Title

Does GIScience Training Enhance Spatial Navigation Ability?

Permalink

Journal

Authors

Ahmed, Annisa
Nazareth, Alina
Burnetta, Danielle
et al.

Publication Date

Peer reviewed

Does GIScience Training Enhance Spatial Navigation Ability?

Annisa Ahmed

Temple University, Philadelphia, Pennsylvania, United States

Alina Nazareth

Temple University, Philadelphia, Pennsylvania, United States

Danielle Burnetta

Temple University, Philadelphia, Pennsylvania, United States

Magda Abozeed

Temple University, Philadelphia, Pennsylvania, United States

Nora Newcombe

Temple University, Philadelphia, Pennsylvania, United States

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.