Critical Thinking Competency

Assessment Update, Draft
Spring 2015

Prepared by:
Faculty Senate Academic Outcomes Assessment Committee
Planning, Assessment & Analysis
How we assess the **Critical Thinking** competency?

**Indirect Evidence**

Millersville’s Senior Exit Survey, 2013-14 to 2014-15

**Direct Evidence**

Millersville’s Critical Thinking Rubric
CAAP Critical Thinking Overall Scores
MU CAAP Students vs. National (Fall 2014)

<table>
<thead>
<tr>
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<th>Freshmen</th>
<th>Seniors</th>
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<tbody>
<tr>
<td>MU CAAP</td>
<td>58.9 (N=234)</td>
<td>63.6 (N=108)</td>
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<tr>
<td>National</td>
<td>59.5</td>
<td>62.1</td>
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Average Scaled Score (Index)
CAAP Critical Thinking Average Subscores
MU Seniors and Freshmen (Fall 2014)

Average Score (Percentage)

- Analysis of Arguments: MU Freshmen (N=234) 51.5, MU Seniors (N=108) 70.2
- Evaluation of Arguments: MU Freshmen (N=234) 50.8, MU Seniors (N=108) 66.5
- Extension of Arguments: MU Freshmen (N=234) 51.8, MU Seniors (N=108) 65.9
The ability to identify essential elements of an argument, including hypotheses, premises, and conclusions, and also their ability to identify logical fallacies, exaggerated claims, unstated assumptions, analogies, and multiple points of view.

Students’ ability to recognize patterns and sequences of arguments is also tested, including their ability to see relationships of premises, sub-arguments, and sub-conclusions to the overall argument.
CAAP Critical Thinking SubScore: Evaluation of Arguments

The ability to evaluate arguments on the basis of consistency, validity, and strength of support. Students’ ability to evaluate information on the basis of its consistency, relevance, and accuracy, and to make judgments about its sufficiency is also tested. In addition, students are assessed in their ability to evaluate replies to arguments on the basis of their intent, appropriateness, and strength.
CAAP Critical Thinking SubScore: Extension of Arguments

Assesses skills in using given premises to reach related conclusions and in recognizing the scope of application of arguments. Students’ ability to develop or recognize arguments that are based on analogies is also assessed. Some items in this category also assess students’ understanding of how modifications to an argument can strengthen or weaken the argument or resolve conflicts within the argument.
1. Identifies and explains the issue (question/problem)
2. Gathers relevant evidence needed to address the question
3. Considers and analyzes the evidence and others' perspectives on the issue
4. Identifies and supports one's own position on the issue
5. Articulates the conclusions (solutions/insights) and one's own assumptions
6. Discusses the implications of the conclusions (solutions/insights)

Overall score: 2.25
(Tested on 8 artifacts, 420 observations)
AACU Critical Thinking Rubric
Assessment (2012)
Where 1=Benchmark, 2&3=Milestones, 4=Capstone

Overall score: 2.16
(Tested on 15 artifacts, 215 observations)
### AACU Critical Thinking Rubric

**Assessment (2010)**

Where 1=Benchmark, 2&3=Milestones, 4=Capstone

<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
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<tbody>
<tr>
<td>1. Explanation of issues</td>
<td>2.45</td>
</tr>
<tr>
<td>2. Evidence</td>
<td>2.12</td>
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<tr>
<td>3. Influence of context and assumptions</td>
<td>2.03</td>
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<tr>
<td>4. Student's position (perspective, thesis/hypothesis)</td>
<td>2.15</td>
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<tr>
<td>5. Conclusions and related outcomes (implications and consequences)</td>
<td>2.06</td>
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</table>

**Overall score: 2.16**

(Tested on 30 artifacts, 150 observations)
How much did your experience in W courses contribute to your ability to think critically and analytically?

Senior Exit Survey

Fall '13 and Spring '14 Combined

- Very little: 10.7%
- Some: 36.5%
- Quite a bit: 36.6%
- Very much: 16.2%

(n=721 graduating seniors)

Fall '14 Only

- Very little: 9.4%
- Some: 34.7%
- Quite a bit: 33.2%
- Very much: 22.7%

(n=277 graduating seniors)
How much did your W courses emphasize applying inferences or causalities to informal written works?

Senior Exit Survey

Fall '13 and Spring '14 Combined

- Very little: 17.1%
- Some: 40.6%
- Quite a bit: 28.1%
- Very much: 14.3%

Fall '14 Only

- Very little: 16.1%
- Some: 39.3%
- Quite a bit: 28.2%
- Very much: 16.4%

(n=721 graduating seniors)  
(n=277 graduating seniors)
How much did your W courses emphasize using critical reasoning strategies to develop content?

**Senior Exit Survey**

**Fall '13 and Spring '14 Combined**

- Very little: 10.3%
- Some: 35.0%
- Quite a bit: 36.1%
- Very much: 18.7%

**Fall '14 Only**

- Very little: 9.6%
- Some: 32.5%
- Quite a bit: 35.4%
- Very much: 22.5%

(n=721 graduating seniors)  
(n=277 graduating seniors)
How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas? (1=Very little, 2=Some, 3=Quite a bit, 4=Very much)

**NSSE**

*Thinking critically and analytically*

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**Freshmen**

**Seniors**

*Student Perceptions*