CLAIMS

1. A method for teaching a psychomotor skill such as swinging a golf club] to a student athlete, the method comprising:

generating a dynamic jointed skeleton (DJS) reference image of an expert performing the psychomotor skill;

after the DJS reference image has been generated, using a camera to generate an image of the student athlete performing the psychomotor skill; and

as the student athlete is performing the psychomotor skill and the image thereof is being generated, displaying to the student athlete a composite video image, the composite video image comprising the DJS reference image overlain onto the image of the student athlete performing the psychomotor skill, thereby allowing the student athlete to make a contemporaneous real-time visual comparison of the student athlete's positions and movements with those of the expert as recorded in the DJS reference image.

2. The method of Claim 1 wherein generating the DJS reference image comprises scaling a DJS of the expert proportionally to the height of the student athlete.

3. The method of Claim 1 wherein generating the DJS reference image comprises scaling a DJS of the expert such that each graph edge representing a body part of the expert such as a forearms, leg, torso is adjusted to match the dimension of a corresponding body part of the student athlete.

4. The method of Claim 3 wherein the psychomotor skill comprises swinging a golf club and wherein the student athlete adjusts acceleration of the golf club during the swing produce the same ball launch velocity and angle as the ball launch velocity and angle shown in the DJS reference video.

5. The method of Claim 1 wherein the composite video image comprises a silhouette of the student athlete overlaid by a DJS reference image of contrasting color.

6. The method of Claim 5 where the composite video image comprises a graphical image representation of a golf course superimposed on the student athlete's image and the DJS.

7. The method of Claim 1 comprising pausing the DJS reference video until a trigger event occurs.

8. The method of Claim 7 wherein the psychomotor skill is swinging a golf club and the trigger event is commencement of a backswing.

9. The method of Claim 7 wherein the psychomotor skill is swinging a golf club and the trigger event is commencement of a downswing.

10. The method of Claim 7 wherein the trigger event is derived from the image of the student athlete performing the psychomotor skill.

11. The method of Claim 1 wherein the psychomotor skill involves the use of equipment and wherein information concerning the equipment is used in generating the DJS reference image.

12. The method of Claim 1 comprising evaluating the performance of the student athlete against a specified list of criteria.

13. The method of Claim 12 comprising using a performance rating of the student athlete in gaming to determine rank or meritorious awards.

14. The method of Claim 1 comprising transmitting the composite video image to a visual display viewable by the student athlete in real time as the student athlete is performing the psychomotor skill.

15. The method of Claim 14 wherein the transmitted composite video image comprises images that do not require large communication bandwidth capability.

16. The method of Claim 14 wherein the visual display comprises a heads-up display or augmented reality glasses.

17. The method of Claim 14 wherein the visual display comprises a TV or monitor.

18. The method of Claim 1 comprising retaining the image of the student athlete performing the psychomotor skill for later retrieval and analysis.

19. An artificial intelligence Al-based system for psychomotor learning comprising:

a camera;

an artificial intelligence (AI) engine, the AI engine comprising:

a dynamic jointed skeleton (DJS) model file comprising a DJS of an expert performing a psychomotor skill; and

a live video streaming file generated by the camera of a student athlete performing the psychomotor skill; and

a visualization device, the visualization device being worn by the student athlete thereby allowing the student athlete to compare motions of the student athlete performing the psychomotor skill with motions of the expert performing the psychomotor skill as the student athlete is performing the psychomotor skill.

20. The method of Claim 19 wherein the visualization device comprises virtual reality glasses or goggles.