Total
Wellness
Program

Critical Thinking

What is Critical Thinking?

According to Bloom's Taxonomy, human thinking skills can be broken down into six categories: knowledge, comprehension, application, analysis, synthesis, evaluation. Critical or "higher-order" thinking is generally defined as the top four. However, you can't think critically about a topic you know little about or don't fully understand. Decades of cognitive research suggest that critical thinking is less a set of skills that can be taught and more a type of thought process that you can train yourself to employ.

So, in short, critical thinking is very much dependent on two things: content knowledge and practice.

Each time you read new material or review old material, practice thinking critically about the material. Constant ask yourself probing questions (How? Why?), look at the information from multiple perspectives (translate the information into a summary, table, graph, concept map, illustration, etc.), and integrate the information into your previously existing knowledge and apply it to new or different situations (how does this relate to or further explain X? How is this the same/different?).

Test Preparation

As you prepare material for an exam, lead your thinking through the six categories:
1. **Knowledge**: remembering or recalling information. Summarize or explain information without relying on the text. Use flashcards, self-tests, quizzes, etc. to test your recall. List, define, describe, identify information.

2. **Comprehension**: grasping or understanding the meaning of information materials. As you read/review material, explain key concepts in your own words. Ask probing questions of the material – How? Why? How is the same/different? Why is this important? Translate the information into different formats to see it from new perspectives (summary, able, graph, concept map, illustration, etc.) Describe, explain, estimate, predict, differentiate, interpret information.

3. **Application**: applying previously learned information (or knowledge) to new and unfamiliar situations. Ask yourself what if? What would happen if? How would it change or behave if?

Demonstrate, apply, illustrate, show, classify, experiment with the information. This is basically problem solving. Use the information to solve a new problem.

4. **Analysis**: breaking down information into parts, or examining (and trying to understand the organizational structure of) information. Use concept maps, table, graphs, illustrations, etc. to break down the information. Ask how are these parts the same? How are they different? How do they relate? Analyze, explain, compare, separate, classify, arrange the information.

5. **Synthesis**: applying prior knowledge and skills to combine elements into a pattern not clearly there before; integrate new information into your previously existing knowledge. Use concept maps, flow charts, illustrations, tables, etc. to combine the parts of new information or new and old information into new patterns and explain the connections. Force new or unexpected connections by writing key concepts on cards, shuffling them, and finding ways to explain the new organization or relate two randomly chosen concepts. Connect information across chapters or units of study and even across courses. Combine, rearrange, substitute, create, redesign the information.

6. **Evaluation**: using evidence to explain opinions, judgments, or decisions. Ask what is most important and why? How could X be improved? Do you agree with the decision or outcome and why? How can you support your answer or viewpoint? Assess, decide, measure, select, explain, conclude, compare, summarize the information.

Group Work
Working in a group or team is a great way to facilitate higher-order thinking. Discussing material in a group or working in a team to solve a problem challenges your thinking, allows you to see different approaches to thinking about material or solving a problems, and forces you to carefully explain and/or defend your position or decision.