Critical thinking is the ability to be in control of one’s thinking. It includes the ability to consciously examine the elements of one’s reasoning, or that of another, and evaluate that reasoning against universal intellectual standards - clarity, accuracy, precision, relevance, depth, breadth, and logic. It also involves the structured examination of sources of information.

Such thinking about one’s thinking involves the ability to identify the basic elements of thought (purpose, question, information, assumption, interpretation, concepts, implications, point of view) and assess those elements using universal intellectual criteria and standards (clarity, accuracy, precision, relevance, depth, breadth, and logicalness).

The Elements of Reasoning can be represented by the following model:

1. **Purpose, Goal, or End in View.** Whenever we reason, we reason to some end, to achieve some objective, to satisfy some desire, or fulfill some need. One source of problems in student reasoning is traceable to defects at the level of goal, purpose, or end. If the goal is unrealistic, for example, or contradictory to other goals the student has, if it is confused or muddled in some way, the reasoning used to achieve it is problematic.
2. **Question at Issue or Problem to be Solved.** Whenever we attempt to reason something out, there is at least one question at issue, at least one problem to be solved. One area of concern for assessing student reasoning, therefore, will be the formulation of the question to be answered or the problem to be solved, whether with respect to the student’s own reasoning, or to that of others.

3. **(Information) The Empirical Dimension of Reasoning.** Whenever we reason, there is some "stuff," some phenomena about which we are reasoning. Any "defect" then in the experiences, data, evidence, or raw material upon which a person’s reasoning is based is a possible source of problems.

4. **Inferences.** Reasoning proceeds by steps in which we reason as follows: "Because this is so, that also is so (or probably so)," or "Since this, therefore that." Any "defect" in such inferences is a possible source of problems in our reasoning.

5. **The Conceptual Dimension of Reasoning.** All reasoning uses some ideas or concepts and not others. These concepts can include the theories, principles, axioms and rules implicit in our reasoning. Any "defect" in the concepts or ideas of the reasoning is a possible source of problems in student reasoning.

6. **Assumptions.** All reasoning must begin somewhere, must take some things for granted. Any "defect" in the assumptions or presuppositions with which the reasoning begins is a possible source of problems in student reasoning. Assessing skills of reasoning involves assessing their ability to recognize and articulate their assumptions, again according to the relevant standards. The student’s assumptions may be stated clearly or unclearly; the assumptions may be justifiable or unjustifiable, crucial or extraneous, consistent or contradictory.

7. **Implications and Consequences.** No matter where we stop our reasoning, it will always have further implications and consequences. As reasoning develops, statements will logically be entailed by it. Any "defect" in the implications or consequences of our reasoning is a possible source of problems. The ability to reason well is measured in part by an ability to understand and enunciate the implications and consequences of the reasoning. Students therefore need help in coming to understand both the relevant standards of reasoning out implications and the degree to which their own reasoning meets those standards.

8. **Point of View or Frame of Reference.** Whenever we reason, we must reason within some point of view or frame of reference. Any "defect" in that point of view or frame of reference is a possible source of problems in the reasoning. A point of view may be too narrow, too parochial, may be based on false or misleading analogies or metaphors, may contain contradictions, and so forth. It may be restricted or unfair. Alternatively, student reasoning involving articulation of their point of view may meet the relevant standards to a significant degree: the point of view may be broad, flexible, fair; it may be clearly stated and consistently adhered to.

(see also Universal Intellectual Standards)