

# Virtual world offers new locale for problem solving

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Second Life, a virtual world created in 2003, currently boasts more than 12 million users worldwide who go there for everything from college recruiting to shopping. Now, Penn State researchers are investigating how virtual teams can better solve real world problems by collaborating in Second Life.

Nathan McNeese, undergraduate, psychology; Gerry Santoro, assistant professor, and Michael McNeese, professor, information sciences and technology and psychology, Penn State; and Mark Pfaff, assistant professor of media arts and sciences, Indiana University-Indianapolis, created an experiment in which students formed teams and were asked to solve a problem, posed by a video, using different meeting styles.

The researchers set up 10 teams to work face-to-face, 10 teams to work through teleconferencing, and 12 teams to work as groups of avatars in Second Life. An avatar is a computer user's representation of him or her self. It is the user's persona inside virtual space.

The assigned task revolved around the video "Rescue at Boones Meadow", an episode of "the Adventures of Jasper Woodbury," a series produced by the Vanderbilt University Learning Technology Center that focuses on mathematical problem finding and solving. Participants watched the video individually and then convened to decide how to rescue an injured eagle according to the information given in the video. All groups had to decide which character would rescue the eagle, which methods of transportation would be used and estimate the time it would

take to complete the task.

The groups using Second Life were confined to text-based communication and had to learn how to master the complex keyboard strokes required for avatar movement. These barriers did not deter the groups from completing the assigned task, however, the teams using Second Life took the longest to finish.

The face-to-face teams felt most confident of their performance, yet the Second Life teams provided the most accurate answers in the task.

"Overall, Second Life is a viable option for group work," Nathan McNeese said. "But there's definitely a learning curve with it and accomplishing even basic tasks can be difficult, especially if you've never used it before." He reported their results in September At the Human Factors and Ergonomics Society meeting in New York City.

Some of the participants, college students ranging in ages from 18 to 22, were already familiar with online chat and gaming tools, making them more comfortable working in Second Life. Nathan McNeese, whose own knowledge of Second Life was limited before starting this project, said the research opens the doors to explore more uses of Second Life with different age groups and solving different problems.

Second Life was created by Linden Labs.

Source: Penn State

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