

Supplementary materials

Investigating the different domains of environmental knowledge acquired from virtual navigation and their relationship to cognitive factors and wayfinding inclinations

As gender is known to play a role in spatial cognition (Nazareth et al., 2019), we investigated whether it has a role in affecting environmental knowledge through the mediation of visuospatial factors. To do this, we ran a mediation model similar to those used in previously studies (Miola et al., 2021; Pazzaglia et al., 2018) and replicated the results using our sample. We found that visuospatial abilities (std $\beta = .15$, $p = .002$) and wayfinding inclinations (std $\beta = .12$, $p = .002$) mediate the relationship between gender and environmental knowledge, as shown in Figure S1. The model had acceptable fit indexes: $\chi^2(50) = 83.26$, $p = .002$, RMSEA = 0.05, SRMR = 0.07, CFI = 0.95, NNFI=0.94.

It should be noted that we replicated the findings newly considering various types of tasks as a single factor and considering learning the environment from passive online VE (both Miola et al., 2021 and Pazzaglia et al., 2018 were active VE navigation, which involved navigating with a joystick).

Figure S1. Mediation model of visuospatial factors between gender and environmental knowledge

