

Collegiate Assessment of Academic Proficiency (CAAP) Report

Spring 2002 and 2004

Findings

Northeast Community College, as part of their assessment of student learning, administered the CAAP exam to graduating students receiving either an AA or AS degree. In the Spring 2002, 47 students participated and in the Spring 2004, 65 students participated. In 2002, 120 of 220 graduating students were randomly selected to participate. A total of 47 students volunteered to take the exam by showing up on the test day.

In 2004 letters were sent to all 220 graduates receiving AA or AS degrees because the Taskforce wanted a larger sample than in 2002. In order to attract more students, two alternative test days were set up. This time 65 students volunteered to take the exam. No negative problems or circumstances interfered with the administration of the exam. Door prizes were awarded to attendees both years as a thank you and in 2004 a pizza lunch was furnished as an additional incentive.

The results from both years are presented beginning on page 4 of this report. The four exams administered tested writing skills, mathematics, reading, and science reasoning. The scaled mean scores for each exam indicates that NECC students scored slightly higher than the national mean in each exam with only one exception of reading in 2002.

The difference between the mean for NECC and the National Sample for each exam was tested and the results are presented under the heading Statistical Test Results in the same table. If the result of the statistical test is $>-.025$ and <0.25 then there is no difference between the two means. If the result is $=<-.025$ and $=>0.25$ then there is a statistical difference. For the results of the writing skills, mathematics, and reading exams there is no difference, but for science reasoning there is a statistical difference at the .01 level. The results of the science reasoning exam would statistically happen only once in a hundred samples; but because this is a volunteer sample and not a random sample, we cannot apply it to all graduates.

Also on page 4 is a comparison between the self reported effort the student gave to each exam and how that compares to the mean score. In most cases, the greater the effort the student said they put into the exam the higher the resulting exam score.

On page 5 the results of the CAAP are presented for various student characteristics including: gender, age, cumulative GPA, educational plans, and college major. It is noted that in 2002 the female students scored slightly above the males in each exam taken while in 2004, it was quite the opposite with the males outscoring the females in all but one exam. In all cases, the scores were only one or two points difference except in 2002 for writing skills when the females averaged four points over the males.

This result is quite significant when you consider that a scaled writing score for the females of 64 means the average female student who took the exam scored at or better

than 62 percent of all the students who took the exam nationally, while the male scaled score of 61 means the average male student who took the exam only scored at or better than 40 percent of all the students who took the exam nationally.

There was a similar result for the age characteristic group in 2002. The 19-20 age group scored a 64 compared to the 21-25 age group which scored a 60 in the writing skills exam. This result is quite significant when you consider that a scaled writing score for the 19-20 age group of 64 means the average 19-20 student who took the exam scored at or better than 62 percent of all the students who took the exam nationally, while the 21-25 age group scaled score of 60 means the average 21-25 student who took the exam only scored at or better than 33 percent of all the students who took the exam nationally.

The students were asked to report their GPA. Note that as the reported GPA increased, the CAAP scores also increased for both exam years. The results of the writing skills exam seem to be the most significant.

When students were asked to report their future educational plans, most said they were transferring to other institutions; while the others selected other, which could mean several things, including going into the job market. There were no significant differences between these two groups.

The last area asked students to identify their major area of study. Here again no major differences in scores versus reported major.

Summary

Overall, NECC students' scored comparable to the thousands of students who took the test nationally, except for the science reasoning exam where NECC students scored significantly higher than students did nationally. For both exam years, the scaled mean score for NECC students that took the CAAP exam was slightly above the national scaled mean score, except in the reading score for 2002. Statistically the scores are no different for the NECC students than they are for the national sample for the writing skills, mathematics, and reading exams.

The CAAP provides a direct measure of how NECC students perform compared to a national sample. When the Assessment Taskforce was looking for direct methods to measure student learning, the CAAP filled that gap. Up until now, the CAAP did not provide feedback to help provide the institution find ways to improve general education programs. For example, we can determine how students are performing in mathematics compared to other students nationally, but there was no feedback as to what areas the students scored well in and what areas they were weak. Currently, we are working with ACT on a new research initiative to provide better feedback to institutions who wish to use the CAAP as a part of their ongoing assessment of general education.

Another problem that was experienced both times the CAAP was administered was to get a true random sample of students. Your results can only be compared to the entire group of students receiving AA or AS degrees if the sample tested is a true random

sample. We have tried two different methods; in 2002 we sent letters from the President requesting students to show up for the exam unless they had valid excuses as determined by Student Services personnel. A total of 120 letters were sent out to a randomly selected group from the 220 graduating students receiving AA or AS degrees. Approximately 39 percent, or 47 students, from the selected list were present on the day the CAAP was administered. In 2004, all 221 students graduating with AA or AS degrees were sent letters from the President. They were offered their choice of two days to take the exam, an excuse from class, and a pizza lunch. This time 30 percent, or 65 students, took the exam. The fact that only those who were willing to participate were included in the study means the group was a volunteer group rather than a random sample group. The results of the volunteer group cannot be extended to include all students.

The CAAP can and will continue to provide valuable information useful to the General Education Assessment Taskforce if these two problems can be overcome. First, we must find a way to test a true random sample of graduating students so that our results can be implied across all graduates. Secondly, the ability to determine areas of content where students are strong and weak so that these results can be used to improve general education courses.

**CAAP Results for Each Exam and Effort Given
2002 and 2004**

		Writing Skills		Mathematics		Reading		Science Reasoning	
		NECC	National	NECC	National	NECC	National	NECC	National
2002	Mean (scaled score)	62.8	62.6	56.4	56.3	60.8	61.1	60.4	58.9
	Std. Dev.	4.5	4.7	3.1	3.7	4.6	5.4	3.5	4.3
	N	47	25,209	47	23,138	47	23,842	47	15,639
	Statistical Test Results*		0.04		0.03		(0.06)		0.35
2004	Mean (scaled score)	63.6	62.5	56.4	56.2	61.4	60.6	60.1	59.0
	Std. Dev.	4.0	4.8	3.6	3.5	4.8	5.4	3.4	4.2
	N	64	27,221	65	10,618	65	26,647	65	17,737
	Statistical Test Results*		0.23		0.06		0.15		0.26

	2002		2004	
	Number	Mean	Number	Mean
Writing Skills				
Tried my best	27	63	47	64
Gave moderate effort	16	63	16	63
Mathematics				
Tried my best	20	56	35	57
Gave moderate effort	15	57	21	57
Gave little effort	11	57	8	55
Reading				
Tried my best	30	61	31	62
Gave moderate effort	13	61	27	61
Gave little effort			6	62
Science Reasoning				
Tried my best	24	61	25	61
Gave moderate effort	18	60	22	60
Gave little effort	4	59	15	60

Note: *If the results of the statistical test lie between >-0.25 and <0.25 then the results are expected to be no different than the national sample. A result greater then or less then indicates a result above or below the national sample mean.

**CAPP Results by Student Characteristics
2002 and 2004**

		Number	Writing Skills	Math	Reading	Science Reasoning
Overall	2002	47	62.8	56.4	60.8	60.4
	2003	65	63.6	56.4	61.4	60.1
Gender	2002	13	61	56	60	60
	Female	34	64	57	61	61
	2004	18	63	58	62	62
	Female	46	64	56	61	60
Age	2002	28	64	56	61	61
	19-20	11	60	56	58	59
	21-25					
	2004	37	64	57	60	60
	19-20	11	63	56	63	60
	21-25					
Cumulative GPA	2002	5	60	56	58	58
	2.01-2.50	11	59	54	58	59
	2.51-3.00	14	63	56	61	61
	3.01-3.50	17	66	58	63	62
	3.51 and over					
	2004	8	60	53	59	57
	2.01-2.50	11	61	55	58	60
	2.51-3.00	22	63	56	61	60
	3.01-3.50	24	66	58	64	62
	3.51 and over					
Education Plans	2002	32	62	57	61	60
	Transfer	15	63	56	61	61
	Other					
	2004	49	65	57	62	61
	Transfer	11	60	55	59	58
	Other					
College Major	2002	13	63	57	61	61
	Business	5	63	56	59	59
	Community Services	7	64	57	59	61
	General Studies	19	64	56	63	60
	Education	5	63	54	59	58
	Home Economics					
	2004	4	63	56	62	61
	Undecided	8	63	58	60	60
	Business	5	59	54	60	60
	Community Services	8	64	55	62	60
	Education	5	63	56	58	59
	Home Economics					