



## Office of Institutional Research

To: College-Wide Assessment Team  
 From: Darby Hiller  
 Date: January 6, 2003  
 Subject: Fall 2002 CAAP After Action Report

The Critical Thinking CAAP test was administered successfully to 120 students in November 2002. The CAAP Critical Thinking test is intended to measure students' skill in clarifying, analyzing, evaluating, and extending arguments. An argument is defined as a sequence of statements that includes a claim that one of the statements, the conclusion, follows from the other statements. Each passage in the test presents a series of sub-arguments, overlapping positions, statistical arguments, experimental results, or editorials. About 60% of the test focuses on the analysis of the elements of an argument, 20% of the test items assess how a student is able to evaluate an argument, and the remaining 20% test a student's ability to extend an argument. In my opinion, these three differing capabilities fit well into the three levels of the critical thinking rubric.

<b>Level</b>	<b>Language in Critical Thinking Rubric</b>	<b>Language in CAAP Technical Handbook</b>
Level 1	Identifies arguments	Identifies elements of an argument
Level 2	Evaluates claims and develops conclusions	Evaluates an argument
Level 3	Demonstrates problem resolution	Extends an argument

The exam provides a number of passages related to issues commonly encountered in a postsecondary curriculum. These passages present one or more arguments and use a variety of formats, including case studies, debates, dialogues, overlapping positions, statistical arguments, experimental results, and editorials. A set of multiple-choice questions accompanies each passage. The multiple-choice CAAP tests are scored by ACT. Standard scores are reported on a scale that ranges from 40 (low) to 80 (high), with a mean of 60 and a standard deviation of 5. Cumulative percents are reported to facilitate comparisons of student performance. A total score is provided for each CAAP exam.

Of the 120 students who took the test, 60% (mean score 65) scored better than the national mean (more than a standard deviation) for two-year community colleges. Four students had a high score of 71. Our students did very well.

The student demographics of the sample did not vary much from the student body as a whole. Ninety percent (90%) were White/Caucasian. Fifty

eight percent (58%) were women. Additionally, 53.3% were between the ages of 16 and 20. Seventy percent of the test takers reported that they were full time students. Moreover, 58.3% were at the freshman level. The responses for self-reported cumulative grade point average were evenly distributed among the five response categories. (Please see the supporting data tables below.) The most frequently reported college majors are as follows: business (8.3%), computer and information sciences (11.7%), education (25%), health professions (9.7%), and undecided (17.5%). Please take care in interpreting these percentages for college majors. The high number of responses will also be related to the course in which the tests were administered.

The NMC institutional mean score was 62, well within the national mean standard deviation. When broken down by demographic, there was no difference in scores between men and women. Students 18 years and under (mean score 63) and in the 31-39 years of age range (mean score 64) tended to do better than those in other ranges. Students with the most educational credits performed the best (senior level; mean score 64). However, freshman performed better than the sophomores (mean scores 62 and 61 respectively), but this difference is well within the standard deviation and would not be statistically significant. Expectedly, the students self-reporting the highest grade point average performed the best (mean score 64), while those with the lowest grade point average performed the worst (mean score 60) but still at the national average. Those selecting the Fine and Applied Arts as their college major scored the lowest (mean score 59) of all the majors. While the Education majors scored the highest (mean score 64).

We can be confident that these scores represent our student's serious effort. Of all the students, 93.4% said they had given moderate effort or better, with 54.2% saying they tried their best.

Unfortunately, we did not receive the raw data to perform extra item analyses. Moreover, ACT does not have the capability at this time to perform an item analysis tailored to NMC students. If in the future, ACT develops this capability and if the product is worthwhile, than I would recommend using the CAAP critical thinking test again for the assessment of our general education outcomes. But until that time, I recommend discontinuing its use because of the difficulties involved in using the results to inform curriculum improvement.

Appendix: Supporting Data

<b>Ethnicity</b>	<b>Frequency</b>	<b>Percentage</b>
African American/Black	1	0.8%
American Indian	3	2.5%
White	108	90.0%
Filipino	1	0.8%
Prefer not to respond	5	4.2%
No response	2	1.7%
<b>Total</b>	<b>120</b>	

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	50	41.7%
Female	70	58.3%
<b>Total</b>	<b>120</b>	

<b>Age</b>	<b>Frequency</b>	<b>Percentage</b>
18 and under	27	22.5%
19-20	37	30.8%
21-25	26	21.7%
26-30	11	9.2%
31-39	9	7.5%
40 and older	10	8.3%
<b>Total</b>	<b>120</b>	

<b>Credit Level</b>	<b>Frequency</b>	<b>Percentage</b>
Freshman	70	58.3%
Sophomore	25	20.8%
Junior	12	10.0%
Senior	4	3.3%
Other	5	4.2%
No Response	4	3.3%
<b>Total</b>	<b>120</b>	

<b>Cumulative GPA</b>	<b>Frequency</b>	<b>Percentage</b>
Below 2.0	3	2.5%
2.01-2.50	25	20.8%
2.51-3.0	25	20.8%
3.01-3.5	33	27.5%
3.51 and above	24	20.0%
No response	10	8.3%
<b>Total</b>	<b>120</b>	

<b>College Major</b>	<b>Frequency</b>	<b>Percentage</b>
Agriculture	1	0.8%
Biological Sciences	2	1.7%
Business	10	8.3%
Marketing and Purchasing	1	0.8%
Communications	4	3.3%
Computer Sciences	14	11.7%
General Studies	2	1.7%
Education	30	25.0%
Engineering	3	2.5%
Fine and Applied arts	4	3.3%
Health Professions	11	9.2%
Home Economics	3	2.5%
Letters	2	1.7%
Physical Sciences	1	0.8%
Social Science	4	3.3%
Trade and industrial	3	2.5%
Undecided	21	17.5%
No Response	4	3.3%
Total	120	