

- 1) Cross-training session (Group A): The participant iteratively switches positions with the virtual robot, placing the screws at the forward phase and drilling at the rotation phase.
- 2) Reinforcement learning with human reward assignment session (Group B): This is the standard reinforcement learning approach, where the participant places screws and the robot drills at all iterations, with the participant assigning a positive, zero, or negative reward after each robot action [10].