Virtual reality can improve design skills in younger generation

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Rapidly improving technology is changing everyday life for all generations. This constantly changing environment can be a difficult adjustment for older generations. However, for the current generation known as "Generation Y", this sense of constant technology adaption isn't an adjustment; it is a way of life. A University of Missouri researcher says a widening gap is occurring between educators and students due to the difference in how older and younger generations approach evolving technologies. Newton D'Souza, an assistant professor of architectural studies at MU, is looking for ways to move beyond traditional teaching methods and to bridge the technology gap between teachers and students.

"In a traditional educational model, learning only occurs in the classroom," MU researcher Newton D'Souza said. "Now, with technology like laptops and mobile phones, learning can occur anywhere from classrooms to hallways to coffee shops. For older generations, technology is a separate fixture. For Generation Y, it's a part of their lives. On one hand, it is exciting; on the other hand, it challenging because we must find ways to adjust teaching styles."

Researchers at the University of Missouri are studying ways to integrate technology into design learning, specifically to learn how to teach children design basics. In an effort to study how children who have grown up in a wired, video game culture use technology, D'Souza engaged young students using a 3D virtual reality platform to teach design. Using a popular existing virtual reality platform called 2nd Life,

researchers directed students to design a small zoo. The zoo project involved a topic that young students could relate to, while providing adequate research restraints.

The 2nd Life platform provided a realistic 3D spatial simulation for students to explore. They were given instructions on certain design specifics and then allowed to work within the simulation. By studying how the students worked within the virtual reality platform and their eventual design product, D'Souza was able to observe the improvement of specific design skills.

D'Souza found that students working within the 3D virtual reality environment tended to improve spatial skills, including kinesthetic and logical abilities. However, verbal and intrapersonal skills seemed to suffer. He attributed this mixed result as a lesson to constantly work on creating better interfaces for today's learners. D'Souza also was surprised to find how quickly the students grasped the virtual reality concept and were able to begin working with it.

"Because they are wired in media, the kids entered into the system much faster than we expected," D'Souza said. "Today's students already exist in a 3D environment; we need to find a way to teach them where they already are."

Ultimately, D'Souza says that because each individual learns differently, new media technologies like the 2nd Life platform will teach researchers even more about how students learn. He believes it is important to continually question the assumptions about how humans learn.

"Right now we are failing to communicate with younger children," D'Souza said. "Learning is effective when previous assumptions are questioned, and nothing is taken for granted. It's not that we should entirely abandon our traditional teaching techniques; we need to

consolidate what we have, and yet improvise to meet the needs of current day learners."

More information: This study was published in the *Journal of Design Studies.*

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