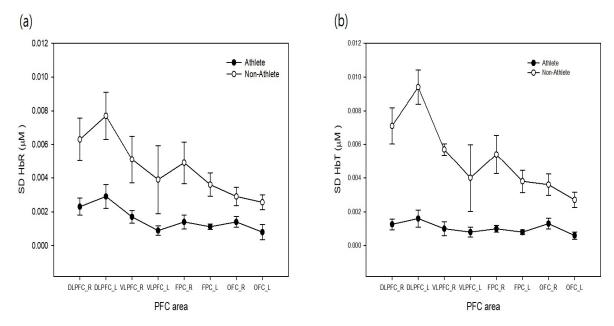
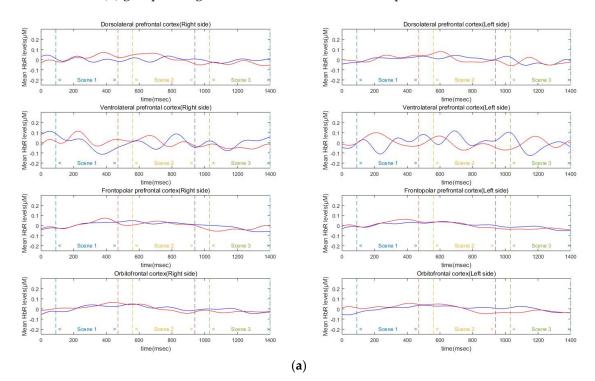
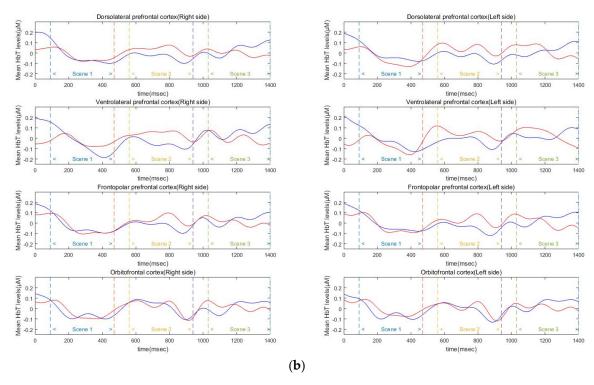
## Supplementary material



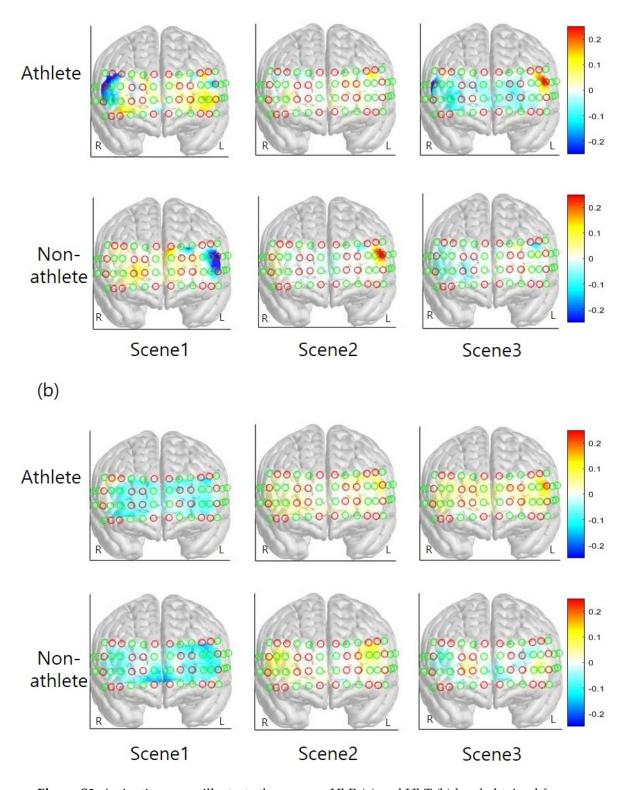
**Figure S1.** Standard deviation of HbR (a) and HbT (b) level in PFC area from athlete  $(\bullet)$  and non-athlete  $(\circ)$  group during the simulation task. Error bar represent SE.





**Figure S2.** Mean HbR (a) and HbT (b) levels in PFC area (left and right DLPFC, VLPFC, FPC, and OFC) of athletes (blue line) and non-athlete collegiate (red line) during the simulation task.

(a)



**Figure S3.** Activation maps illustrate the average HbR (a) and HbT (b) level obtained from 0 to 39s across each scene for the athlete and non-athlete collegiate group. Red and green circles denote the sources and detectors, respectively. R indicates the right-hemisphere and L refers to the left-hemisphere.