

# [Implicit explicit learning and motor imagery](https://assignbuster.com/implicitexplicit-learning-and-motor-imagery/)

Verbal instructionsTraditionally vital, Fitts and Posner - leads to autonomy.   
New research suggests it may degrade performance. Implicit learningPassive accumulation of task relevant information processed at an unconscious level, not easily verbalised.   
Procedural memory. ONIMPLICIT/EXPLICIT LEARNING AND MOTOR IMAGERY SPECIFICALLY FOR YOUFOR ONLY$13. 90/PAGEOrder NowExplicit learningConscious, intentional recollection of previous experiences and information.   
Episodic, autobiographical.   
Semantic, ability to recognise people. Working memory - may interfere with motor execution. EpisodicRecollection of singular events. SemanticALl explicit memory that isn't autobiographical. Trivia.   
Reading, writing, maths. Masters 2000Reducing exp TR knowledge, learning by analogy.   
Analogy had less Exp knowledge than control and exp group.   
Analogy had better retention, identical kinematics. Internal focusExplicit.   
Body parts and movements. External focusImplicit.   
Apparatus/Implements.   
Found to have greater economy of action. Constrained action (hypothesis)Internal focus - increase in task related info processing.   
Conscious control of movement, stops automatic processing, decrement in performance. Rehabilitation ExplicitInternal foci - Stroke patient focus on limb extension when reaching. Rehabilitation ImplicitExternal foci - Parkinson's with hypokinesia focus on metronome. Motor imageryDynamic mental representation of motor behaviour unaccompanied by real movements brought about by combinations of modalities. MI modalitiesVisual, Kinaesthetic, Cutaneous, Auditory, Olfactory. Functional equivalencePerformance and MI.   
Planning, preparing, simulating, observing - Motor representation, similar neurophysiological substrate.   
Same as perception in function. MI and MEExecution time increases with difficulty in real and virtual tasks. Same time lengths. MI and ME NeurophysiologyCovariation of HR and pulmonary ventilation with imagined effort.   
Musc activity increases with respect to rest. Taktek 08MI and physical practice superior during transfer. fMRIGood spatial resolution, poor temporal. BOLD response, haemodynamic blood flow. Expensive. Limited ROM. MEGPoor spatial resolution, good temporal, magnetic field, better ROM. EEGCheap, easy, susceptible to movement artifact, old methods of processing data question accuracy. Action planningSupp motor area. Motor controlPrimary motor cortex. ImageryInferior parietal cortex. TimingBasal ganglia. Error detectionCerebellum. 30%Activation in motor cortex during imagery, compared to actual. Rossa 03Golf imagery, wall vs rest vs imagery.   
Decreased activation - increased skill level for supp motor area and cerebellum.   
Agreement between golf swing imagery and brain activation areas. MI and rehabCould reduce time needed with therapist.