Focused Training Strategies to Improve Critical Thinking

Use this thinking exercise to strengthen teaching strategies that improve critical thinking skills and habits of mind. Apply these strategies to all training exercises where the goal is to improve thoughtful problem identification and reflective decision making.

Repeating this exercise periodically will offer insights about current best training practices and focus training efforts on critical thinking across content domains and educational contexts.

THOUGHTFULLY EXAMINE YOUR CURRENT TEACHING/TRAINING PRACTICES:
Think about what you personally SAY and DO in team meetings, course sessions, field work exercises, case conferences and mentoring sessions: WRITE DOWN specific examples of how you already use these teaching strategies.

A: Modeling strong critical thinking sets the standard for trainees. This type of training strategy is called a ‘talk aloud.’

When and where do you DEMONSTRATE STRENGTH IN CRITICAL THINKING using these methods?

1) Describe aloud the problem being addressed, separating it from other problems that are related.
2) Evaluate aloud the quality and significance of available data, determining what data is still needed.
3) Identify patterns of events, pointing out pattern details, and naming the pattern.
4) Explain aloud the reasons and relevant evidence that supports a key decision.
5) Thoroughly explain aloud the implications and possible application of available data.
6) State aloud the inferences being made, or those that should be made, in a given situation.
7) Evaluate aloud the relative applicability of alternative solutions.
8) Critique the quality of a decision-making process (Was our process evidence-based? organized? fair-minded? ethical? comprehensive? etc.) adding the details used to support your critique.
9) Comment on the fair-mindedness of a judgment or communication, providing the evidence you are using for your evaluation.
10) Explain aloud your evaluation of the quality of a previous decision by reviewing details of the decision-making process and the evaluative criteria you applied.

B: Requiring trainees/students to demonstrate evidence of their critical thinking process is vital to the training process.

When and where do you TRAIN STRENGTH IN CRITICAL THINKING using these methods?

11) Require a few moments of silence whenever a difficult or key question is asked, so that everyone can think well about possible responses.
12) Ask what a collection of data might mean, requiring a full explanation of observed relationships.
13) Ask for the reasoning behind a judgment to assure that it is more than just a guess or an opinion.
14) Ask for recommendations over time in an evolving case where the problem changes or becomes more complex.
15) Ask whether action is called for at this time, and elicit the thinking process used to arrive at the judgment.
16) Think aloud with trainees to determine why an action failed to provide an expected result.
17) Review and evaluate a group decision process, analyzing the roles of each group member.
18) Require trainees/students to demonstrate each of the skills described in 1) through 10) above.

C: Using these strategies well requires planning and forethought.

19) Do you plan for and include a ‘think aloud’ at least once in each training session?
20) Do you specifically teach trainees/students to be mindful of potential reasoning errors? How do you do this?
21) What strategies do you use to encourage students/trainees to be more metacognitive? ("Metacognition" = thinking about and evaluating one’s own thinking process)
22) Do you assure that students/trainees are exposed to novel problems and unexpected, urgent events that will require them to make decisions in new, uncertain and/or changing contexts?
23) What are your best teaching moments in terms of effectively training critical thinking and problem solving? Why are they the best?
24) Considering the educational and training opportunities you will provide in the next two weeks, which of these learning opportunities could be better designed to more effectively train critical thinking?