**Assessment Summary Report for Information Science Undergraduate Program**
Administration of the CAAP Critical Thinking Module
May 2010

The Collegiate Assessment of Academic Proficiency (CAAP) test was given to a sample group of undergraduate students during the Spring term 2010. As reported in the CAAP documentation, the CAAP test is an academic test designed to measure general education foundational skills. In particular, the Critical Thinking Module was used in this assessment. This methodology constitutues the approach used in assessing general education skills of Information Science undergraduates as part of the overall assessment process. Seventy one undergraduate Information Science students completed the test for this sample study.

Demographics

Ethnicity
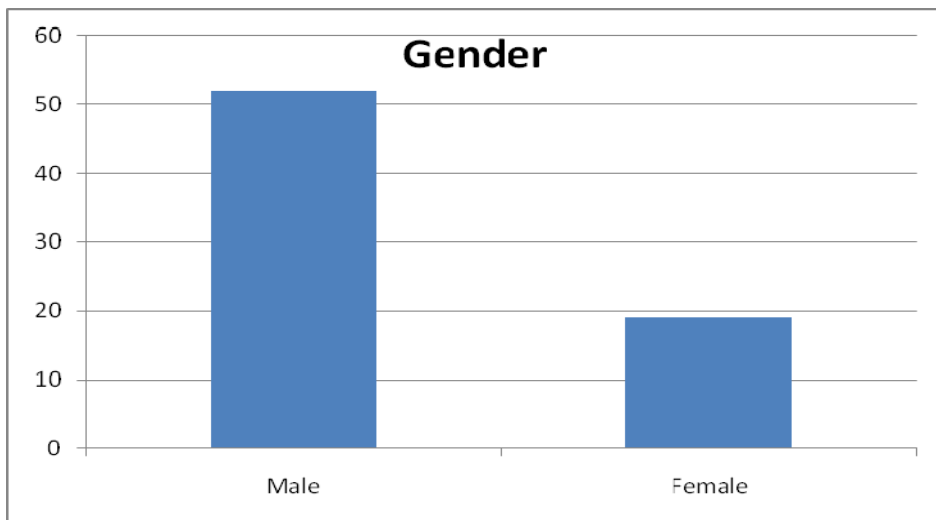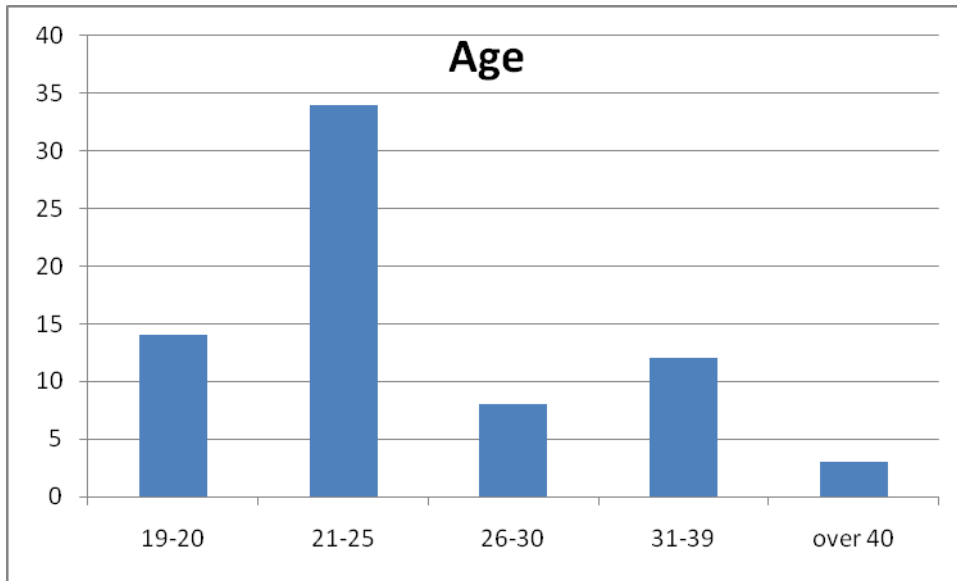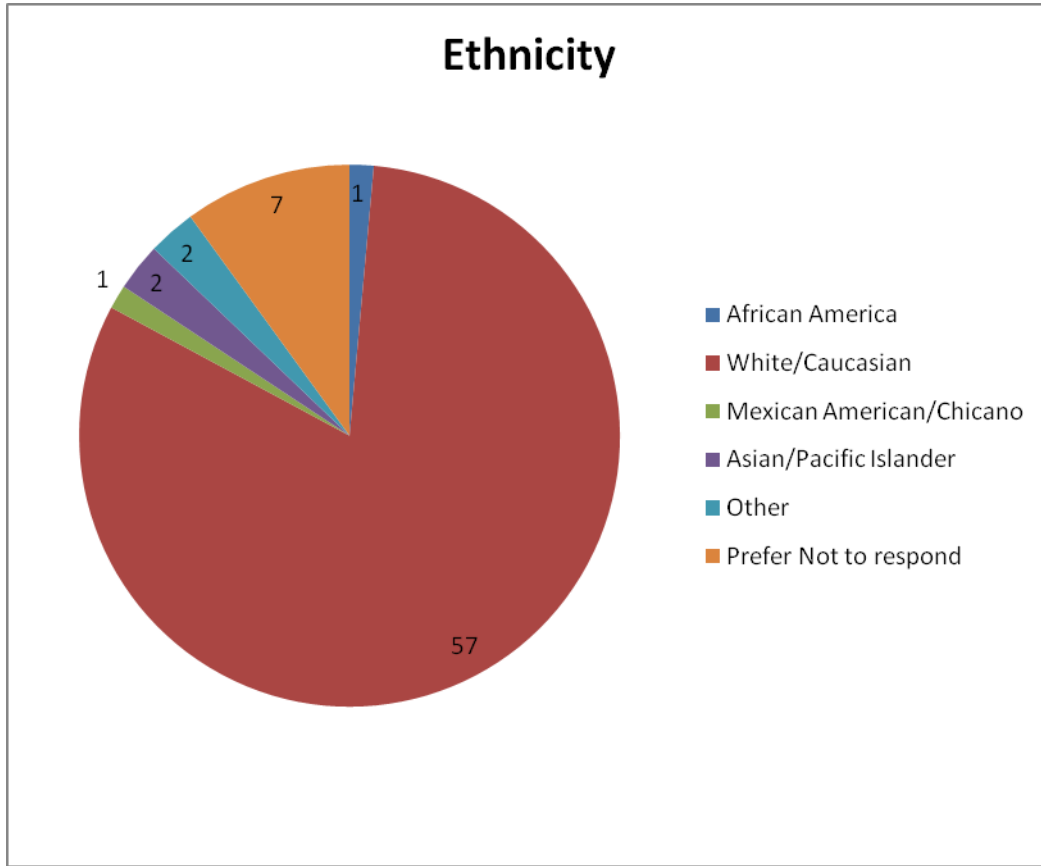
Percentile Rankings of Student Scores

Seventy one undergraduate students (53% of the undergraduate class) completed the test and had results that met the requirements for interpretation. The possible range of scores on the CAAP Critical Thinking module is from 40 to 80. The local mean score was 66.4 with a standard deviation of 4.2. The national mean score is 62 with a standard deviation of 5.4. In comparison to the national norms our students performed very well. As seen from the following table 86% of the students performed at or better than the national 50th percentile.

Approximate Percentile Groups National Norms		
Percentile Grouping	**Number**	**Percentage**
Top 25th	47	66%
50th-75th	14	20%
25th-50th	7	10%
Bottom 25th	3	4%

The local distribution of student scores taking the exam

Approximate Percentile Groups Local Norms		
Percentile Grouping	**Number**	**Percentage**
Top 25th	27	38%
50th-75th	20	28%
25th-50th	11	15%
Bottom 25th	13	18%

Analysis Between Groups

Male students did perform slightly better than female students. Even though there is only a one point difference in the average score this represents a larger percentile difference.

Category	SubCategory	Frequency	Average Score	Percentile(local)
Gender	Male	52	67	56
	Female	19	66	48

In regards to age there seems to be a general decline in scores as age increases with the exception for the 26-30 age group. Students in the 31-39 group may be second degree students, returning students or non-traditional students and may have been out of school for a number of years. These students may have been away from test taking, an academic setting or may have taken general education courses many years ago.

Category	SubCategory	Frequency	Average Score	Percentile(local)
Age	19-20	14	69	72
	21-25	34	66	48
	26-30	08	67	56
	31-39	12	65	34

Transfer students did not fare as well as students who enrolled at the University of Pittsburgh as freshman.

Category	SubCategory	Frequency	Average Score	Percentile(local)
Initial Enrollment	Freshman	35	67	56
	Transfer	36	65	34

As expected, seniors had a higher average score than juniors. As an upper level school we have no students who are freshman and sophomore.

Category	SubCategory	Frequency	Average Score	Percentile(local)
Education level	Junior	32	66	48
	Senior	33	67	56

Part-time students did not do as well as full-time students. Full-time students typically are younger (who also scored better) and do not have competing full-time jobs.

Category	SubCategory	Frequency	Average Score	Percentile(local)
Student Status	Full Time	53	67	56
	Part Time	18	65	34

As expected average test scores correlated with GPA measurements.

Category	SubCategory	Frequency	Average Score	Percentile(local)
GPA	2.51-3.00	19	65	34
	3.01-3.50	28	66	48
	3.51 and above	20	68	62

Discussion

It appears that overall the undergraduate students in Information Science fared quite well on the CAAP test Critical Thinking module with 86% of the students scoring above the national 50th percentile. This indicates that the current general education distribution requirement contributes to the development of critical thinking skills in Information Science students. There is a point of caution here in the interpretation of the CAAP scores in that their national norms were standardized on sophomores. And, some of the differences seen here may be partially due to maturation and increased course completion by upper class students. And, of course there is some impact due to the standard error that is part of all standardized tests. With that in mind there are also some other observations.

Even though the sample did well overall there is a very small group of students (N=3) that scored in the national bottom 25th percentile. It is unclear whether these students who score low on the Critical thinking module also perform poorly in the Information Science major. However, there is evidence that low scoring students also had lower GPA'S. It may be of value to have a mechanism in place to better identify low performing students and provide targeted academic advising to ensure their academic success.

The study suggests that four groups of students may benefit from further analysis. Females, older students, transfer students and part-time students scored lower than their counterparts. This may suggest that these students could benefit from services offered to them upon their admission and throughout their stay in Information Science. For example, upon admission students in these highlighted groups may be recommended to take advantage of orientations, study-skill programs, academic advising sessions, course repeats, and one on one mentoring. However, some caution is noted here. An individual who is a member of one of these four groups may perform quite well in the Information Science program and this test should not be used to label anyone.

More detailed information on individual performance is provided in Appendix A. These charts detail the number of people scoring at local and national percentile points. In order to better interpret these charts here a couple of observations. If you look at the X axis you notice that 8 people scored at approximately the 94th percentile locally and at the 98th percentile nationally. Also, 10 people scored at approximately the 50th percentile locally which matches the 75th percentile nationally.

In summary, Information Science students need to have critical thinking ability in order to solve the more complex systems problems of today. Our students are required to take a distribution of general education courses. It appears from the test results that our students on a whole perform very well well in regards to the national norms. However, the tests indicate that some further study of sub groups within Information Science is warranted. As a first step it would be beneficial to look at the academic performance of these sub groups. If there is some evidence indicating lower performance in these subgroups then specialty services targeting these subgroups may be of some value.

Appendix A

Number of People Versus Local Norms and National Norms (Percentiles)