NEUROMYTH AUDIT CHECKLIST

Evaluate training programs against brain science

1 For Learning Design Decisions

- [ ] **Does this program assume learning styles exist (visual / auditory / kinesthetic)?**
  If yes → shift to multimodal presentation for all learners.
- [ ] **Is instruction being segmented by learner type rather than by conceptual complexity?**
  If yes → redesign around schema-building and encoding pathways.
- [ ] **Are activities designed to minimize task-switching, or do they ask learners to split attention?**
  Goal: one element of focus at a time; eliminate competing stimuli.
- [ ] **Does the program make assumptions about capacity based on age, gender, or background?**
  If yes → redesign around skill assessment and scaffolded support.
- [ ] **Is there peer-reviewed evidence that this approach improves learning outcomes?**
  Or only that it is popular / intuitive / endorsed by a consultant?
- [ ] **Are learners given time and structure to consolidate — spaced practice, retrieval, reflection?**
  Massed delivery without consolidation rarely transfers to the job.

DESIGN TIP Multimodal instruction (visual + auditory + kinesthetic integration) benefits all learners because complex concepts require multiple encoding pathways — not because people are "types."

2 For Stakeholder Conversations

- [ ] **When someone invokes learning styles or brain hemispheres, identify the underlying concern.**
  Usually it's about engagement or differentiation — not modality.
- [ ] **Can you reframe the request in evidence-based language without dismissing their goal?**
  e.g., "You're right people learn differently — let's focus on prior knowledge and practice context."
- [ ] **Is the supporting source peer-reviewed research, or only a vendor, consultant, or certification body?**
  Marketing materials ≠ brain science. Ask for the primary study.
- [ ] **Is the stakeholder assuming a demographic group can't learn something?**
  Challenge age, gender, or background assumptions with skill-assessment data.
- [ ] **Are you being asked to build "creative" vs. "non-creative" learning tracks for different staff?**
  Creativity is a whole-brain, learnable skill — not a fixed trait some people lack.
- [ ] **Does the request imply multitasking is a learning advantage or productive skill?**
  It isn't. Task-switching degrades encoding. Build this into your pushback.

CONVERSATION TIP Neuromyths persist because they explain real observations. Acknowledge the observation ("people do have preferences") before correcting the explanation ("but fixed learning types don't exist in the brain"). This reduces defensiveness and keeps the conversation productive.

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3 For Program Evaluation

- [ ] **Are you measuring learning transfer (behavior change on the job) or only completion and satisfaction?**
  Neuromyth-driven design often inflates satisfaction while leaving transfer flat.
- [ ] **Do assessment methods allow learners to demonstrate understanding in multiple ways?**
  Not to accommodate a "type" — to reveal genuine conceptual mastery.
- [ ] **Does feedback focus on specific performance and next steps?**
  Avoid broad characterizations: "you're a visual thinker" or "you're not the creative type."
- [ ] **Is program data segmented by demographic group in ways that assume capacity differences?**
  Disaggregate by skill baseline, not by age, gender, or background.
- [ ] **Does the evaluation design control for prior knowledge, practice opportunity, and contextual support?**
  Without these controls, you can't attribute outcomes to the training design.
- [ ] **Is improvement being measured over time — not just immediately post-training?**
  Spaced retrieval and transfer require follow-up windows of 30, 60, and 90 days.

EVALUATION TIP If learners score high on satisfaction but low on transfer, the most likely culprit is shallow encoding — often caused by neuromyth-driven design (learning style matching, multitasking environments, or fixed-category assumptions). Use the LEM blueprint to locate exactly where in the sequence encoding breaks down.

Quick Reference: The Four Core Neuromyths

Neuromyth	Why It Persists	What the Evidence Shows
Learning Styles (VAK)	People do have preferences; matching feels intuitive	No neurological evidence for fixed VAK categories. Multimodal design benefits everyone.
Left-Brain / Right-Brain Creativity	Hemispheric roles are real; the myth over-extends them	72-study review: no reliable hemispheric lateralization for creative thinking.
Demographics Predict Learning Capacity	Performance differences across groups are real; the explanation isn't	Individual brains are complex mosaics. Trainer assumptions create self-fulfilling outcomes.
Multitasking Is a Productive Skill	Switching feels efficient; it isn't	Task-switching uses inferior memory systems, adds 25 min recovery time, and impairs transfer.

Ready to build brain-aligned training? Our Learning Environment Model (LEM) framework maps every design decision against how the brain actually encodes and retrieves information.

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