



Quality Enhancement Plan (QEP)

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CRITICAL THINKING: 4 Fundamental Characteristics

Critical Thinking, for the purposes of the Quality Enhancement Plan defined as the "**careful and deliberate determination of whether accept, reject, or suspend judgment**" (Moore and Parker, 1994).

The QEP Committee will focus on 4 broad characteristics of critical thinking skills—those assessed explicitly by the *California Critical Thinking Skills Test*, which will be one of several assessment tools we implement our plan to enhance our students' critical thinking skills.

Those 4 characteristics of Critical Thinking are

1. [Analysis](#)
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4. [Deduction](#)

Note: The following definitions are excerpted (with minor edits) from the California test's site, www.insightassessment.com/test-cctst2k.html#ST_Scales. Examples and further explanations are contributed from Janusz Polanowski, co-chair of the Best Practices Committee.

Analysis

We are using our analytical skills when we pull apart arguments and points of view to show why a person thinks what he or she thinks. In effect we are separating the premises and the assumptions a person is using from the claim or the conclusion that the person is reaching.

Before we can say whether a given argument or information makes sense, we have to be able to clearly understand and evaluate its stated and unstated premises. We have to determine whether these premises provide sufficient support for any conclusion(s) we are coming to. We must determine whether we clearly understand the defined concepts involved in the argumentation. We should be able to answer such questions as:

1. What is the main argument, contention, or thesis of...?
2. How is this argument developed...?
3. What evidence or proof or support is offered...?
4. What is its meaning?
5. What are the parts of this argument or information?
6. How do we know that these are the parts of the whole?
7. What are the reasons given?
8. What is implied?
9. How does ... apply to ...?

10. Is this a fair and balanced presentation?
11. Is something left out?
12. What are the counterarguments?
13. What are other theories or contentions offered?

For example, suppose someone asserts that the invasion of Iraq by the United States is morally unjustifiable because it violates the international law. Our analytical skills should immediately tell us that the person is making assumptions about what justice is, about the relationship between the international law and justice, and about whether it is always immoral to violate an international law.

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Evaluation

We are using our evaluation skills when we decide how strong or how weak a person's arguments are, or when we determine the believability of a given statement.

We evaluate ideas and arguments all the time. The question is, how well we do it? For example, the idea that we are safe drivers when we are under the influence of drugs or alcohol is not believable. Unfortunately, the drugs or alcohol inhibits our critical thinking by, among other things, weakening our skill at making good evaluation is just at that time that we are likely to make a mistake and think that we can drive safely.

The purpose of evaluation is to help us figure out how believable the offered arguments are. We should be able to answer such questions as:

1. How would you decide that?
2. How would you prove or argue your position?
3. Is the available information sufficient for making an informed judgment?
4. What conclusion can you draw from the available information?
5. What critique of the information available can you offer?
6. How do you justify your position?

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Inference

We use our inference skills whenever we draw conclusions based on reasons and evidence. We might be using our deductive inference skills or our inductive reasoning inference skills. We can apply our inference skills to all sorts of things including beliefs, opinions, facts, conjectures, principles, and assumptions.

We should be able to answer such questions as:

1. Why did a person behave in the described way?
2. What is the consequence of the available information?
3. How does the information support the conclusion?

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Deduction

Deduction happens when we decide that, no matter what, it is impossible that the conclusion we are considering is false, given that all the premises of our argument are true.

For example, if we know for a fact that San Diego is west of Denver and we know that Denver is west of Detroit and New York, then we can infer with deductive certainty that San Diego is west of New York.

Mathematics uses deduction. Algebra and geometry are exercises in deduction. Playing a game can also be an exercise in deduction, as can filling out an income tax return. Both games and tax returns are things that require us to apply strict rules and laws. One of the ways that we know that little children can reason deductively is to observe that they can play games that require following rules, even playground rules.

An example of a deductive argument might be as follows : All men are mortal. George Bush is a man. Therefore, George Bush is mortal.

We should be able to answer the following questions:

1. What are the premises?
2. What is the conclusion?
3. Are the premises true or false?
4. Do the premises provide sufficient support for the conclusion?

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