

PSYCHOMOTOR SKILLS

Psychomotor skills require the ability to complete a task using thinking (cognition) and motor control. If the learning task requires the use of motor control and coordinating muscular movements, then the task is psychomotor.

Dimensions of motor skills:

- 1. Fine vs gross – Fine performance involves fingers and wrist eg. removing sutures. Gross performance involves the whole body eg. lifting a patient.**
- 2. Continuous vs discrete – The former involves continuous adjustment and corrections to stimuli, such as the continuous movements of external cardiac massage, while the latter is a movement made in response to an external stimulus, such as switching off a patient's nurse-call button.**
- 3. Closed-looped vs open-looped – Closed looped performance relies entirely on proprioceptive feedback, so could be performed with eyes closed, whereas open-looped is affected by external stimuli. For example, the painless removal of sutures requires some reaction from the patient, which indicates comfort or otherwise.**

Critical elements of psychomotor skills:

To provide instruction for psychomotor skills, the instructor must:

1. Provide a demonstration and explanation of the skill
2. Allow for practice of the skill to lead to temporal patterning for the learner.

Five levels of psychomotor skills:

1. Imitation
2. Manipulation
3. Precision
4. Articulation
5. Naturalisation

Task analysis of a psychomotor skill:

Psychomotor skills have been broken down into three phases

1. Cognitive phase — learners learn what to do and not necessarily how to do it. Learners need verbal explanations at this stage to cognitively learn the skill.
2. Associative phase — This phase of learning involves the learners physically learning the skill.
3. Autonomous phase — The learner becomes more smooth with the skill and develops the skill on a level of performing it automatically and not thinking through each step.

Characteristics of a skilled performance:

Accuracy	Skill executed with precision
Speed	Movements swift and confident
Efficiency	Movements economical, leaving spare capacity available
Timing	Accurate timing and correct sequential order
Consistency	Results are consistent
Anticipation	Can anticipate events very quickly and respond accordingly
Adaptability	Can adapt the skill to current circumstances
Perception	Can obtain maximum information from a minimum of cues

Checklist for teaching a motor skill:

1. provide an atmosphere conducive to learning.
2. Carry out a skills analysis to determine part-skills and elements.
3. Determine the sequence of the procedure.
4. Assess entry behaviours of students these may need to be taught again.
5. Model the skill by demonstration or film.
6. Teach the sequence of the procedure.
7. Teach the motor skill by either whole-learning or part-learning method.

- 8. Allocate sufficient time for practice**
- 9. Provide augmented feedback on performance.**
- 10. Prompt student to use intrinsic feedback.**
- 11. Encourage transfer of existing similar skills by pointing out similarity.**