Rigorous critical thinking is essential in any inquiry that is intended to produce trustworthy information. Evaluators are advised to read textbooks on critical thinking and practice using critical thinking techniques regularly.

Critical thinking is distinctive in that it raises and answers provocative questions as a way of evaluating the value of ideas. Questions are asked to probe the accuracy of statements and the soundness of reasoning that supports conclusions.

A number of obstacles to critical thinking occur naturally. They are part of our ordinary experience. This makes critical thinking hard work. The primary strategy to overcoming them is to acknowledge that they are present. Such acknowledgement usually reduces their influence, and allows you the opportunity to apply critical thinking techniques to the issue at hand. Persistent effort is required to think critically, which is a prerequisite for doing sound evaluation.

The following points describe some common obstacles to critical thinking. As you plan and conduct evaluation work, be sensitive to the possibility that failure to overcome one or more of these obstacles may reduce the quality of your work.

# 1. My viewpoint is superior

One basic obstacle to critical thinking is the tendency to believe that my viewpoint is superior to other viewpoints. When this tendency is not controlled, our perceptions and judgments are likely to become distorted in a variety of ways. One way to control this tendency is to remind ourselves regularly that it is present, and that its influence is stronger as our commitment to an idea becomes stronger.

Strong positive or negative feelings about an idea is an indicator that the "my viewpoint is superior" tendency may interfere with your evaluation. When you have strong feelings about the evaluation topic or methodology or findings, be aware that you need to be especially careful to apply critical thinking techniques.

Review your understanding of objectivity, and consider how you will strive to be objective in your evaluation project.

# 2. Resistance to change

A related obstacle is the tendency to resist change, including changes in our ways of thinking. When you resist considering an idea, especially if it challenges a belief or idea that you are committed to, acknowledge that resistance to change may be blocking you from critically examining the idea.

As you plan your evaluation project, push yourself to consider at least two different approaches to studying your evaluation topic.

## 3. Pressure by groups

Pressures to conform to opinions expressed by various groups can serve us well when they are accompanied by critical thinking. But such pressures can become an obstacle. To avoid being unduly influenced by such pressures, consider the range of evidence accessible on an issue.

Evaluate the strength of the evidence according to the rules of reason rather than the number of people who support or oppose the alternatives.

## 4. Preserving the image that we want others to have of us

Image preservation can be an obstacle to critical thinking when we feel threatened by some unpleasant reality. We are indisposed to inquiry as we work to protect the image, and we are disposed to distort evidence to support the desired image. Acknowledging that saving face is a natural tendency helps reduce its effect on critical thinking. Affirming the value of being honest with oneself about this also helps reduce the effect.

### 5. Stereotype

A stereotype is a fixed unbending generalization that is faulty. An indicator that a stereotype is blocking critical thinking is the attitude expressed as "don't bother me with the facts." When you hold a stereotype you distort evidence to fit the stereotype rather than modify the stereotype. To reduce the effect of stereotyping, remind yourself regularly that people and institutions seldom fit into neat categories. Critical thinking demands that you evaluate each situation in terms of particular time and place and circumstance.

When you feel early in an inquiry that there is no need to continue looking for the facts because you know what they will show, acknowledge that stereotyping may be distorting your perceptions.

# 6. Oversimplification

Indicators that oversimplification is present include phrases like "everyone does it" or "no one does it," "the bottom line is," "there is more to this than meets the eye". To counter oversimplification consider whether reasonable examples are available that contradict each other. If so, then seek a more balanced expression of the idea.

#### 7. Forming conclusions on the basis of insufficient evidence

Once we form a conclusion, it is very difficult to think differently about the topic due to the obstacles already discussed. To prevent hasty conclusions from impeding critical thinking, identify the key questions that must be answered and the sufficient evidence that is required to answer them. Describe the evidence along with the conclusion, and then describe the relative strengths of the connection between the evidence and alternative conclusions.

### 8. Unwarranted assumptions

An assumption is a proposition that is accepted without proof. An unwarranted assumption is a proposition that is shown to be false when relevant evidence is provided. Developing skill in "reading between the lines" is important for doing good evaluation; that is, searching for evidence that supports an assumed conclusion.

#### 9. Fallacies

A fallacy is an argument that appears to be correct but can be shown to be faulty. Its appearance is deceptive. Informal fallacies are errors in reasoning due to irrelevance of evidence purported to support a conclusion, or ambiguous use of language. They occur in everyday speech as well as systematic discourse when we fail to exercise critical thinking. (Formal fallacies are errors that occur when a particular rule for some form of valid inference is not followed. For example, there are six rules for valid syllogisms, and there are truth tables in symbolic logic.)

Emotive or persuasive language contributes to fallacious reasoning. Hence many evaluation textbooks caution the researcher to avoid such language. Consider the following example from Jean Royer Dyer, *Understanding and Evaluating Educational Research*, Addison-Wesley, 1979. A survey shows that 65 percent of those surveyed believe that public schools are doing a good job. What interpretations come to mind as you read the following descriptions of this fact?

- The respondents are overwhelmingly satisfied with the public schools.
- Nearly two-thirds of the respondents is satisfied.
- As many as one-third of the respondents is not satisfied.
- Only one-third of the respondents is not satisfied.

Textbooks on logic or critical thinking have lists of fallacies. I recommend that you consult one as you plan your evaluation, analyze your data, and write your report. Examine your thinking for fallacies, and ask others to look for fallacies in the connections between your evidence and conclusions.

### For Additional Information and Exercises

Irving M. Copi, *Introduction to Logic*, Macmillan, 1978.

Thomas Gilovich, *How We Know What Isn't So: The Fallibility of Human Reason in Everyday Life*, The Free Press, 1991.

International Fund for Agricultural Development (IFAD), *Managing for Impact in Rural Development: A Project Guide for M&E*, especially section 8, 'Reflecting Critically to Improve Action', 2002.

Vincent Tyan Ruggiero, *Beyond Feelings: A Guide to Critical Thinking*, Mayfield Publishing Company, 1990

Theodore Schick, Jr. and Lewis Vaughn, *How to Think about Weird Things*, Mayfield Publishing Company, 1996.