

Publication

A Player-Centric Approach to Designing Spatial Skill Training Games

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Certain video games show promise as tools for training spatial skills, one of the strongest predictors of future success in STEM. However, little is known about the gaming preferences of those who would benefit the most from such interventions: low spatial skill students. To provide guidance on how to design training games for this population, we conducted a survey of 350 participants from three populations: online college-age, students from a low SES high school, and students from a high SES high school. Participants took a timed test of spatial skills and then answered questions about their demographics, gameplay habits, preferences, and motivations. The only predictors of spatial skill were gender and population: female participants from online and low SES high school populations had the lowest spatial skill. In light of these findings, we provide design recommendations for game-based spatial skill interventions targeting low spatial skill students.

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