

**Critical Thinking Assignments**  
**Guided Pathways Workshop #6**  
**April 24-26, 2018**

**The Collegiate Learning Assessment: An Example Task**

You are a staff member who works for an organization that provides analysis of policy claims made by political candidates and makes recommendations to endorse specific candidates. Pat Stone is running for reelection as the mayor of Jefferson, a city in the state of Columbia. Mayor Stone's opponent in this contest is Dr. Jamie Eager. Dr. Eager is a member of the Jefferson City Council. Dr. Eager made three arguments during a recent TV interview:

1. First, Dr. Eager said that Mayor Stone's proposal for reducing crime by increasing the number of police officers is a bad idea. Dr. Eager said "it will only lead to more crime." Dr. Eager supported this argument with a chart that shows that counties with a relatively large number of police officers per resident tend to have more crime than those with fewer officers per resident.
2. Second, Dr. Eager said "we should take the money that would have gone to hiring more police officers and spend it on the Strive drug treatment program." Dr. Eager supported this argument by referring to a news release by the Washington Institute for Social Research that describes the effectiveness of the Strive drug treatment program. Dr. Eager also said there were other scientific studies that showed the Strive program was effective.
3. Third, Dr. Eager said, that because of the strong correlation between drug use and crime in Jefferson, reducing the number of addicts would lower the city's crime rate. To support this argument, Dr. Eager presented a chart that compared the percentage of drug addicts in a Jefferson ZIP Code area to the number of crimes committed in that area. Dr. Eager based this chart on crime and community data tables that were provided by the Jefferson Police Department.

In advance of the debate later this week, your office must release a report evaluating the claims made by Dr. Eager and make a recommendation endorsing either Mr. Stone or Dr. Eager.

Your task is to write a report evaluating the claims made by Dr. Eager and to make a recommendation endorsing either Mr. Stone or Dr. Eager. Make sure to provide an analysis of Dr. Eager's three claims and to choose a candidate (either Mr. Stone or Dr. Eager) to support. Your analysis of Dr. Eager's claims should include appropriate and relevant evidence as well as counterarguments from the information given in the document library. Your decision to support either Mr. Stone or Dr. Eager should also be clearly supported using the information in the documents.

There is no "correct" answer. Your report should clearly describe all the details necessary to support your position. Your answers will be judged not only on the accuracy of the information you provide, but also on how clearly the ideas are presented, how thoroughly the information is covered, how effectively the ideas are organized, and how well your writing reflects the conventions of Standard Written English.

While personal values and experiences are important, please answer all of the questions in this task solely on the basis of the information provided above and in the Document Library.

Type your response in the space provided. Write as much as you need to fulfill the requirements of the task; you are not limited by the size of the response area on the screen. You have one hour.

**Document Library:**

- 1) A confidential memo describing a connection between Strive and Dr. Eager.
- 2) An article in the local paper describing a robbery at a convenience store by an addict.
- 3) Crime statistics from the Jefferson Police
- 4) A research brief describing the effectiveness of Strive in a small city
- 5) Charts showing the rate of crime vs the number of police officers for 53 counties
- 6) Dr. Eager's chart of crimes vs drug use in Jefferson
- 7) Three research abstracts evaluating the effectiveness of Strive

## **Harvard Business School Case Study: Should a Female Director "Tone It Down"?**

Sarah is a director of a Real Estate Investment Trust whose CEO has expressed his admiration of her intellect and drive for information, but board meetings have become tense recently, and the CEO has grown distant. In Sarah's opinion, the problem is obvious: Sid Yerby, the CFO. Despite Sarah's repeated requests for comprehensive financial statements, he continues to come to board meetings with a mere two pages of analysis that lack any explanation or footnotes. Increasingly, however, hers seems to be the minority view, and, as the only woman on the board, she is starting to feel isolated. The chairman has warned her that everyone is starting to think of her as "pushy." Should she quit the board?

## **MyDigitalText Assignment: A Case of Childhood Obesity in Cleveland**

Obesity is a clearly defined medical condition; if your Body Mass Index (BMI) is 30.0 or higher, you are obese. The negative medical effects of obesity are well known, including an increased risk of heart disease, diabetes, certain types of cancer, and death. So being fat is a health risk.

Being fat is also a social risk. The 1996 remake of *The Nutty Professor*, starring Eddie Murphy, is largely based on ridiculing fat people; so are *Shallow Hal* (2001), *Norbit* (2006), and *Paul Blart: Mall Cop* (2009), not to mention TV programs like *The Biggest Loser* and *Mike & Molly*. Americans must, at some level, think it is OK to openly display denigrating stereotypes of fat people.

In schools and the workplace, people of size experience widespread discrimination, and federal law does not protect against this type of discrimination. Being obese is a strong risk factor for being bullied at school and for being a school bully. So being overweight has a negative impact on your education and career.

Knowing that obesity has a wide range of negative physical, social, educational and occupational effects, is it reasonable to try to protect children from parents who allow them to become obese? In 2011, an 8-year-old boy weighing over 200lb was removed from his mother's house near Cleveland, Ohio because his mother wasn't doing enough to control his weight. (For comparison, the average weight of eight-year-olds is about 55 lbs.) A spokesperson for the Department of Children and Family Services said that, after working with the mother for over a year, she wasn't doing enough and "the child's problem was so severe that we had to take custody." Children are ordinarily removed in cases of physical abuse, neglect, or undernourishment; in this instance, case workers claimed that the mother's inability to control her son's weight was medical neglect. The case sparked a heated debate about obesity, parental responsibility, government responsibility, and our perceptions of fat people.

Imagine that you are drinking a cup of coffee and reading the morning paper when the case of the obese 8-year-old in Cleveland catches your eye. Upon reading the article, you find yourself getting more and more upset about the situation, and you decide to write a letter to the editor expressing your feelings. You begin: "To the Editor: Regarding the case of the obese boy in Cleveland..."

Write a 500-word essay expressing your thoughts about this case. You may address the question of whether it is reasonable for government agencies to protect children from parents who allow them to become obese, or whether taking children from their homes an acceptable way to protect them, or whether focusing on children is blaming the victim and the real focus should be on the junk food industry, or any other aspect of this case that interests you.

**Critical Thinking Fables**  
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**The Old Engineer and The Hammer (engineering folk tale)**

Graybeard Engineer retired and a few weeks later the Big Machine broke down, which was essential to the company's revenue. The Manager couldn't get the machine to work again so the company called in Graybeard as an independent consultant. Graybeard agreed. He walked into the factory, took a look at the Big Machine, grabbed a sledge hammer, and whacked the machine once whereupon the machine started right up. Graybeard departed and the company was making money again. The next day Manager received a bill from Graybeard for \$5,000. Manager was furious at the price and refused to pay. Graybeard assured him that it's a fair price. Manager retorted that if it's a fair price Graybeard won't mind itemizing the bill. Graybeard agreed that this is a fair request and complies. The new, itemized bill read...

1. Hammer: \$5.00
2. Knowing where to hit the machine with hammer: \$4,995.00

**The Party Hat (from Dear Abby 1977)**

A wealthy woman asked a famous millinery designer to design a hat for her. He placed a canvas form on her head, and in eight minutes with a single piece of ribbon, he created a beautiful hat right before her eyes. The matron was delighted. "How much will that be, she asked. "Fifty dollars," he replied. "Why, that's outrageous," she said, "It's only a piece of ribbon!" The milliner quickly unraveled the ribbon and, handing it to her, said, "Madame, the ribbon is free!"

**THECB description of critical thinking:** "creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information."

# Critical Thinking Learning Outcomes

...describe the ability to execute a macroprocedure that is controlled by comprehension of organizing ideas and detailed information and requires analysis and/or knowledge utilization.

For macroprocedures that develop reflective judgment, check your outcomes by asking: Could students demonstrate this outcome without encountering and engaging with one or more of the “difficult tasks for students” at their stage? (Perhaps they are on a team and assign that part of the task to a teammate at a higher stage.)

For other macroprocedures, check your outcomes by asking: Could students demonstrate this outcome...  
 without understanding the underlying concepts? (Perhaps they memorized the steps without understanding them.)  
 without performing the tasks the outcome is supposed to demonstrate? (Perhaps they have an app on their smartphone.)  
 without demonstrating analysis or knowledge utilization? (Perhaps the outcome only requires retrieval and comprehension.)

## THE NEW TAXONOMY: KNOWLEDGE DOMAINS

### INFORMATION

<i>Details</i>		<i>Organizing Ideas</i>	
Vocabulary terms	Time sequences	Generalizations: statements for which specific examples can be provided	Cause-and-effect principles
Specific facts			Correlational principles

### MENTAL PROCEDURES a.k.a. PROCEDURAL KNOWLEDGE

<i>Skills</i>		<i>Processes</i>	
<i>Procedures that, with practice, can be executed automatically or with little conscious thought</i>		<i>Procedures that require controlled execution every time they are followed</i>	
Single rules: if-then rules or small sets of rules	Tactics: general rules that guide the flow of a process	Macroprocedures: robust procedures with a diversity of possible products or outcomes that involve the execution of many sub-procedures	e.g. designing e.g. writing e.g. evaluating
Algorithms: a specific set of steps that must be performed in order			

### PHYSICAL PROCEDURES

<i>Foundational Procedures</i>		<i>Simple Combinations</i>		<i>Complex Combinations</i>	
<i>Basic physical abilities</i>		<i>Processes involving sets of foundational procedures acting in parallel</i>		<i>Processes involving sets of simple combinations</i>	
Finger dexterity	Speed of limb movement	e.g. shooting a free-throw (basketball)	e.g. striking an arc (welding)	e.g. playing defense (basketball)	e.g. arc welding a complex joint
Static strength	Manual dexterity				
Body equilibrium	Arm-hand steadiness	e.g. applying a blood pressure cuff		e.g. mechanically transferring patients and bathing them	
Wrist-finger speed	Control precision				

# THE NEW TAXONOMY: COGNITIVE PROCESSES

## KNOWLEDGE UTILIZATION

<b>Investigating</b> <i>Test hypotheses using assertions and opinions of others</i>		<b>Experimenting</b> <i>Test hypotheses using data collection by the student</i>		<b>Problem Solving</b> <i>Use information to accomplish a goal with obstacles or limiting conditions</i>		<b>Decision Making</b> <i>Use information to make a decision</i>	
Investigate	Find out about	Experiment	How would you test that	Solve	How would you reach your goal	Decide	Which is the best way
Differentiating factors	What would happen	Generate and test	How would you determine if	Develop a strategy	Adapt	Select the best alternatives	Which of these is most suitable
Research	Take a position on	Test the idea that	How can this be explained	Figure out a way to	How would you overcome		
How/why it happened		What would happen if					
		Based on the experiment what could be predicted					

## ANALYSIS

<b>Specifying</b> <i>Identify logical consequences of information</i>		<b>Generalizing</b> <i>Construct new principles or generalizations</i>		<b>Error Analysis</b> <i>Identify logical or factual errors in knowledge</i>		<b>Classifying</b> <i>Identify categories to which information belongs</i>		<b>Matching</b> <i>Identify similarities and differences</i>	
Make and defend	What would happen if	Draw conclusions	Create a rule	Revise	Assess	Classify	Identify a broader category	Categorize	Distinguish
Predict	Develop an argument	Draw inferences	Trace the evolution	Edit	Identify errors	Identify categories	Organize	Compare and contrast	Create an analogy
Judge	Under what conditions	Create a principle	Form conclusions	Evaluate	Identify problems	Identify different types	Sort	Differentiate	Create a metaphor
Deduce			Generalize	Diagnose	Identify issues			Discriminate	
				Critique					

## COMPREHENSION

<b>Symbolizing</b> <i>Construct symbolic representations of information</i>			<b>Integrating</b> <i>Identify the basic structure of information</i>		
Symbolize	Draw / illustrate	Use models	Describe how or why	Describe relationship between	Paraphrase / summarize
Represent	Show	Diagram chart	Describe key parts of	Explain ways in which	Describe the effects

## RETRIEVAL

<b>Executing</b> <i>Perform procedures</i>			<b>Recalling</b> <i>Produce information on demand</i>			<b>Recognizing</b> <i>Determine if information is accurate or known</i>		
Use	Demonstrate	Show	Exemplify	Label	What	Recognize	Select from a list	Identify from a list
Make	Complete	Draft	Name	State / describe	When	Determine if true/false		
		Create	List	Who	Where			

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## REFLECTIVE JUDGMENT STAGES 2-6

<i>Stage</i>	<i>Characteristic Assumptions</i>	<i>Difficult Tasks for Students</i>
2 pre-reflective	<p>Knowledge is certain but some people do not have access to it</p> <p>Authorities such as scientists and teachers know the truth</p> <p>When the truth is uncertain, accept the view of an authority</p> <p>Evidence is not a criterion for establishing truthfulness</p>	<p>Recognizing there are legitimate differences of opinion about some issues</p> <p>Giving reasons for a belief beyond reference to an authority</p> <p>Accepting that even authorities do not have answers for some issues</p>
3 pre-reflective	<p>Knowledge is certain in some areas and temporarily uncertain in others</p> <p>Beliefs are justified according to the word of an authority in areas of certainty and what “feels right” in uncertain areas</p> <p>Evidence can neither be evaluated nor used to reason to conclusions</p> <p>Opinions and beliefs cannot be distinguished from factual evidence</p>	<p>Recognizing legitimate sources of authority as better qualified than themselves in making judgements on controversial issues</p> <p>Understanding the difference between interpretation and opinion</p> <p>Using evidence to justify a point of view</p> <p>Appreciating multiple evidence-based views of a single issue</p>
4 quasi-reflective	<p>Knowledge is uncertain because limitations of the knower</p> <p>Beliefs are justified by idiosyncratic use of evidence and opinion</p> <p>Differences in viewpoints exist because of upbringing or deliberately distorting information</p> <p>Evidence is used in support of a viewpoint along with unsubstantiated opinion</p>	<p>Understanding that the nature of knowing itself leads to the uncertainty of knowledge</p> <p>Understanding that not all viewpoints are equally valid</p> <p>Understanding that opinions should be based on evidence</p> <p>Understanding that different perspectives may lead to different legitimate interpretations of evidence, but this is not the same as bias</p> <p>Understanding the difference between facts and interpretations</p>
5 quasi-reflective	<p>Interpretation is inherent in understanding so knowledge is never certain</p> <p>Beliefs may be justified only within a given context or from a given perspective</p> <p>Evidence can be evaluated qualitatively: within a perspective, some evidence is stronger or more relevant than other evidence.</p>	<p>Choosing among competing evidence-based interpretations</p> <p>Explaining relationships between alternative perspectives on an issue</p> <p>Recognizing that choosing one alternative does not deny the legitimacy of other alternatives</p>
6 reflective	<p>Knowledge is uncertain and must be understood in relationship to context and evidence</p> <p>Some points of view may be tentatively judged as better than others</p> <p>Evidence on different points of view can be compared and evaluated as a basis for justification</p>	<p>Understanding that even though knowledge may change at some future point, some principles or procedures are currently generalizable beyond the immediate situation</p> <p>Constructing one’s own point of view and defending it on the basis of evidence or argument as being better than other points of view.</p>