- h. Crystal has been working with Hazard High School administration to begin the Pre-Ets program with their students in the Fall.
- i. On April 16th Pat gave a talk to students in a variety of health care professional program that are participating in a scholarship program offered by the New York Community Trust that is administered by the UK College of Agriculture, Food, and Economics' CEDIK program. These students were located in several Appalachian states and plan to work in Appalachia when they finish their training. [Thank you to Melody Nall for inviting me to talk with them.](#)

2. CARAT-TOP Program

- a. We took the spring semester off from working with the high school students and have focused on completing our program assessment.
- b. We are planning on starting our next cohort in fall and will engage students from Buckhorn High School.
- c. Pat is continuing to meet with our UAccel mentors on a monthly basis.
 - i. They had teams of marketing and management students look at KARRN to help develop different business strategies.

- ii. The students presented their ideas the week of April 15th. Pat is waited to get their handouts and will bring a group together to determine which ideas can be implemented. These students were very passionate about helping and you could see it during the presentations.
 - iii. We want to thank Serentiy Wright and the UAccel team for their continued support.
 - d. Crystal Hignite has reached out to the local library in Hazard and submitted paperwork to allow us to hold an educational experience this summer. This will serve as a pilot test to holding activities at other libraries in other towns/cities. This fits with the specific aims of our CCDD funded CARAT-Top Mobile program.
- 3. **Toys with a Purpose program.** This program is still going crazy.
 - a. We continue to work with multiple teams of engineering students to adapt toys as part of their senior capstone projects (see below).
 - b. We continued working with several teams of students from the School of Art and Visual Arts (see below).
 - c. We continue to have 24+ CHS undergraduate students adapting toys as part of their work it the CHS Rehab makerspace program.
 - i. [I would like to give a big shout out to Mary Jo Cooley-Hidecker the Co-Director of this program for all of her work with the students.](#)
 - ii. Multiple teams of students presented posters at the KY Speech-Language and Hearing Association meeting in Feb.
 - iii. Three teams also presented posters at the recent UK Undergraduate Showcase on April 24th.
 - d. We continue to grow our collaboration with UK Children’s Hospital.
 - i. We have been working on the process of providing toys and then having them assessed by UK for safe use in the hospital. This process has been completed and we have provided them with a weighted animal and several bubble blowers. They have requested several more bubble blowers 😊
 - ii. We will be meeting in May to view the initial prototype of an interactive hallway concept that Dima Strakovsky (School of Art and Visual Arts) has been taking the lead on.
 - e. Pat has had several conversations with Chuck Stamper from UK College of Ag-4 H program.
 - i. We will be participation in the 4-H Teen Summer Conference again this summer (June 13th) and will be engaging the students in adapting toys and games. Last year they came up with some great ideas.
 - ii. We will also pilot a community level adapting toy build day in Fall.

- f. We continue to grow our collaboration with Angie Folczyk and the Child Development Center of the Bluegrass.
 - i. We have provided them with weighted stuffed animals, bubble blowers, and a switch adapted pitching machine.
- g. Pat, Keisha, and 2 undergraduate students (Clara Bond and Savannah Hayes) attended The Lexington School on April 26th and worked with 12, 4th graders and 72, 6th graders for adapting toys and books.
 - i. I would like to give a large shout out to Clara and Savannah for working with the administration at the Lexington School to set up this event. They have both shown great leadership in the KARRN Undergraduate club.

4. Grace Jones Memorial Fund

- a. UK One Day for UK. The College of Health Sciences graciously allowed the Grace Jones Memorial Fund to be the primary fund that people can give to.
 - i. **We were able to raise \$8,160 during this event.**
 - ii. I would like to share our sincere appreciation with Dean Scott Lephart, Loralyn Cecil, and Ryan Clark for helping to make this possible.
- b. Pat and Clara Bond participated in a *Behind-the-Blue* podcast to talk about KARRN, the KARRN student activity to assess campus, and the Grace Jones Memorial fund. '[Behind the Blue](#)': The Kentucky Appalachian Rural Rehabilitation Network (KARRN) | UKNow (uky.edu).
- c. We are currently accepting applications for funding and will be reviewing them in early May.

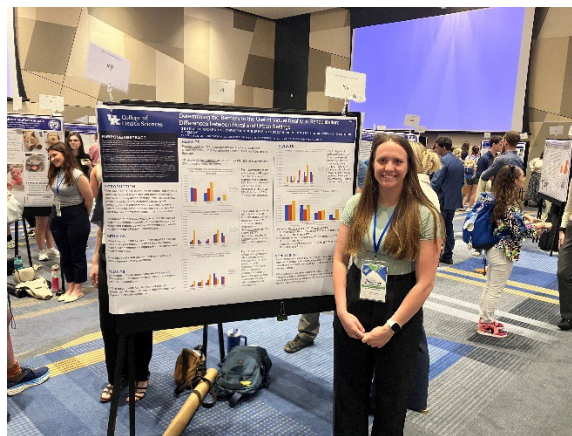
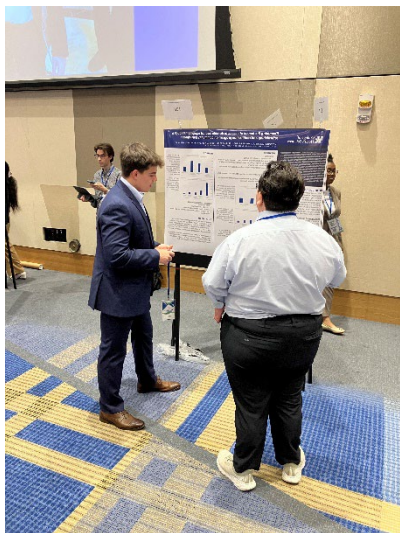
5. Student research projects.

- a. *Perceptions of Biases, Stereotypes, and Misconceptions for People with Disabilities*
 - i. Our 2 undergraduate students (Kelly Chism and Mary Ann Nerswick) have completed this manuscript and we are in final formatting mode. This is the second revision since the first journal we submitted it did not feel it was the correct fit. We are submitting it for review to a second journal.
- b. *Coordination and Assisting the Reuse of Assistive Technology (CARAT) program assessment.*
 - i. 2 DPT students (Bella Estes and Lauren Briggs) and 2 UG students (Marquez Lassell and Hailey Herrington) have been involved.
 - ii. The online and paper version of the surveys have been collected and the data analyzed.
 - iii. Marques presented a poster at the UK Undergraduate Research Showcase on April 24th.
 - iv. We plan to submit an abstract for APTA-KY meeting on September 27-28
 - v. A final report of the data will be completed this summer.

- c. *Coordinating and Assisting the Reuse of Assistive Technology- Together One Priority*
 - i. 2 DPT students (Lauren Haney and Sydney Dehart) have been involved with this project.
 - ii. The data analysis has been completed and we have begun development of a manuscript. We plan to have the manuscript completed by the end of the summer and submitted for peer-review.

- d. *The Use of Virtual Reality in Physical Therapy Clinical Practice.*
 - i. 2 DPT (Chris Burpo and Becca Risner) and 1 undergraduate (Genna Bickford) student involved with this program.
 - ii. We continue to collaborate with Dima Strakovsky from the School of Art and Visual Arts on this project.
 - iii. Genna Bickford completed the data analysis as her Honors Thesis and presented a poster at the UK Undergraduate Showcase on April 24th.
 - iv. We plan to submit abstracts for the APTA-KY meeting in September as well as the APTA-CSM meeting in Spring 2025.
 - v. We will begin writing the manuscript this summer/fall

- e. *Examination of Health Department Health Care Services Provided to Individuals with Disabilities.*
 - i. We have a large team working on this including: Keisha Wells, Mary Jo Cooley Hidecker, Daniel Potter, Xia Yuyan.
 - ii. The data from this study will complement the NIH grant we just submitted that would expand on this significantly.
 - iii. The project has been submitted for IRB review.



Undergraduate Students Marques Lassell (in the blue coat) and Genna Bickford presenting at the 2024 Undergraduate Showcase.

6. **Engineering student capstone projects.**

The teams presented their finished prototypes (for those in their second semester on the project) or concepts (if this was their first semester) during a fun event held on April 23rd. **A big thank you to Regina Hannemann in the College of Engineering for continuing to allow us to work with her students.**

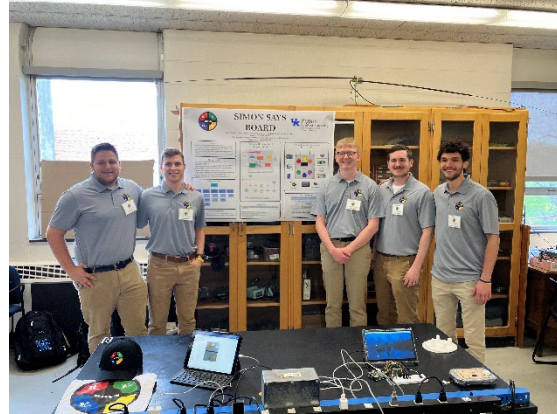
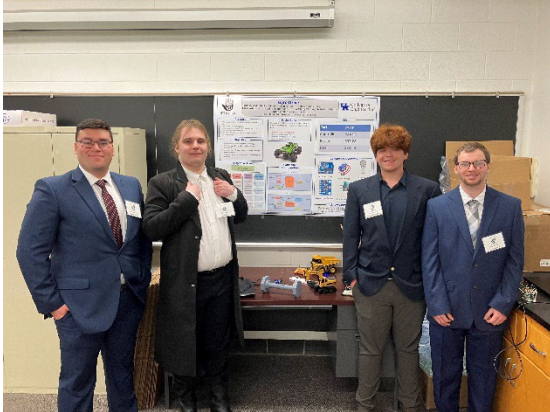
- a. I was able to meet with Regina's Department Director as well as their Associate Dean for Undergraduate studies. They were both very excited to have a collaboration with our group and hope this collaboration can grow.



The first team created a play mat that controls the multifunction owl. Each pad has LED light that light up when touched and activate each of the different functions on the Owl. The second team created an interactive version of candy land. Great use of LED lights and card readers. This team won 3rd place in the student competition.



The first team created a w/c mounted automatic firing nerf gun with laser sighting. The function is very adjustable depending on the users' capabilities. This team won 2nd place in the student competition. The next group developed a modular sensory wall with 6 different sensory modules.



These two teams are in their first semester and developing the concepts that will be prototyped next semester. The team on the left is one of two teams developing interfaces that will allow a remote-controlled vehicle to be driven using only wrist action on one hand. The second team is not shown since I could not get them together for a team photo. The team on the right is creating a wall/door hanging version of a Simon Says type of game with multiple functions.

7. The School of Art and Visual Arts.

- a. [A big thank you to faculty member Dima Strakovsky for his continued collaboration.](#)
- b. Groups of students assessed the TWP website and have prototyped two changes.
 - i. One was focused on a new forward facing front page that will be more engaging. The second group focused on a better system for tracking inventory and developing reports.
 - ii. The students Hailey and Emma presented their work to us April 29th and the new concepts look great. The students will be working with Dima over the summer to build out the new website.
- c. In addition to Dima, Hannah Smith and Chad Eby have also been developing several other “game changer” items that will help on multiple levels. We will be meeting in mid-May to see what they have been creating. I can’t wait to be able to discuss these in detail.