Route Learning and Detour Finding Through Different Learning Conditions

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Route learning and detour finding are crucial tasks in everyday life. Personality and the means of learning a route may affect performance on these navigation tasks. Active navigation has been found to be superior to passive exposure for route learning. In this study, we explored the roles of learning modality and personality on travel time and distance, and errors during route following and detour finding tasks. A three independent groups (driving, map, and passenger) design was employed with several personality, driving, and video game experiences covariates. The sample consisted of 36 students from a small liberal arts and sciences college. A MANCOVA for three independent groups was used to analyze learning condition, personality, and navigational aspects for all routes. Individuals in the driving condition who made wrong turns in the testing route made significantly more turnarounds in the detour route than other conditions. There were no differences in wrong turns between conditions in the testing route. Additionally, participants who scored higher for extraversion and open-mindedness had significantly greater detour time, detour distance, and detour turnarounds. Learning condition did not have any effects during route testing, however there was a main effect of learning condition on amount of detour participant turnarounds and total detour turnarounds where the driving condition demonstrated more frequent turnaround rates.
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