New Project Will Use Simulation to Teach Students about Science

The work will be done in collaboration with the University of Idaho.

UCF's Learning Sciences Cluster Lead Roger Azevedo is co-principal investigator on a new National Institutes of Health Science Education Partnership Award to find ways and digital tools to help educate students and encourage them to go into a Bioscience career.

The researchers want to help develop educational programs and tools that integrate evidence-based information with broader societal factors, representation of individual risk, and multiple representations of information to improve people's ability to correct misconceptions.

The more than $500,000 project will be led by the University of Idaho. Azevedo, a professor in UCF's School of Modeling, Simulation and Training, will manage all aspects of the project at UCF, including leadership, training, co-design and testing of the simulation environment, and leading, collecting and analyzing complex human-machine interactions trace data.

Over the course of the five-year project, adaptive and engaging tools will be created including an interactive game-based simulation used to teach users about infectious disease and give teachers and educators digital tools to help teach data science literacy skills. These tools will also help create STEM research on the remediations of misconceptions by using evidence-based information with broader societal factors than what is used now, individual risk factors and multiple representations of information. The researchers also want the work to inspire young people from diverse backgrounds to consider careers in biomedical research.

Azevedo is a professor at the School of Modeling Simulation and Training and is a faculty in the departments of Computer Science and Internal Medicine. He received his doctoral degree in Educational Psychology from McGill University and completed his postdoctoral training in Cognitive Psychology at Carnegie Mellon. Azevedo is the lead scientist for the Learning Sciences Faculty Cluster Initiative where his main research goal is to understand the complex interactions between humans and intelligent learning systems.

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