

Critical thinking

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Critical thinking involves determining the meaning and significance of what is observed or expressed, or, concerning a given inference or argument, determining whether there is adequate justification to accept the conclusion as true.

Hence, Fisher & Scriven define critical thinking as "skilled, active, interpretation and evaluation of observations, communications, information, and argumentation."[1] Moore & Parker define it more naturally as the careful, deliberate determination of whether one should accept, reject, or suspend judgment about a claim and the degree of confidence with which one accepts or rejects it.[2]

Critical thinking gives due consideration to the evidence, the context of judgment, the relevant criteria for making the judgment well, the applicable methods or techniques for forming the judgment, and the applicable theoretical constructs for understanding the problem and the question at hand. Critical thinking employs not only logic but broad intellectual criteria such as clarity, credibility, accuracy, precision, relevance, depth, breadth, significance and fairness. In contemporary usage "critical" has the connotation of expressing disapproval,[nb 1] which is not always true of critical thinking. A critical evaluation of an argument, for example, might conclude that it is valid. Thinking is often casual and informal, whereas critical thinking deliberately evaluates the quality of thinking. In a seminal study on critical thinking and education in 1941,

Edward Glaser writes that the ability to think critically involves three things:[3]

1. An attitude of being disposed (state of mind regarding something) to consider in a thoughtful way the problems and subjects that come within the range of one's experiences,
2. Knowledge of the methods of logical inquiry and reasoning,
3. Some skill in applying those methods.

Critical thinking calls for a persistent effort to examine any belief or supposed form of knowledge in the light of the evidence that supports it and the further conclusions to which it tends. It also generally requires ability to recognize problems, to find workable means for meeting those problems, to gather and marshal pertinent (relevant) information, to recognize unstated assumptions and values, to comprehend and use language with accuracy, clarity, and discrimination, to interpret data, to appraise evidence and evaluate arguments, to recognize the existence (or non-existence) of logical relationships between propositions, to draw warranted conclusions and generalizations, to put to test the conclusions and generalizations at which one arrives, to reconstruct one's patterns of beliefs on the basis of wider experience, and to render accurate judgments about specific things and qualities in everyday life.

Critical thinking can occur whenever one judges, decides, or solves a problem; in general, whenever one must figure out what to believe or what to do, and do so in a reasonable and reflective way. Reading, writing, speaking, and listening can all be done critically or uncritically. Critical thinking is crucial to becoming a close reader and a substantive writer.

Expressed most generally, critical thinking is "a way of taking up the problems of life." [4] Irrespective of the sphere of thought, "a well cultivated critical thinker": raises important questions and problems, formulating them clearly and precisely; gathers and assesses relevant information, using abstract ideas to interpret it effectively comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards; thinks open-mindedly within alternative systems of thought, recognizing and assessing, as need be, their assumptions, implications, and practical consequences; and communicates effectively with others in figuring out solutions to complex problems; without being unduly influenced by others' thinking on the topic.