

Anand Mhatre, PhD and the Makerspace Training Program at Community Living Support Services (CLASS)

By Karla Perelstine, M.Ed.

Dr. Anand Mhatre, Assistant Professor, University of Pittsburgh Department of Rehabilitation Science and Technology has been affiliated with the University of Pittsburgh for over eight years. With a MS degree in Manufacturing Systems Engineering and BE degree in Mechanical Engineering, he started along his career path, first working at John Deere and then at Cree where he worked on lawn mowers, robots, and software. He returned to school to complete his PhD in the School of Rehabilitation Science at University of Pittsburgh. Dr. Mhatre's interests evolved into a passion for user-centered design, a discipline which understands how people interact with their environments and the products and objects in those environments. His global research projects include development of assistive technology to help those individuals with disabilities enjoy a full and fulfilling lifestyle.

Dr. Mhatre recognizes that it is important for those utilizing the assistive technology to be involved in development of the product. He indicates that it is important that people who need assistive technology to perform activities of daily life have the tools, resources, and skills to build them. That is why, in the summer of 2021, he launched a Makerspace at a community services center in Pittsburgh. With the use of funding provided by a University of Pittsburgh "Year of Creativity" grant, Dr. Mhatre introduced a class at the Community Living Support Services (CLASS) in Swissvale to create a skills-building program for individuals with intellectual and/or cognitive disabilities.

This eight-week program consisted of eight weekly instructional classes and four workshops. Topics covered in the workshop included needs assessment and considerations for designing technologies for people with disabilities. The team focused workshops consisted of one staff member, one university student intern, and one individual with a physical or cognitive disability. Members of the team produced assistive devices with the use of 3-D printer technology.

Some projects that were created by the skills-building teams included a cupholder that fits onto a wheelchair, an art device that allows the user to paint/draw without grasping a utensil, a tug a war dog toy which allows for greater stability by using two hands to give the dog and its owner an equal chance of winning, and a vending machine soda catcher which allows individuals to retrieve soda cans as they drop from the vending machine. Dr. Mhatre hopes that one day there is an assistive technology design course that can be integrated into the skills building program at CLASS. This will assist people with disabilities in developing custom devices and technologies for themselves to allow for the ability to better participate in daily life activities and stay independent.

