Exploring inclusive design and innovation: A conversation with Cathy Bodine[1]
[2]

In the dynamic realm of innovation and entrepreneurship, inclusive design has emerged as a pivotal force. Among those helping to drive that force at the University of Colorado is Cathy Bodine, professor, director of Innovation Ecosystem for the Colorado Clinical and Translational Sciences Institute (CCTSI), and executive director of the Coleman Institute for Cognitive Disabilities.

With support from Bill and Claudia Coleman at the Coleman Institute, Bodine was a pioneer in designing for disability inclusion, particularly cognitive disabilities, two decades ago. Today, her team spearheads impactful projects, including her significant contribution to the development of Microsoft's Cognitive Toolkit, engaging over 25,000 participants at launch. Bodine played a vital role in shaping the toolkit, showcasing her expertise in inclusive design. She also provides valuable advice to Amazon's Accessibility Board.

"Inclusive design is really about upfront discovery, working together with the person you're trying to serve to determine what problem truly needs to be solved," Bodine said.

Her focus is particularly on individuals with disabilities and the aging population. The core of her process lies in understanding the lived experience of the individual. Bodine stresses the importance of recognizing the ecosystem surrounding each end user, especially in fields like medicine. This ecosystem includes clinicians, care providers, community-based programs and more. The goal is to identify the real problem and needs of the individual collaboratively.

"Once you understand that, and can agree on what the real problem is, then you can begin to figure out what the technical specifications are for the product you are designing," Bodine said.

Inclusive design is not just about identification; it involves the continuous involvement of the end user throughout the development process.

"Researchers and end users are a unit, an equal team member in the process," Bodine said. "You don't want to spend all your time, energy and money building a widget that no one wants. It's really about coming out of this process with a product that people actually want to use."

Bodine said inclusive design is not about discovering the latest or trendiest solution, but rather about first comprehending the scope of the problem and existing solutions through the perspective of the end users. Inclusive design aims to enhance these pre-existing solutions with technology or other means, emphasizing the need for balance. It acknowledges that as complexity is added to a solution, the likelihood of issues arising increases, underscoring the importance of maintaining a careful equilibrium in the design process.

One problem Bodine and her team are working to solve is the 75% abandonment rate of prescribed walkers, which leads to a tremendous cost to the GDP every year in lost wages, treatment of injuries due to early walker abandonment, and the increased burden on caregivers. The team's initiative aims to reconfigure and reimagine these devices in collaboration with an industry partner, Thought Forward Design. The focus is on understanding the stigma associated with walkers and creating a solution that not only addresses users' needs but also enhances the overall experience.

By infusing thoughtful design principles, Bodine and her team aim to transform the perception of walkers. The idea is to create a more aesthetically pleasing and user-friendly device, ensuring that individuals feel a sense of pride in using their walkers.

"The abandonment of walkers is a multi-billion-dollar problem," Bodine said. "We're re-conceptualizing the notion of a mobility device so that people actually want to use it and can take pride of ownership. Think of the iPhone as an example of a product people love to own and use. To reach our goal, we are working directly with people who have experience using a walker, their care providers, and the clinicians who prescribe walkers for their patients."

Through better design, the project envisions a scenario where people are not only more inclined to use their walkers but also experience a significant reduction in the abandonment rate. Bodine imagines a world where walkers are not a point of shame for the user but are seen as a powerful tool on the road to recovery or to maintain independence.

She sees inclusive design as the fundamental solution not only to this problem but to many others as well. Additionally, she advocates for human connection and storytelling as effective means to navigate through the complexities of various challenges. By fostering empathy and understanding through these interpersonal elements, she believes we can create more effective and lasting solutions that resonate with diverse perspectives and experiences.

In her research and her classrooms, Bodine underscores the importance of teaching inclusive design. Her bioengineering students gain hands-on experience, observing clinics and working on projects that involve direct interaction with individuals with disabilities. Communication skills take center stage, with students learning to craft open-ended questions that truly delve into the problems faced by users.

“The most important skill is communication — learning how to converse and respect and honor what they hear from these people,” Bodine said. Seeking the truth without letting one’s bias get in the way is a learned skill that Bodine models and teaches to students. She underscores the importance of open-ended questions, leaving room for unexpected answers, and using active listening skills while evidence is gathered.

Bodine emphasized her gratitude toward her team and the Coleman Institute for its continued support of her research and work. She credits the institute for championing the cause of accessible technology for the cognitively impaired and fostering a shift in awareness. Through collaborative efforts involving students, faculty, potential users, clinicians and care providers, the Coleman Institute has played a crucial role in reshaping the narrative around accessible technology.

Bodine’s journey stands as a testament to the power of collaboration and innovation in creating positive change for diverse communities.

Inclusive design initiatives at CU

To learn more about inclusive design, consider exploring these initiatives at CU:
Coleman Institute[3]: The institute supports research and development of technology at the four CU campuses for individuals living with cognitive disabilities and their caregivers. Discover more about their groundbreaking work and contribute to the cause of inclusive technology.
Smart Cities Future Lab[4]: Join the movement toward building smarter, more inclusive cities by engaging with the Smart Cities Future Lab, dedicated to creating next-generation companies focused on bringing inclusive solutions to smart cities. Applications for the next cohort are now open, offering the opportunity to be part of a community driving positive change.
Center for Inclusive Design and Engineering[5]: A hub of innovation, dedicated to enhancing healthy living through technology. In the center’s Assistive Technology (AT) track within the Department of Bioengineering at CU Denver, students gain hands-on experience in developing cutting-edge technologies to improve human function. Beyond academia, the center provides specialty AT services, consulting on accessibility, and community-oriented programs, all contributing to the mission of fostering inclusivity and empowerment.

Watch for crucial tax forms arriving in the mail; 2023 tax exemptions expire in February [6]

Updated paid parental leave policy expands time off [7]

Kraemer Family Library receives 2024 Library Excellence in Access and Diversity Award [8]

Call for nominations for new staff awards [9]

Anschutz Acceleration Initiative awardees announced[10]

Baker named Employee of the Quarter [11]

Q&A: Casey Rhines [12]

In memoriam: Larry Zimmer[13]

CU Boulder students help rebuild professor's home after Marshall Fire [14]

Video gamers may be risking hearing loss or tinnitus, study finds [15]

How will Colorado Springs' economy fare in 2024? The experts weigh in.[16]

Links
[1] https://connections.cu.edu/spotlights/exploring-inclusive-design-and-innovation-conversation-cathy-bodine[2] https://connections.cu.edu/sites/default/files/bodine_feat.jpg[3] https://www.cu.edu/coleman[4] https://smartfutureslab.com/[5] https://www.ucdenver.edu/centers/center-for-inclusive-design-and-engineering[6] https://connections.cu.edu/stories/watch-crucial-tax-forms-arriving-mail-2023-tax-exemptions-expire-february[7] https://connections.cu.edu/stories/updated-paid-parental-leave-policy-expands-time[8] https://connections.cu.edu/stories/kraemer-family-library-receives-2024-library-excellence-access-and-diversity-award

[9] https://connections.cu.edu/stories/call-nominations-new-staff-awards[10] https://connections.cu.edu/stories/anschutz-acceleration-initiative-awardees-announced[11] https://connections.cu.edu/people/baker-named-employee-quarter[12] https://connections.cu.edu/people/qa-casey-rhines[13] https://connections.cu.edu/people/memoriam-larry-zimmer[14] https://connections.cu.edu/itn/cu-boulder-students-help-rebuild-professor-s-home-after-marshall-fire[15] https://connections.cu.edu/itn/video-gamers-may-be-risking-hearing-loss-or-tinnitus-study-finds[16] https://connections.cu.edu/itn/how-will-colorado-springs-economy-fare-2024-experts-weigh