

CRITICAL THINKING: ASSESSMENT RUBRIC

Preliminary Definitions:

Critical Thinking consists in analyzing a claim, an argument, or a situation with due regard to the relevance and weight of the facts, assumptions, theories, and values required to generate *an explicitly and defensibly reasoned conclusion* regarding that claim or argument or situation.

A *reasoned conclusion* is a conclusion that is based upon reasons, where a proposition is a *reason* for a conclusion if that proposition provides, in combination with one or more other propositions, a sufficient ground for asserting that conclusion. A reasoned conclusion is the product of an *argument*.

A *defensibly reasoned conclusion* is a conclusion that is grounded on defensible reasons, where *defensible reasons* are reasons that neither involve nor imply any factual errors or logical fallacies or surreptitious and questionable value-assumptions.

An *explicitly reasoned conclusion* is a conclusion based upon reasons that are laid out in such a manner that the relation of those reasons to that conclusion are capable of being grasped and evaluated by others.

A *conclusion* can be a statement that no clear conclusion (apart from itself) can be arrived at.

(These definitions are stipulations intended to render critical thinking tractable to uniform and systematic evaluation.)

Criteria for Evaluation of Critical Thinking:

1. Identification and Treatment of Issues.

A. Description of the Criterion:

This criterion tests whether the student has identified all the significant issues that arise from the claim, argument, or situation placed before her, whether she has explained those issues clearly and precisely, and whether she has addressed all those issues in her arguments.

B. Questions to be asked by the Evaluator:

(i) Has the student identified all the significant issues that arise regarding this claim or argument or situation? Are there any significant omissions?

(ii) Has the student explained those issues clearly and precisely? Are there any significant errors, vaguenesses, or ambiguities?

(iii) Having identified all the significant issues, does the student proceed to address all of them? Are there any significant omissions?

2. Use of Evidence.

A. Description of the Criterion:

This criterion tests whether the student has adduced sufficient evidence germane to a sound treatment of the significant issues that arise from the claim, argument, or situation placed before him, whether he has interpreted and evaluated that evidence and those issues in light of each other, and whether he has explained how and to what extent the evidence he has adduced generates or sustains the reasons he provides for his conclusion.

Evidence includes direct empirical evidence and secondary material gathered from reliable authorities up to but not including Wikipedia. The nature of the evidence germane to the analysis and evaluation of a particular claim, argument, or situation will, naturally, depend upon the salencies of that claim, argument, or situation.

B. Questions to be asked by the Evaluator:

(i) Has the student adduced sufficient evidence germane to a sound treatment of the significant issues involved? (In other words, are there any significant evidentiary lacks or misidentifications? *Evidentiary misidentifications can include appeals to unreliable secondary sources.*)

(ii) Has the student interpreted and evaluated his evidence in a manner suited to a sound treatment of those significant issues? (In other words, are there any significant evidentiary misinterpretations or misapplications? *Evidentiary misinterpretations and misapplications can include undefended appeals to authorities, however reliable those authorities may in fact be.*)

(iii) Has the student made clear and explicit the relations between his evidence and his conclusions regarding those significant issues?

3. Recognition of Assumptions and Creation of Counterfactuals:

A. Description of Criterion:

This criterion tests whether the student recognizes and makes explicit the significance to her conclusions of various contextual assumptions (factual, evaluative, or theoretical) that she makes about the claim, argument, or situation placed before her, her ability to create and describe hypothetical or counterfactual contexts in which alternative assumptions would generate alternative conclusions, and her ability to defend her assumptions against these alternatives.

B. Questions to be asked by the Evaluator:

(i) Has the student explicitly demonstrated her recognition of the various significant assumptions that she has made and upon which her conclusions depend? Or does she simply take some or all of those assumptions for granted?

(ii) If the student explicitly demonstrates the kind of understanding mentioned above, does she proceed to create hypothetical or counterfactual contexts in which alternative assumptions would generate different conclusions? Does she explain how and why, given those alternative assumptions, her conclusions would be different?

(iii) If the student creates hypothetical or counterfactual contexts in which alternative assumptions generate different conclusions and explains how and why, given those alternative assumptions, her conclusions would be different, does the student proceed to defend the assumptions of her choice against those alternative assumptions?

4. Dialectical Skill:

A. Description of the Criterion

This criterion tests the student's ability to explain clearly the strongest and most significant objections to his reasoned conclusions, to identify the counterarguments generating those objections, and to demonstrate how those counterarguments are less defensible than the arguments that generate his own conclusions.

B. Questions to be asked by the Evaluator:

(i) Does the student treat of any counterarguments to his argument?

(ii) If so, are those counterarguments as strong as they could be, or does he invent 'straw men' to make it seem as if his own arguments were clearly the superior ones?

(iii) If not, does the student succeed in demonstrating how and why his arguments survive those counterarguments?

5. Structure of Arguments:

A. Description of the Criterion:

This criterion tests whether the student has demonstrated the ability to synthesize the information given to her, the evidence she has identified and adduced, and the explicit assumptions she has chosen and defended into a lucid, precise, and logically rigorous argument (or set of arguments) that eventuates in the conclusion she wishes to advance.

B. Questions to be asked by the Evaluator:

(i) Has the student provided any arguments in defense of her conclusion?

(ii) If so, are those argument valid (free of all logical fallacies and errors) and sound (based on true premises), and clearly articulated?

Questions pertinent to the previous criteria will prove pertinent to the evaluation under this criterion also. In addition, the evaluator may ask:

(iii) Has the student demonstrated notable intellectual creativity in structuring her arguments and in integrating in those arguments the information given her, the evidence she has adduced, and the assumptions she has chosen?

(Since, in the nature of the case, this last question pertains to a non-quantifiable property of the student's arguments, the evaluator will have to base her decision on her informed subjective views about the nature of intellectual creativity.)

Criteria and Levels of Performance

Criterion	(1) Benchmark	(2) Milestone	(3) Capstone
<i>Identification of Issues</i>	<p>The student either</p> <p>(i) fails to identify most of the significant issues that arise from the claim, argument, or situation placed before her; or</p> <p>(ii) fails to explain most of the significant issues clearly (viz., without errors, needless vaguenesses, and avoidable ambiguities); or</p> <p>(iii) fails to address in her arguments most of the significant issues she has identified.</p>	<p>The student</p> <p>(i) fails to identify some of the significant issues that arise from the claim, argument, or situation placed before her; or</p> <p>(ii) fails to explain some of the significant issues clearly (viz., without errors, needless vaguenesses, and avoidable ambiguities); or</p> <p>(iii) fails to address in her arguments some of the significant issues she has identified.</p>	<p>The student</p> <p>(i) identifies all the significant issues that arise from the claim, argument, or situation placed before her; and</p> <p>(ii) explains all those significant issues clearly (viz., without errors, needless vaguenesses, and avoidable ambiguities); and</p> <p>(iii) addresses in her arguments all those significant issues.</p>
<i>Use of Evidence</i>	<p>The student either</p> <p>(i) fails to adduce sufficient evidence germane to a sound treatment of the significant issues involved; or</p> <p>(ii) fails to interpret and evaluate most of the adduced</p>	<p>The student</p> <p>(i) adduces sufficient evidence germane to a sound treatment of the significant issues involved; but either</p> <p>(ii) fails to interpret and evaluate some of the adduced</p>	<p>The student</p> <p>(i) adduces sufficient evidence germane to a sound treatment of the significant issues involved; and</p> <p>(ii) interprets and evaluates all the adduced evidence in</p>

	<p>evidence in a manner suited to a sound treatment of those significant issues; or</p> <p>(iii) fails to make clear and explicit the relations between most of his evidence and his conclusions regarding those significant issues.</p>	<p>evidence in a manner suited to a sound treatment of those significant issues; or</p> <p>(iii) fails to make clear and explicit the relations between some of his evidence and his conclusions regarding those significant issues.</p>	<p>a manner suited to a sound treatment of those significant issues; and</p> <p>(iii) makes clear and explicit the relations between all of his evidence and his conclusions regarding those significant issues.</p>
<p><i>Recognition of Assumptions and Creation of Counterfactuals</i></p>	<p>The student fails explicitly to demonstrate her recognition of most of the significant assumptions upon which her conclusions depend.</p>	<p>The student either</p> <p>(i) fails explicitly to demonstrate her recognition of some of the significant assumptions upon which her conclusions depend; or</p> <p>(ii) does not proceed to create hypothetical or counterfactual contexts in which alternative assumptions would generate different conclusions; or</p> <p>(iii) if she does, does not explain how and why, given those alternative assumptions, her conclusions would be different; or</p> <p>(iv) if she does, does</p>	<p>The student</p> <p>(i) explicitly demonstrates her recognition of all of the significant assumptions upon which her conclusions depend, and</p> <p>(ii) proceeds to create hypothetical or counterfactual contexts in which alternative assumptions would generate different conclusions; and</p> <p>(iii) explains how and why, given those alternative assumptions, her conclusions would be different; and</p> <p>(iv) proceeds to defend the assumptions of her</p>

		not proceed to defend the assumptions of her choice against those alternative assumptions.	choice against those alternative assumptions.
<i>Dialectical Skill</i>	The student either (i) does not consider any counterarguments to his arguments; or (ii) considers mostly very weak 'straw man'-type counterarguments to his arguments.	The student (i) considers counterarguments to his arguments; but either (ii) considers mostly counterarguments that, though not of the 'straw man'-type, are not the strongest available counterarguments to his arguments; or (iii) does not succeed in showing how and why his arguments survive <i>all</i> those counterarguments.	The student (i) considers counterarguments to his arguments, and (i) considers mostly counterarguments that are among the strongest available counterarguments to his arguments; and (ii) succeeds in showing how and why his arguments survive <i>all</i> those counterarguments.
<i>Structure of Arguments</i>	The student either (i) provides no arguments in defense of his conclusions; or (ii) provides mostly invalid or unsound arguments in defense of his conclusions.	The student (i) provides arguments in defense of his conclusions; and (ii) provides mostly valid and sound arguments in defense of his conclusions.	The student (i) provides arguments in defense of his conclusions; and (ii) provides only valid and sound arguments in defense of his conclusions; and (iii) demonstrates notable intellectual

			creativity in structuring her arguments and in integrating in those arguments the information given him, the evidence he has adduced, and the assumptions he has chosen.
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