

UNICORN LAND - TEACHING USING A SERIOUS GAME TO PROMOTE STUDENT ENGAGEMENT AND AN EQUITABLE LEARNING ENVIRONMENT FOR NEURODIVERSE STUDENTS

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This research examines the effects that teaching using a serious game has on engagement and performance. This is intended to help students who are neurodiverse, who are more likely to struggle with learning from a traditional lecture-style class. A one-group pretest-posttest quasi-experiment design was conducted in this SoTL study. Two lessons were taught on algorithms to find the shortest path from a single source to all other vertices in a graph in a Computer Science Algorithms course. One lesson was taught normally, and one was taught by playing a serious game called Unicorn Land. Unicorn Land is a unicorn-themed Mario Kart style board racing game where students use the algorithm to race down the river. Students took a survey on engagement after both lessons, a pretest prior to each lesson, and a posttest. The survey results and learning gains were analyzed. There were no significant differences in engagement or performance.

