

Does GIScience Training Enhance Spatial Navigation Ability?

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Abstract: Research on the reciprocal influence of spatial thinking and GIScience training is limited (Wakabayashi & Ishikawa, 2011). In the current project, we examine improvement in spatial navigation in undergraduates enrolled in GIS classes over the course of a semester. Students enrolled in strategic communications (SC), a low-spatial content class, were used as a control group. Fifty students were trained and tested at 2 time points – beginning and end of a semester – in a virtual navigation task (Silcton; Weisberg, et. al., 2014). We hypothesize that a significantly higher number of GIS students as compared to SC students will be Integrators i.e. they will find the most targets within-route and between-route in the virtual environment. Furthermore, we hypothesize that GIS students will show a significantly greater improvement at time point 2 as compared to SC students. This research has important implications for spatial training and educational pedagogy in STEM disciplines.