

Claims

1. **A sensorimotor training system, comprising:**
 - an inversion module configured to provide an inverted visual field to a user, thereby reversing standard directional orientations;
 - a laser pointer, wherein in a physical embodiment the laser pointer is a handheld, low-powered device and in a virtual embodiment the laser pointer is electronically integrated into a VR system;
 - wherein the user performs sensorimotor tasks (such as drawing or writing) using the laser pointer under the inverted visual conditions.
2. **The system of claim 1, wherein the inversion module comprises a pair of inversion goggles for the physical embodiment.**
3. **The system of claim 1, wherein the inversion module comprises a VR headset configured to digitally invert the visual field for the virtual embodiment.**
4. **The system of claim 1, further comprising a persistent marking interface, wherein in the virtual embodiment a virtual canvas retains the markings generated by the electronic laser pointer.**
5. **The system of claim 1, further comprising a motion tracking module that captures the user's hand movements for providing real-time feedback and performance analysis.**
6. **The system of claim 1, wherein the virtual embodiment further comprises a gamification module configured to:**
 - award points based on sensorimotor task performance,
 - provide auditory feedback and virtual rewards,
 - enable competitive tournament play among users.
7. **A method of retraining hand-eye coordination, comprising:**
 - presenting an inverted visual field to a user via an inversion module, wherein the inversion module is either a pair of inversion goggles or a VR headset;
 - capturing the user's hand movements using a tracking module;
 - enabling the user to perform sensorimotor tasks with a laser pointer, wherein in a physical embodiment the laser pointer is handheld and in a virtual embodiment the laser pointer is electronically integrated;
 - generating markings corresponding to the user's input, wherein in the virtual embodiment the markings are persistently stored on a virtual canvas;
 - providing feedback based on the user's performance.
8. **The method of claim 7, wherein the feedback comprises quantitative performance metrics including error margins and task completion times, and wherein in the virtual embodiment, gamification elements (such as points, sound effects, and virtual rewards) are provided based on performance.**
9. **The method of claim 7, wherein the sensorimotor task includes drawing, writing, or tracing predetermined patterns.**
10. **The method of claim 7, further comprising storing session data for future analysis and comparison of sensorimotor performance.**
11. **The method of claim 7, wherein the virtual embodiment further comprises enabling users to participate in competitive tournaments and global challenges based on performance metrics provided by the gamification module.**