EQUEST

Project result 3: Module 5 of 6

Module 5: Cognitive Mediation

Practical Guidelines for Structural Cognitive Modifiability (SCM), MLE Parameters, CBT/ABA Clinical Integration, and LPAD Assessment

Exercises in this module:

- 5.1 The MLE Grooming Mediation [WITH PARTICIPANTS]
- 5.2 The LPAD-style Dynamic Observation Sheet [WITH PARTICIPANTS]
- 5.3 Tacking Sequence & Self-Correction Checklist [WITH PARTICIPANTS]
- 5.4 Reward & Emotional Reciprocity Practice [WITH PARTICIPANTS]
- 5.5 AAC Emotion Matching Exercise [WITH PARTICIPANTS]

Exercise settings:

- [STAFF ONLY] no participants or horse
- [STAFF + HORSE] no participants
- [OBSERVING A LIVE SESSION]
- [WITH PARTICIPANTS]

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1. Theoretical & Scientific Baseline

1.1 Structural Cognitive Modifiability (SCM) & Mediated Learning Experience (MLE)

The Paradigm Shift: Grounded in the work of Professor Reuven Feuerstein, SCM radically rejects the traditional, static view of human intelligence. SCM postulates that the human brain possesses remarkable neuroplasticity, and cognitive structures can undergo structural modification throughout life regardless of age or disability.

Mediated Learning Experience (MLE): In the MLE model, the practitioner does not act as a passive transmitter of information. Instead, they act as an active mediator who intentionally filters, structures, organises, and interprets stable stimuli, helping the participant build a bridge between physical experience and abstract cognitive principles.

1.2 The Three Core Parameters of MLE

1. **Intentionality & Reciprocity:** The mediator intentionally guides the participant's cognitive focus, and the participant actively responds with mutual engagement.
2. **Meaning:** The mediator explains WHY the activity is being done, highlighting its practical or emotional value.
3. **Transcendence:** The mediator explicitly connects the stable task to a broader life concept outside the stable (e.g. "Just like we use different brushes for different parts of the horse, where else in your daily life do you use different tools for different tasks?").

1.3 Multi-Theoretical Integration: CBT, ABA, and Clinical Psychopathology

In addition to Feuerstein's cognitive modifiability which, alongside the preceding MLE framework, is heavily informed by the clinical experience of Italian partner C.R.E. Girolamo De Marco, equine rehabilitation may also integrate elements of Cognitive Behavioural Therapy (CBT) and Applied Behaviour Analysis (ABA).

To maintain ethical VET standards, it is essential to recognise that these distinct epistemological frameworks are managed within multidisciplinary teams under strict clinical direction, rather than presented as a unified or universally accepted practice.

1. **Cognitive Behavioural Approach (CBT):** Utilises observable goals, structured task analysis, gradual exposure, prompting, fading, shaping, and positive reinforcement. Stable tasks (grooming, leading, obstacle navigation) serve as graded experiential tasks to build anxiety tolerance, emotional regulation, impulse control, and self-efficacy.
2. **Applied Behaviour Analysis (ABA):** Applied in ground and mounted tasks to teach new functional skills, reduce challenging behaviours, promote independence, and build communication through picture exchange (PECS) and structured requests. Note: While Functional Behavioural Analysis (FBA) is validated as an effective observational tool, partners such as AEDEQ highlight the autistic community's self-advocacy consensus, which cautions against rigid ABA interventions that may suppress natural neurodivergent traits or limit authentic personality development.
3. **Humanistic & Relational Impact:** The horse's non-judgmental presence, physical warmth, and immediate non-verbal feedback may stimulate oxytocin release, lower cortisol levels, and stabilise physiological arousal.

1.4 Dynamic Potential Assessment: The LPAD System

The Learning Propensity Assessment Device (LPAD) is a dynamic, process-oriented assessment tool operating in a test – mediate – retest paradigm[1]. Instead of analysing static IQ scores, LPAD evaluates how much cognitive functioning improves AFTER receiving targeted mediation.

2. Practical Exercises for the Stable & Arena

Exercise 5.1 The MLE Grooming Mediation

[WITH PARTICIPANTS] | **Who:** Therapists and special educators; instructors | **Time:** During a routine grooming session | **You need:** Grooming brushes (hard curry comb, soft brush)

Objective: Develop the practical skill of mediating a stable activity using the three core MLE parameters.

Instructions:

1. Work with a participant during a routine grooming session.
2. As the participant selects brushes, apply MLE criteria:
    a. **Intentionality & Reciprocity:** guide eye/hand focus to the horse's neck; ensure mutual engagement.
    b. **Meaning:** ask "Why do we use the hard curry comb first and the soft brush second?"
    c. **Transcendence:** connect sequencing to daily life: "When you clean your room or wash your hands, is doing things in order helpful?"
3. Log participant responses and connections made.
4. **Reflect**. Which of the three MLE parameters was easiest for you to apply, and which needs more practice?

Builds on Professional Profile (R1) competency 2.5

Exercise 5.2 The LPAD-style Dynamic Observation Sheet

[WITH PARTICIPANTS] | **Who:** Therapists and special educators | **You need:** 5 grooming tools; a board with storage outlines

Objective: Practise dynamic observation during a cognitive stable task to evaluate learning propensity rather than static knowledge.

This exercise is a basic, informal dynamic learning observation for educational tasks and it does not replace or constitute a clinical LPAD evaluation.

Instructions:

1. Set up a problem-solving task (matching 5 grooming tools to storage outlines on a board).
2. Execute the 3-phase LPAD evaluation:
    a. **Phase 1 (Initial Test):** Hand participant tools, ask them to place them without help. Record baseline score and planning errors.
    b. **Phase 2 (Mediation):** Step in as an active mediator. Discuss shapes, compare outlines, encourage systematic searching.
    c. **Phase 3 (Retest):** Mix up tools, have the participant repeat independently. Log post-mediation score and cognitive change.
3. **Reflect**: Compare the baseline and retest results: what kind of mediation made the difference?

Builds on Professional Profile (R1) competency 2.5

Exercise 5.3 Tacking Sequence & Self-Correction Checklist

[WITH PARTICIPANTS] | **Who:** Instructors, special educators | **You need:** Base saddle pad; gel or sheepskin pad; saddle; a fence or saddle rack

Objective: Teach participants how to stack tack in correct bottom-to-top sequence on a fence rail and perform independent visual self-corrections.

Instructions:

1. Position tacking items in a designated area near a fence or saddle rack.
2. **Guide participant to stack layers:** Layer 1 (e.g. base saddle pad) -> Layer 2 (e.g. gel / sheepskin pad) -> Layer 3 (saddle).
3. Guide participant through three visual self-correction checks:
    a. **Symmetry check (front view):** Do both sides of the pad hang down equally?
    b. **Spine alignment check (top view):** Are pad seams and saddle gullet aligned in a straight line?
    c. **Border check (side view):** Is there a balanced 3-4 finger margin of base pad visible around the gel pad?
4. **Reflect:** Which of the three checks did the participant manage independently, and which needed guidance?

Builds on Professional Profile (R1) competency 2.5

Exercise 5.4 Reward & Emotional Reciprocity Practice

[WITH PARTICIPANTS] | **Who:** Instructors, therapists | **You need:** A ball; a mounting block

Objective: Teach participants how and when to reward the horse after completing an exercise to build emotional reciprocity and human-animal teamwork.

Instructions:

1. Instruct the participant to ask the horse for a simple task (touching a ball, moving to the mounting block).
2. Guide the participant to immediately recognise successful task completion and deliver appropriate reinforcement (gentle neck pat, verbal praise, relaxed posture).
3. Discuss with the participant how the horse responds to reward, reinforcing emotional connection and mutual respect.

Builds on Professional Profile (R1) competency 3.4

Exercise 5.5 AAC Emotion Matching Exercise

[WITH PARTICIPANTS] | **Who:** Therapists, special educators | **You need:** Optional: the emotion cards from Exercise 3.3

Objective: Guide participants to interpret the horse's internal state based on felt emotional and physiological experiences emerging during interaction, fostering authentic empathetic perception without imposing human-centric anthropomorphic assumptions.

Instructions:

1. **Introduce Shared Baselines:** Discuss four physiological states (Tension, Relaxation, Alertness, Fatigue) and four emotional experiences (Fear/Anxiety, Contentment, Curiosity, Frustration) that are true for both humans and horses, ensuring participants understand that horses convey these states through distinct behavioural signals rather than human-like facial expressions.
2. **Somatic Observation:** Guide the participant to enter a shared space with the horse and focus on the felt physiological experience emerging during the interaction, observing equine indicators such as breathing rhythm, muscle softness, or ear position.
3. **Relational Processing:** Ask the participant to reflect on their internal somatic response to the horse's presence, evaluating how their own body tension, breathing, or emotional arousal mirrors or responds to the horse's current state.
4. **Empathetic Integration:** Discuss how interpreting the horse's state through this relational intuition engages authentic empathetic perception, reinforcing mutual understanding without projecting distorted human assumptions onto the animal.

Practice note: Adapt the language to each participant's communication and cognitive level. The emotion cards from Exercise 3.3 can support steps 1 and 3.

Builds on Professional Profile (R1) competency 3.4

Notes and sources

1. See EQUEST Result 1: The Professional Profile, competency 2.5 (Cognitive Mediation & Dynamic Assessment).