

Motor learning · supported focus

Supported focus · SL

Supported scope

- Supported SL focus. First assessment 2026; current SL/HL brief acquired. Remaining guide, assessment and practical requirements retain their recorded holds.
- State model conditions and distinguish fictional data from measurements.

Sport Motor Control · 1.1

Reasoning

A learner adjusts a slow movement after seeing an error, but a very fast action may end before visual feedback can change it. Timing constrains the role of feedback. Start with a prediction. State the quantities or features you would compare, then decide what evidence could distinguish two explanations.

Sport Motor Control · 2.1

Reasoning

Open-loop control emphasizes a pre-organized command during an action; closed-loop control uses feedback to compare the result with a goal and modify control. Many sporting actions combine feedforward preparation with feedback. Intrinsic feedback arises from the performer's sensory information, while augmented feedback is additional information supplied by another source. augmented feedback: Additional task information supplied beyond the performer's own sensory feedback; knowledge of results : Feedback about the outcome of an action.

Sport Motor Control · 3.1

Reasoning

Distinguish knowledge of results from knowledge of performance. A score reports the outcome; a description of arm position reports movement features. Feedback can guide practice, yet immediate success with continuous prompts may not persist when prompts are removed. Retention and transfer therefore provide stronger learning evidence than one practice score. Use a voluntary, low-risk seated target or tracing task. Define the outcome, keep practice opportunities equal, give an agreed feedback schedule and assess delayed performance without feedback. Counterbalance group order where feasible and use anonymous records. Do not claim the task completely models elite performance.

Sport Motor Control · 4.1

Reasoning

State the known values and their units. Choose the relation because its assumptions fit this case, then rearrange before substitution. Known: one trial provides 20 attempts and 14 successes, or 70%. A delayed no-feedback test provides 20 attempts and 10 successes, or 50%. The decline is 20 percentage points, not a 20% relative decline; relative decline is $(14-10)/14 \times 100$, approximately 28.6%. The observation supports investigating dependence on prompts, not a guaranteed explanation.

Sport Motor Control · 4.2

Reasoning

Success rate changes from 80% in practice to 55% in retention. Find the decrease in percentage points. Use the same sequence: known quantities $\rightarrow$ model $\rightarrow$ relation $\rightarrow$ substitution $\rightarrow$ unit and interpretation.

Sport Motor Control · 5.1

Reasoning

Open-loop and closed-loop are models, not a claim that an athlete's nervous system uses only one mechanism. Feedback timing, task complexity and sensory availability affect what can be inferred. Return to the original observation. Explain what the result supports, which conditions it assumes, and one way to test a competing explanation.

Sport Motor Control · 5.2

Reasoning

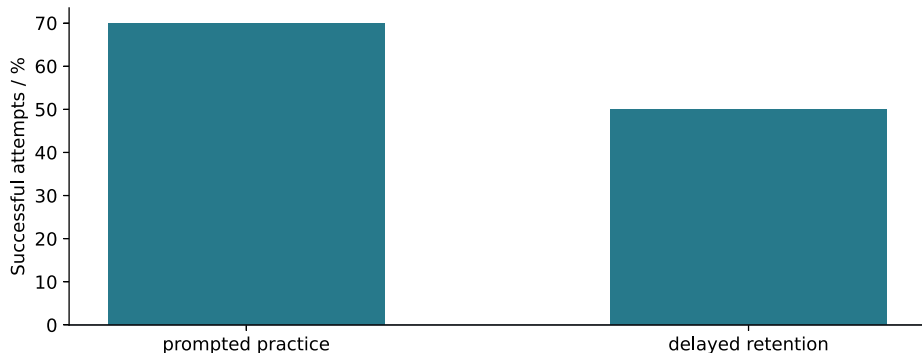
A strong score with continuous prompts proves lasting motor learning. This claim is false: Open-loop and closed-loop are models, not a claim that an athlete's nervous system uses only one mechanism. Feedback timing, task complexity and sensory availability affect what can be inferred.

Sport Motor Control · 5.3

Reasoning

Motor control: feedback, timing and evidence: Distinguish knowledge of results from knowledge of performance. A score reports the outcome; a description of arm position reports movement features. Feedback can guide practice, yet immediate success with continuous prompts may not persist when prompts are removed. Retention and transfer therefore provide stronger learning evidence than one practice score.

Sport Motor Control · diagram



- Original teaching diagram: Motor control: feedback, timing and evidence
- Use the labels and the stated model together.

Sport Motor Control · original transfer

Your turn

Fictional accuracy falls from 80% to 60% without prompts. Distinguish percentage-point and relative changes. Why is prompt dependence a hypothesis?

Sport Motor Control · transfer reasoning

Method and interpretation

The fall is 20 percentage points and 25% relative to baseline. Fatigue, task changes or variation could also explain it; controlled retention and transfer comparisons are needed.

Sport Learning · 1.1

Reasoning

A learner performs well while a coach gives constant instructions, then struggles the next day. Immediate performance and retained learning are different outcomes. Start with a prediction. State the quantities or features you would compare, then decide what evidence could distinguish two explanations.

Sport Learning · 2.1

Reasoning

Motor learning is a relatively lasting change in movement capability from practice. Knowledge of results concerns the outcome; knowledge of performance concerns movement quality. retention : Persistence of learning after a delay; knowledge of results: Feedback about the task outcome.

Sport Learning · 3.1

Reasoning

A retention test after a delay and without the same assistance can provide evidence of learning. Practice conditions, prior experience and task difficulty need control before comparing feedback methods. Use a low-risk target task, equal practice time, random or balanced assignment, and a delayed retention test. Record outcome accuracy separately from movement quality. Seek consent and avoid labels about a participant ability or personality.

Sport Learning · 4.1

Reasoning

State the known values and their units. Choose the relation because its assumptions fit this case, then rearrange before substitution. Known: 12 of 20 throws hit a target during retention. $\text{Accuracy} = \text{successful attempts} / \text{total attempts} \times 100 = 12/20 \times 100 = 60\%$. Another group at 70% is not automatically superior without sample variability and comparable starting performance.

Sport Learning · 4.2

Reasoning

15 of 25 retention attempts succeed. Find success percentage. Use the same sequence: known quantities $\rightarrow$ model $\rightarrow$ relation $\rightarrow$ substitution $\rightarrow$ unit and interpretation.

Sport Learning · 5.1

Reasoning

More feedback is not always better for independent performance. A short-term improvement alone does not demonstrate a lasting learning change. Return to the original observation. Explain what the result supports, which conditions it assumes, and one way to test a competing explanation.

Sport Learning · 5.2

Reasoning

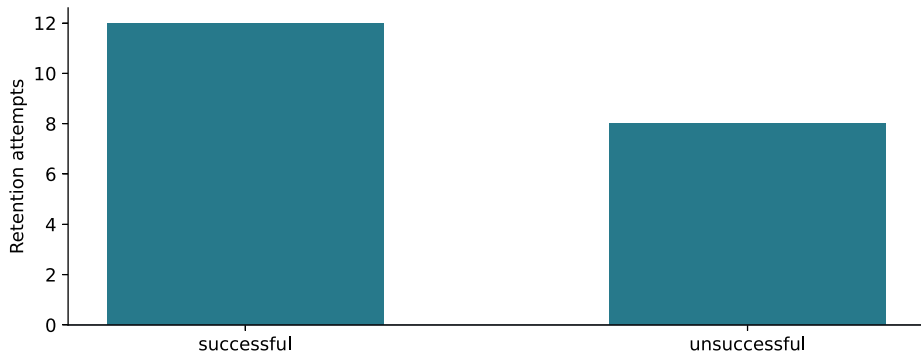
High performance during guided practice always proves lasting motor learning. This claim is false: More feedback is not always better for independent performance. A short-term improvement alone does not demonstrate a lasting learning change.

Sport Learning · 5.3

Reasoning

Motor learning, feedback and retention: A retention test after a delay and without the same assistance can provide evidence of learning. Practice conditions, prior experience and task difficulty need control before comparing feedback methods.

Sport Learning · diagram



- Original teaching diagram: Motor learning, feedback and retention
- Use the labels and the stated model together.

Sport Learning · original transfer

Your turn

Fictional practice accuracy is 90%; delayed retention without feedback is 60%. Interpret the change and design a test of durable learning.

Sport Learning · transfer reasoning

Method and interpretation

Observed performance fell 30 percentage points. Compare matched baselines, delayed retention without feedback and transfer trials, with repeats. Practice performance alone does not prove durable learning or its cause.

Check yourself

- Explain augmented feedback using the stated model.
- Explain knowledge of results using the stated model.
- Change one value in the original transfer; explain which assumption still matters.