True Collaboration in the Realm of Virtual Reality

Written by Kristian Partington

In the middle of a farmer’s field under a clear blue sky, fruit trees surround me. A quiet, calm voice asks me to look to the ground below on both my right side and left. There are two piles of fruit and I’m asked to pick them up and place them in their respective baskets.

When I finish these tasks, the scene changes instantly. I’m now in a rowboat, again under clear blue skies. I move the paddles and my perspective changes. I row with one arm, the boat moves in a circle accordingly. I move the other, and the same thing happens. I naturally pick up speed as I paddle harder, reaching all shores of the serene lake.

When the Virtual Reality (VR) headset comes off, I’m back in a room in the basement of The Village of Wentworth Heights alongside village exercise therapist Laura Domenicucci and Mahzar Eisapour, the University of Waterloo masters student who designed the VR locations. These two have helped to design this alternate world in collaboration with academics, exercise therapists, kinesiologists, and people living with dementia.

The VR project is in its early stages of creating a new way for older adults to access individualized exercise opportunities. They may be experiencing memory changes, for example, which can distract them in a group setting, or they might have difficulty focusing in an exercise class due to sensory overload in larger rooms with different noise levels.

Under the guidance of Dr. Jennifer Boger, Schlegel Research Chair in Technology for Independent Living and Dr. Shi Cao, Laura and Mahzar are working with a small sample of Wentworth Heights residents to assess the VR system. The goal of the project is to create a VR exercise program that is designed to complement the needs, abilities, and interests of the people that will use it. The exercises inspired through the program offer simple range of motion enhancements and though it’s still early in the study, the residents seem to be quite engaged. That engagement might have something to do with the fact that residents and team members provided ideas and feedback in the early stages of development, heightening its potential impact.

“I’d call it much more than cooperation,” Jen says. “It’s co-creation and collaboration on research and it means everything to me. Having the different stakeholders involved in the creation of technology itself, not just giving feedback on an end-product, is key to creating something usable, useful, and relevant.”

When she began working with the RIA, the potential connections between residents, team members and researchers/designers was an exciting prospect for Jen. Now she’s seeing it all unfold, just as I watched a virtual lake spread out before my eyes.

“We are so very grateful to the residents and team members at Schlegel Villages, and in particular Laura and the team from Wentworth Heights, for their amazing support of this research,” Jen says. “It’s really hard for me to articulate in words how fantastic it is to be part of an organisation that is willing to engage in research at all levels like this so that we may create better ways to support aging.”

Wentworth Heights resident participates in a virtual reality research study.

Continued on next page...
may be experiencing memory changes, for example, which can distract them in a group setting, or they might have difficulty focusing in an exercise class due to sensory overload in larger rooms with different noise levels.

Under the guidance of Dr. Jennifer Boger, Schlegel Research Chair in Technology for Independent Living and Dr. Shi Cao, Laura and Mahzar are working with a small sample of Wentworth Heights residents to assess the VR system. The goal of the project is to create a VR exercise program that is designed to complement the needs, abilities, and interests of the people that will use it. The exercises inspired through the program offer simple range of motion enhancements and though it’s still early in the study, the residents seem to be quite engaged. That engagement might have something to do with the fact that residents and team members provided ideas and feedback in the early stages of development, heightening its potential impact.

“I’d call it much more than cooperation,” Jen says. “It’s co-creation and collaboration on research and it means everything to me. Having the different stakeholders involved in the creation of technology itself, not just giving feedback on an end-product, is key to creating something usable, useful, and relevant.”

When she began working with the RIA, the potential connections between residents, team members and researchers/designers was an exciting prospect for Jen. Now she’s seeing it all unfold, just as I watched a virtual lake spread out before my eyes.

“We are so very grateful to the residents and team members at Schlegel Villages, and in particular Laura and the team from Wentworth Heights, for their amazing support of this research,” Jen says. “It’s really hard for me to articulate in words how fantastic it is to be part of an organisation that is willing to engage in research at all levels like this so that we may create better ways to support aging.”