

**COLLEGIATE LEARNING ASSESSMENT (CLA)
CRITICAL THINKING, ANALYTIC REASONING, PROBLEM SOLVING, AND WRITING SKILLS
DEFINITIONS AND SCORING CRITERIA**

The Collegiate Learning Assessment (CLA) is a national effort that provides colleges and universities with information about their students' performance on tasks that require them to think critically, reason analytically, solve realistic problems, and write clearly. These are learning outcomes espoused by all higher education institutions yet we lack evidence on the extent to which improvement on them is actually achieved.

We conceptually speak of these learning outcomes as if their meaning is shared and understood. In actuality, however, this is not always the case. In addition, any measurement of these (or any) skills is limited by the method used and the content assessed. The CLA assesses samples of student performance on constructed responses. Students must integrate writing, critical thinking, analytic reasoning, problem solving, and reading comprehension skills, plus apply significant effort in order to perform well. The holistic integration of these skills on the CLA essay responses mirrors the requirements of serious thinking and writing tasks faced in life outside of the classroom.

This document summarizes the types of questions addressed by CLA scoring in general. Because each CLA task and their scoring differ, not every item listed is applicable to every task. The tasks cover different aspects of critical thinking, analytic reasoning, problem solving, and writing and in doing so can in combination better assess the entire domain of performance.

Critical Thinking, Analytic Reasoning and Problem Solving

Applied in combination, critical thinking, analytic reasoning and problem solving skills are required to perform well on CLA tasks. We define these skills as a student's demonstrated ability to evaluate and analyze source information, and subsequently to draw conclusions and present an argument based upon that analysis. We specifically consider the following items to be important aspects of these skills and attend to scoring those items that apply to a given task.

Evaluation of evidence

How well does the student assess the quality and relevance of evidence, including:

- Determining what information is or is not pertinent to the task at hand;
- Distinguishing between rational claims and emotional ones, fact from opinion;
- Recognizing the ways in which the evidence might be limited or compromised;
- Spotting deception and holes in the arguments of others; and
- Considering all sources of evidence?

Analysis and synthesis of evidence

How well does the student analyze and synthesize data and information, including:

- Presenting his/her own analysis of the data or information (rather than "as is");
- Committing or failing to recognize logical flaws (e.g., distinguishing correlation from causation);
- Breaking down the evidence into its component parts;
- Drawing connections between discrete sources of data and information; and
- Attending to contradictory, inadequate or ambiguous information?

Drawing conclusions

How well does the student form a conclusion from their analysis, including:

- Constructing cogent arguments rooted in data/information rather than speculation/opinion;
- Selecting the strongest set of supporting data;
- Prioritizing components of the argument;
- Avoiding overstated or understated conclusions; and
- Identifying holes in the evidence and subsequently suggesting additional information that might resolve the issue?

Acknowledging alternative explanations/viewpoints

How well does the student consider other options and acknowledge that their answer is not the only perspective, including:

- Recognizing that the problem is complex with no clear answer;
- Proposing other options and weighing them in the decision;
- Considering all stakeholders or affected parties in suggesting a course of action; and
- Qualifying responses and acknowledging the need for additional information in making an absolute determination?

Writing

Analytic writing skills invariably depend on clarity of thought. Therefore, analytic writing and critical thinking, analytic reasoning, and problem solving are related skills sets. The CLA measures critical thinking performance by asking students to explain in writing their rationale for various conclusions. In doing so, their performance is dependent on both writing and critical thinking as integrated rather than separate skills. We evaluate writing performance using holistic scores that consider several aspects of writing depending on the task. The following are illustrations of the types of questions we address in scoring writing on the various tasks.

Presentation

How clear and concise is the argument? Does the student...

- Clearly articulate the argument and the context for that argument;
- Correctly and precisely use evidence to defend the argument; and
- Comprehensibly and coherently present evidence?

Development

How effective is the structure? Does the student...

- Logically and cohesively organize the argument;
- Avoid extraneous elements in the argument's development; and
- Present evidence in an order that contributes to a persuasive and coherent argument?

Persuasiveness

How well does the student defend the argument? Does the student...

- Effectively present evidence in support of the argument;
- Draw thoroughly and extensively from the available range of evidence;
- Analyze the evidence in addition to simply presenting it; and
- Consider counterarguments and address weaknesses in his/her own argument?

Mechanics

What is the quality of the student's writing?

- Is vocabulary and punctuation used correctly? effectively?
- Is the student's understanding of grammar strong?
- Is the sentence structure basic, or more complex and creative?
- Does the student use proper transitions?
- Are the paragraphs structured logically and effectively?

Interest

How well does the student maintain the reader's interest?

- Does the student use creative and engaging examples or descriptions?
- Does the structure syntax and organization add to the interest of their writing?
- Do they use colorful but relevant metaphors, similes etc.?
- Does the writing engage the reader?
- Does the writing leave the reader thinking?