Thinking Maps

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From Critical Thinking: An Introduction

Thinking map 1 — chapters 2-4, p. 56:

**SKILLFUL ANALYSIS AND EVALUATION OF ARGUMENTS**

**Analysis**
1. What are/is the main Conclusion(s) (may be stated or unstated; may be recommendations, explanations, and so on, conclusion indicator words and therefore “test may help”)?
2. What are the Reasons (data, evidence) and their Structure?
3. What is Assumed (that is, implicit or taken for granted, perhaps in the Context)?
4. Clarify the Meaning (by the terms, claims or arguments) which need is

**Evaluation**
5. Are the reasons Acceptable (including explicit reasons and unstated assumptions – this may involve evaluating factual claims, definitions and value judgements and judging the Credibility of a source)?
6. (a) Does the reasoning Support its conclusion(s) (is the support strong, for example “beyond reasonable doubt,” or weak)?
(b) Are there Other Relevant Considerations/Arguments which strengthen or weaken the case? (You may already know these or may have to construct them.)
7. What is your Overall Evaluation (in the light of 1 through 6)?

Thinking map 2 — chapter 5, p. 77:

**CLARIFYING IDEAS SKILLFULLY**

1. What is the problem? (Is it vagueness, ambiguity, a need for examples or what?)
2. Who is the audience? (What background knowledge and beliefs can they be assumed to have?)
3. Given the audience, what will provide sufficient clarification for present purposes?
4. Possible sources of clarification:
   (a) a dictionary definition (reporting normal usage),
   (b) a definition/explanation from an authority in the field (reporting specialised usage),
   (c) deciding on a meaning; stipulating a meaning.
5. Ways of clarifying terms and ideas:
   (a) giving a ‘synonymous’ expression or paraphrase,
   (b) giving necessary and sufficient conditions (or an “if and only if” definition),
   (c) giving clear examples (and non-examples),
   (d) drawing contrasts (including par genus et differentiam),
   (e) explaining the history of an expression.
6. How much detail is needed by this audience in this situation?

Thinking map 3 — chapter 6, p. 87:

**JUDGING ACCEPTABILITY SKILLFULLY**

1. How certain is it claimed to be?
2. Does the context of the claim influence its acceptability?
3. Does it require expertise/research to decide?
4. Is it widely known or believed?
5. How well does it fit with our other beliefs?
6. Is it from a credible source?

Thinking map 4 — chapter 7, p. 105

**JUDGING CREDIBILITY SKILLFULLY**

1. Questions about the person/source:
   (a) Do they have the relevant expertise (experience, knowledge, and perhaps formal qualifications)?
   (b) Do they have the ability to observe accurately (eyesight, hearing, proximity to event, absence of distractions, appropriate instruments, skill in using instruments)?
   (c) Do their reputation suggest they are reliable?
   (d) Does the source have a vested interest or bias?
2. Questions about the circumstances/context in which the claim is made:
   (a) Did the source “witness X” or was he “told about X”?
   (b) Is it based on “primary” and “secondary” sources?
   (c) Is it based on “direct” or “circumstantial” evidence?
   (d) Is it based on direct reference to credibility considerations?
3. Questions about the nature of the claim which influence its credibility:
   (a) Is it very unlikely, given other things we know, or is it very plausible and easy to believe?
   (b) Is it a basic observation statement or an inferred judgement?
   (c) Is there corroboration from other sources?

Thinking map 5 — chapter 8-9, p. 137

**JUDGING INFERENCE SKILLFULLY**

3. Does the reasoning include some important assumptions?
   (a) (Does the reasoning Support its conclusion(s))
   (b) Are there Other Relevant Considerations/Arguments which strengthen or weaken the case?
   (c) What is your Overall Judgement?
   (d) Are the reasons acceptable and are the inferences deductively valid?
   (e) Is the case proved beyond reasonable doubt?
   (f) Is the case shown more likely than not on the balance of probabilities?
   (g) Is the argument reasonable?

Thinking map 6 — chapter 10, p. 142

**SKILLFUL CAUSAL EXPLANATION**

1. What are the possibilities in this case?
2. What evidence could you find that would count for or against the likelihood of these possibilities (if you could find it)?
3. What evidence do you have already, or can you gather, that is relevant to determining what causes what?
4. Which possibility is rendered most likely by the evidence? (What explanation fits best with everything else we know and believe?)

Thinking map 7 — chapter 11, p. 163

**HANDLING DECISIONS/RECOMMENDATIONS SKILLFULLY**

1. What makes this decision Necessary? (Objectives?)
2. What is Recommended and on what Grounds?
3. What are the Options/Alternatives? (Realistic or unusual?)
4. What are the Possible Consequences of the various options and How Likely are they? (On the basis of what evidence and how reliable is it?)
5. How Important are these consequences – for all those affected?
6. When I Compare the alternatives in the light of their consequences, which is best? Is the recommended course best?
7. How can I carry out this decision? (Contingency plans?)