

Dual task – The participation (volitional or imposed) of two or more discrete (separate goals) tasks simultaneously.

Dual task effect – The relative reduction in performance (cost) or improvement (gain) when comparing single task performance of two or more separate tasks to the measured performance of the same, when performed in combination (two or more discrete tasks). Mathematical equation available.

Attention – The capacity to direct and disburse neural resources given environmental and task demands in solitude (focused and endure on single task) or in shared (filter, divide) demands. Attention can be influenced by interest, salience/relevance/task specificity, challenge, expectations, personality, energy, relevance

Motivation – The desire to participate in a given task, event, or assignment. Influenced by awareness of self and task (expectations), and considering personality, fear (injury, cost, or threat). Directly influences attention.

Constraints – A limitation or restriction on task performance with the intent of shaping greater accuracy, adaptability, consistency, environmental and task tolerance.

Automaticity – The relative efficiency of motor control due to practice, experience, and consistent simultaneous task demands, leading to optimal cognitive efficiency, consistency, and tolerance for environmental noise during divided attention demands. Having a lower dual task cost is one sign of greater automaticity.

Adaptability – The ability to tolerate to varied task and environmental demands with limited impact on physical or cognitive performance as reflected in one or more parameter: repetitions (endurance or time); load or resistance, speed, posture, cognition, and accuracy. True adaptability requires learning and is reflected in carryover - performing outside of the conditions in which the learner was trained-in or is commonly exposed-to.

Overtraining – Intentionally prescribing higher than functional requirements of an everyday task, avocational, vocational or athletic endeavor in effort to improve tolerance or performance

Predictions – Asking a subject, patient, or client to communicate an estimate of their performance prior to a task, requiring the integration of memory, awareness, and confidence.

Expectations – Internalized or verbalized estimates of upcoming events: typically in terms of performance within a feedforward task or tolerance of a feedback-based task.

Relative percentage success – The number of learner or instructor defined successful repetitions divided by the total number of repetitions.

Relative percentage error – The number of learner or instructor-defined errors divided by the total number of repetitions.

Fear avoidance: Physical – Anticipation of pain, disabling injury, or a lower than acceptable motor performance in an upcoming activity (community mobility), environment (icy surface), or task (sport, functional reach, avocation).

Cognitive – Anticipation of a greater than acceptable risk of failure in problem solving, disorientation (geographic or otherwise), recall, accuracy (test taking), or reaction speed resulting in embarrassment, frustration, or agitation.

Awareness – The relative accuracy of a person's self perception of skill, limitations, and strengths as compared to reality. This considers both their retrospective analysis (what problems I have had/errors I have made) requiring memory; but also their prospective analysis (what have I learned and would modify for greater success) requiring problem solving. Each subsequent level of awareness assumes the full capability of all lower levels.

Anosognosia – The complete absence of any sense of awareness

Intellectual – Being solely aware of impairments, yet not recognition in real time or future consequence.

Emergent – Being aware of a problem as it is occurring

Anticipatory – Being aware of past problems and making adjustments in an effort to be more successful. (Note: The relative success of the effort to prevent a problem is not required for anticipatory awareness. Being aware of the need and attempting to avoid a problem repeatedly is required. Being able to solve or prevent the problem successfully, is not)