

General Education Assessment Report

One section of Cog356, offered during the spring 2022 semester, was used to collect the data for this **Cognitive Science Program** assessment of critical thinking.

The assessment tool and measure identified in the **Cognitive Science Program** assessment plan update was used.

General Education Category	Learning Outcome	Information				Results							
		Semester(s) of data collection	Students Assessed		Exceeding Standards		Meeting Standards		Approaching Standards		Not Meeting Standards		
			#	%	#	%	#	%	#	%	#	%	
Critical Thinking	Students will identify, analyze, and evaluate arguments as the occur in their own and others's work	Spring 2022	4	20	1	25	3	75	0	0	0	0	
	Students will develop well reasoned arguments	Spring 2022	4	20	2	50	2	50	0	0	0	0	

Briefly describe your **method of analysis**.

Of the 7 students enrolled in the spring 2022 section of the Cog356 course in which the data was collected, 4 were cognitive science majors. All 4 of these students are represented in the results for the two outcomes. Why such a small number? The answer to the question is rooted in two unrelated phenomena. An unfortunate faculty hire a few years ago that manifested in decided loss of enrollment in the program. The negative impact of the pandemic on our relatively small program that had placed a premium on the value of in-person learning experiences. That said, we proceeded according to plan. Each student wrote an essay corresponding to each of the two outcomes. For the essay corresponding to the first outcome, the quality of student performance was measured for each of the four elements of the required rubric. These values were then averaged, and the result mapped onto exceeding or meeting or approaching or not meeting standards. For the essay corresponding to the second objective, the quality of student performance was measured for each of the three objectives of the required rubric. These values were then averaged, and the result mapped onto exceeding or meeting or approaching or not meeting standards.

Analysis of Results: Please be sure to address each learning outcome and both strenghts and weaknesses revealed by the assessment, if any.

Learning outcome 1 "Argument Analysis" Generally speaking, the students seem to be able to identify the premises and the conclusion of an argument, critically consider the plausibility of the premises, and say a little something about the inferential reasoning used to obtain the conclusion from the premises. That last bit, connecting the premises to the conclusion, is the what tended to be weakest in their analysis.

Learning outcome 2 "Argument Construction" As is typically the case in my critical thinking assessments, the students seemed to be more passionate about creating their own argument than analyzing the argument of another. They methodically addressed the three components of the given rubric, infusing their writing with references to interesting works associated with individuals who contributed big ideas that pertain to their argument. The most questionable aspect of their argument construction was, I think, the informality of expression which tended to creep into their presentations.

Action to be taken: Please indicate the connection between the assessment findings and the proposed action(s); if no action is to be taken, please indicate why you think none is necessary.

The assessment findings indicate that cognitive science students are reasonably capable critical thinkers. That said, reflecting upon the students' writing, I believe that it might be helpful to suggest that the students be mindful of Grice's maxims as they engage in the presentation of their critical thinking. They tend to adhere to the maxim of quality (in which one tries to be truthful and avoid providing information that is not supported by the evidence), and the maxim of relation (in which one strives to be relevant and say things pertinent to the discussion), but they are wanting with respect to the maxim of quantity and the maxim of manner.

With respect to the maxim of quantity, they should be asked, generally speaking, not to provide more information than is needed. With respect to the maxim of manner, they should be asked to try very hard to be as clear, brief, and orderly as possible.

What has been learned that could be helpful to others as they conduct assessment of general education?

We learned that the following idea, which we presented three years ago in this box, is even more valuable than we thought. Conceptualizing critical thinking as a **metacognitive** activity, with all that the word entails, not only adds significant perspective to the art and practice of critical thinking, but also makes the enterprise more fun to think about and assess.