How to design personalized and meaningful technology for older adults

November 9 2021

Marjolein den Haan - Wintermans defends her PhD on ideas to help seniors relax and make sense of their day. Credit: Eindhoven University of Technology

More and more research suggests framing aging positively rather than focusing on problems. In her Ph.D. research on the department of

Industrial Design Marjolein den Haan—Wintermans adhered to this positive design lens which resulted in concrete guidelines to come up with good technological solutions together with older adults thereby enriching more facets of an individual's daily life.

Aging has typically been framed as a problem that can be "managed" by technology, which neglects the growth, creativity, and development occurring in older adulthood. "Alternatively, we want to view technology as a facilitator to maintain quality of life and even enrich it—so taking a positive rather than a problem-related approach," says Den Haan-Wintermans.

"Older adults are often seen as a homogenous user group while they, in fact, are an extremely diverse group. Users cannot be generalized because people have different needs, wants and dreams. The diversity of older adults should be considered when designing technologies, products and services, as solutions will not be suitable for an entire population."

Successfully creating meaningful concepts as designers or researchers largely depends on the level of understanding and empathy designers can gain for the target group, according to Den Haan-Wintermans. Designers can provide tools to assist the user in bringing forward the expertise of their own experience.

"Because leisure time contributes to successful aging, we chose this as our context. Ultimately aiming at empowering older adults through technology that is easy to use, to stay mentally and physically active, we co-discover their interests and co-create personal designs."

Firstly, she evaluated the GoLivePhone and she found motivating factors to smartphone use and factors that contributed to a pleasant smartphone learning environment, such as tools that grew along with older adults, and 'super-users' who facilitated learning in a social setting.

She provided technological designers with useful suggestions on how to design technologies with the needs and wishes of the older adults in mind. "We contribute changing social and technological personal motivations of older adults to maintain engagement with a design, both when learning and using it," she says.

"We recommend technology designers to create flexible and adaptive products from two different directions: from the system, and from the user."

Walking application

Secondly, she used the Leisure Time Canvas she created, and developed a walking application based on this in co-design with our participants. She found that the participants preferred the quality rather than the quantity of physical activity. This study provided designers with the necessary knowledge of meaningful personal motivations to develop successful aging interventions.

"We contribute a storytelling tool in the leisure time context that deeply engages people to design something meaningful. By creating and applying the Leisure Time Canvas, we showcase how to leverage personal interests such as hobbies to design interventions for successful aging, represented by walking application Ommetje."

Thirdly, she analyzed three student design projects and formulated ways to improve the designing for one approach and further personalized the participation for older adults in the design.

"Thus, we were able to reflect on how such a personalization in the design and design processes contributes to the creation of suitable supportive technologies for older adults.

This process helps the design researcher to interpret the qualitatively collected data, and facilitates the older adult to share stories to jointly create a personal design."

Provided by Eindhoven University of Technology