

# GE SLO S4: Think Critically About Concepts In Multiple Disciplines

## Advanced Level

### Capstone Courses

Semester: FALL 2013

Critical Thinking in capstone courses is assessed based on the students' final presentation using the Critical Thinking Rubric created by the Association of American Colleges and Universities. Student Work Samples vary depending on the course/subject. Capstone courses are taken during the senior year in a student's specified major field of study.

Number of students: 86

Number of Sections: 6

### Courses Included in SLO S4 Assessment at Capstone Level:

BIO 4970 \*01

DSN 4000\*02

ENG 4817\* 01

PED 4610 \*K1

PS 4130\* 01

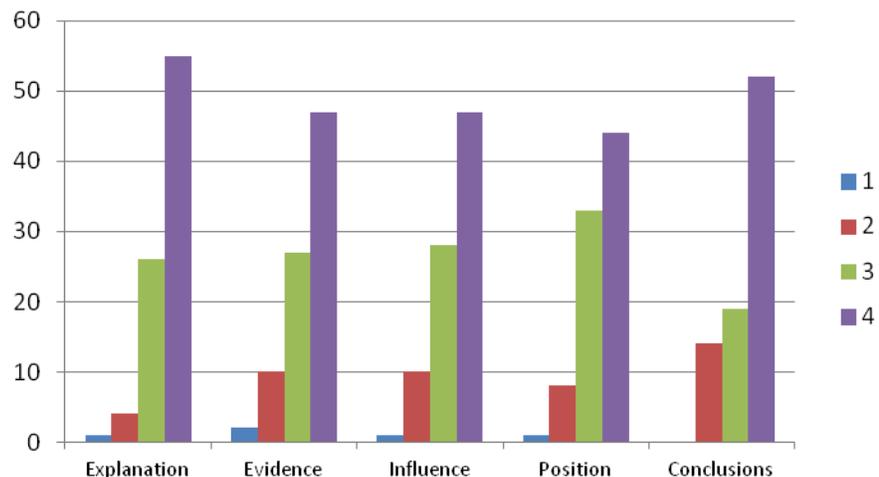
PSY 4940\* K1

A score of 4 denotes a student is at Capstone level; a score of 1 denotes a threshold into the skill, and a score of 2 or 3 denotes milestone. Students in beginning level courses, such as ENG 1030, should score 1, and students taking intermediate level courses, such as GE 202X, should score at the milestones 2-3. The Capstone courses assessed in this pilot easily met the appropriate milestone and often at the higher milestone score of 3. However, campus-wide discussion is encouraged to decide if, at the capstone level, a score of 3 is sufficient enough progress for graduating seniors.

### Mean scores overall:

Explanation	3.6
Evidence	3.4
Influence	3.4
Position	3.4
Conclusions	3.4

### Distribution of Scores



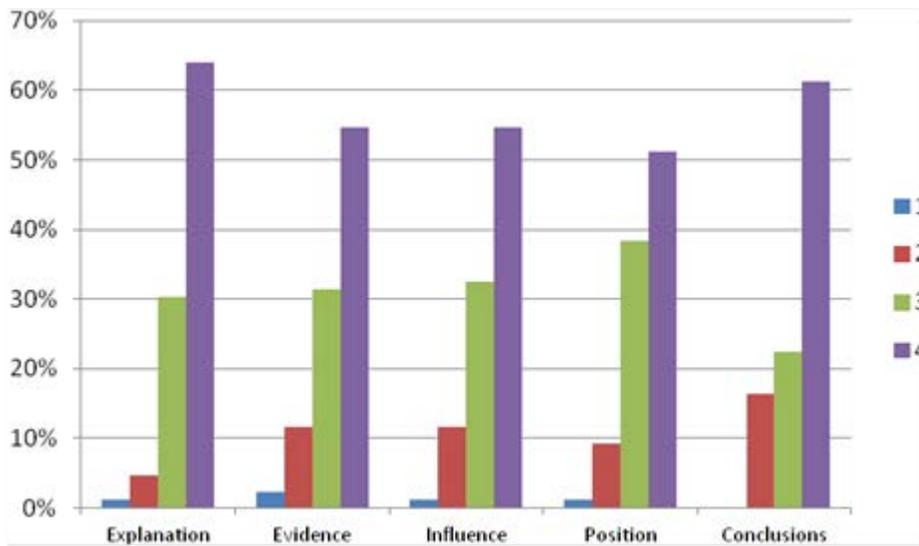
### Distribution of Scores:

**Frequency by score**

	Explanation	Evidence	Influence	Position	Conclusions
<b>1</b>	1	2	1	1	0
<b>2</b>	4	10	10	8	14
<b>3</b>	26	27	28	33	19
<b>4</b>	55	47	47	44	52
<b>total</b>	86	86	86	86	85

**Percentages of score**

	Explanation	Evidence	Influence	Position	Conclusions
1	1%	2%	1%	1%	0%
2	5%	12%	12%	9%	16%
3	30%	31%	33%	38%	22%
4	64%	55%	55%	51%	61%
Level 3-4	94%	86%	87%	90%	84%



Students perform the best on Explanation, 94% met level 3 or higher. The second highest is Position, for which 90% of the students met level 3-4. The performance on Conclusion is slightly lower, with 16% failed to reach level 3.

### **SPSS results**

All 5 dimensions are significantly correlated ( $P < .001$ ). This means that students' performance on these five dimensions is consistent with each other. Those students who scored well on explanations are also performing well on other critical thinking skills (position, e.g.)

### **Discussion/Action/Closing the Loop:**

The assessment data suggests that students of the sampled capstone courses are beneath the requisite level "4" of the Capstone level in the critical thinking rubric. Current data suggests that while students are comfortable identifying and explaining problems within their field of study, and can comprehensively deliver most relevant information about said problem in speeches and writing, areas of evidence, context/assumption, perspective, and related outcomes can be improved. Further work encouraging students to analyze and interpret sources and question expert viewpoints is needed as well as analysis of students' own assumptions and biases. In turn, this will build students' confidence in stating their positions clearly and definitively as well as reflect their informed evaluations of evidence and perspectives while compiling and working with data. Specific assignments should be designed by instructors to further these ends. We have not brought together Capstone Instructors who have a specific emphasis in an SLO for sometime. We now need to do so to establish our norms and to discuss what might be our common approach from now onwards in courses with a Critical Thinking emphasis. Finally every instructor needs to be challenged to consider new teaching and learning strategies specific to their discipline that can further inculcate Critical Thinking. Instructors of GE Capstone courses will meet in March of 2014 (the mid term for Spring 2014) to discuss teaching and learning strategies related to this SLO.

## CRITICAL THINKING VALUE RUBRIC

*For more information, please contact rubric@cam.ac.uk*



**Definition**  
Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

*Evaluators are encouraged to assign a grade to any work sample or relative of work that does not meet benchmark (full essay) level performance.*

	Capstone 4	Milestone 3	Milestone 2	Benchmark 1
<b>Explanation of issues</b>	Issue/ problem to be considered critically is stated clearly and described comprehensively, delimiting all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undetermined, ambiguous, unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
<b>Evidence</b> <i>Showing and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
<b>Influence of context and assumptions</b>	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes makes assertions as assumptions). Begins to identify some contexts when presenting a position.
<b>Student's position (perspective, thesis/ hypothesis)</b>	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
<b>Conclusions and related outcomes (implications and consequences)</b>	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints. Related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information because information is chosen to fit the desired conclusion; some related outcomes (consequences and implications) are identified clearly.	Conclusion is incoherently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.