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# Collegiate Assessment of Academic Proficiency

## Loyola Students Similar to Those at Other Institutions in Critical Thinking and Writing Skills

Prepared by the Office of Institutional Research

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The Collegiate Assessment of Academic Proficiency (CAAP) is a standardized, nationally normed academic assessment program from ACT. In spring of 2007, Loyola administered two CAAP modules to a small group of new freshmen who entered in fall of 2006: Critical Thinking and Writing Skills. The Critical Thinking module consists of 32 items that measure students' skills in clarifying, analyzing, evaluation, and extending arguments. The Writing Skills module consists of 72 items that measure students' understanding of the conventions of standard written English in punctuation, grammar, sentence structure, strategy, organization, and style. ACT standardizes each score to a scale ranging from 40 to 80. In addition to the overall score for each module, ACT calculates for each student two subscores from the Writing Skills module: usage/mechanics (punctuation, grammar, and sentence structure) and rhetorical skills (organization, strategy, and style).

Results presented here compare the Loyola freshmen who took the CAAP to a reference group of freshmen at a national set of private, four year institutions (see appendix for list). The schools represented in this reference group, however, are mostly less selective than Loyola, and most are different types of institutions (small colleges, art schools, etc.). Thus, most of the comparisons made are misleading in that one would expect a priori that Loyola students would have higher test scores. For only one comparison, described below, are scores adjusted by average entering ACT scores, thus making the comparison more useful. Appendix A contains a list of the institutions in the reference group.

Those taking the CAAP consisted of a small group of students who were participants in the Parsing the First Year project (PFY), administered by Pennsylvania State University. To have participated in the PFY, students must have entered as new freshmen in fall of 2006, taken the ACT national college admission examination, and responded to the National Survey of Student Engagement. Those students were invited to take the CAAP. Out of a freshman class of 2,134, 169 took the Writing Skills module and 184 took the Critical Thinking module. This presents another problem for comparing Loyola CAAP takers to those of the other institutions, as many of those institutions will have administered the CAAP to all of their students, rather than to a select group. Unfortunately, it is difficult to know exactly how this would affect the comparisons discussed here.

### Key Findings

#### Test Scores

##### Critical Thinking Skills

- The average standardized score on the Critical Thinking module of Loyola CAAP takers was 65.8 (on a scale from 40 to 80), compared to 62.0 nationally.
  - On the Critical Skills module, 57% of Loyola students scored at least 66, compared to just 25% of their national counterparts (see Figure 1<sup>1</sup>).
- When the Critical Skills module was broken down into specific components (analysis of arguments, evaluation of arguments, and extension of arguments), Loyola freshmen in the top quartile tended to be similar to those in the reference group, while those in the lower three quartiles tended to be slightly stronger in those areas (see Table 1).

##### Writing Skills

- The average Loyola standardized score on the Writing Skills module was 68.3, compared to 64.0 nationally.
  - Sixty six percent of Loyola scored at least 68, compared to just 25% of their national counterparts (see Figure 2).
- The average standardized Usage/mechanics subscore of the Writing Skills module was 19 for Loyola students, and compared to 17.1 freshmen in the reference group.
  - Sixty four percent of Loyola students had a usage/mechanics subscore of least 19, compared to 20% of their counterparts (see Figure 3).
- The average standardized Rhetorical skills subscores of the Writing Skills module were the same as for the Usage/mechanics subscores: 19 for Loyola students and 17.1 for freshmen nationally.

<sup>1</sup> When interpreting Figures 1-4, note that the fact that Loyola's line drops off faster than does that of the reference group is positive.

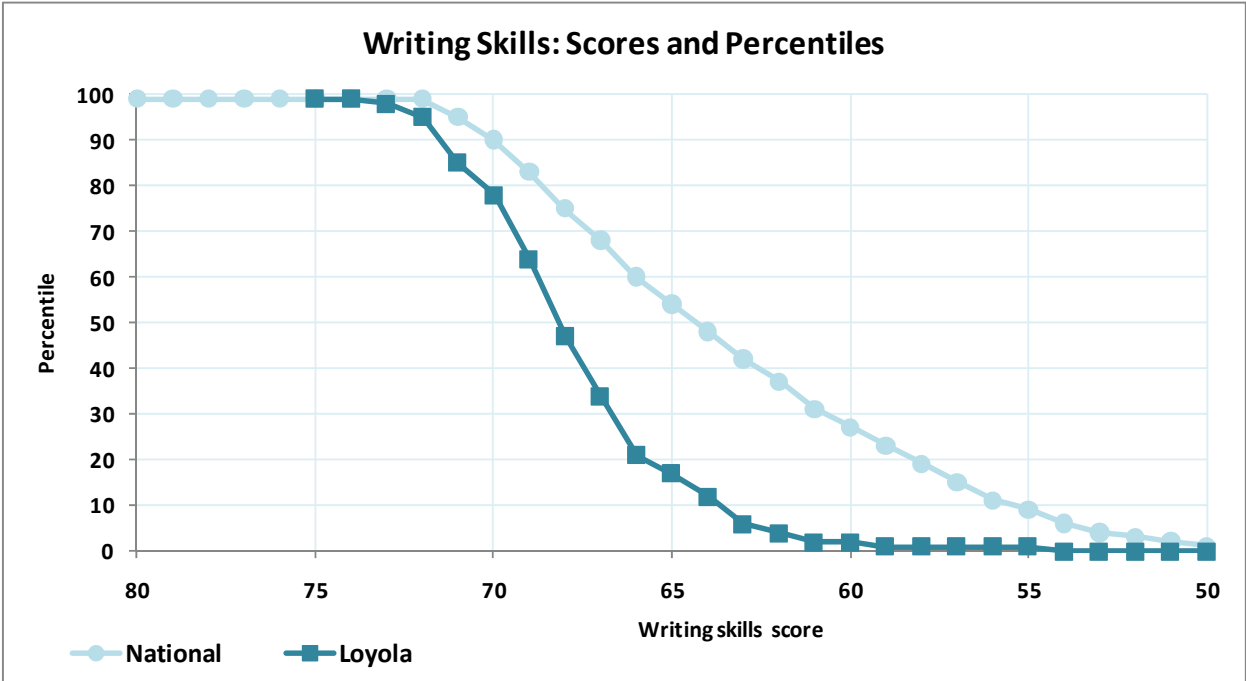
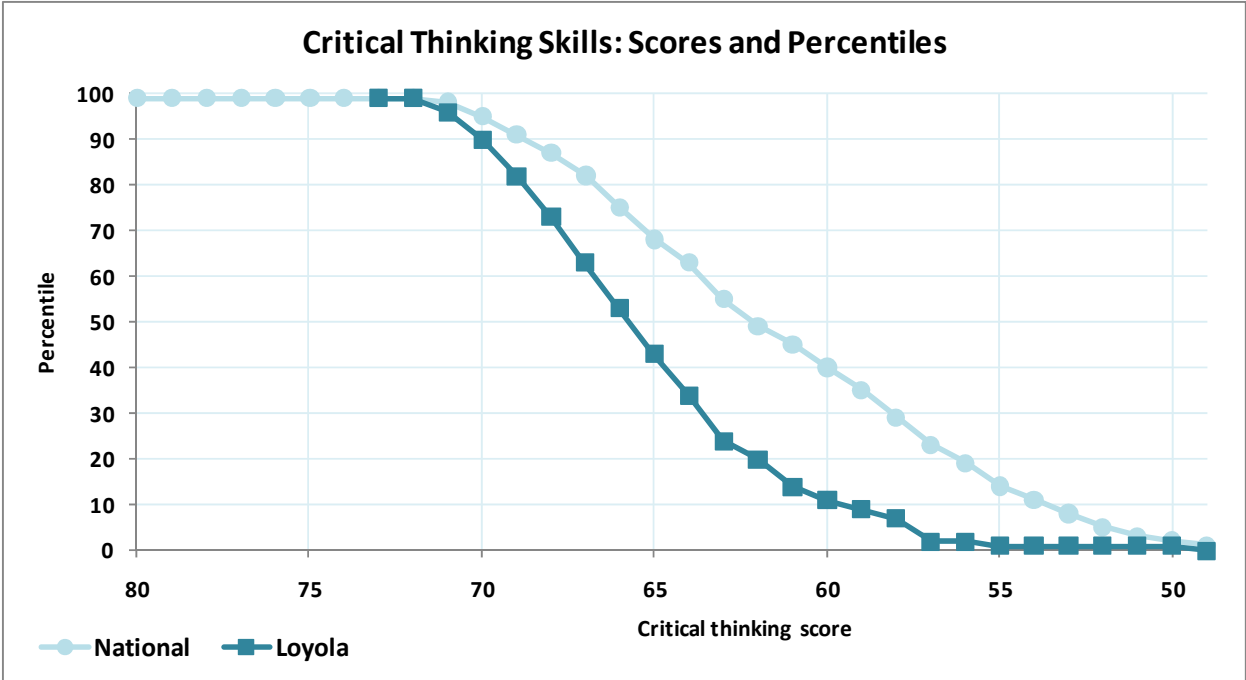
- While 61% of Loyola freshmen had Rhetorical skills subscores above 18, only 20% of their counterparts did (see Figure 4).
- When the Writing Skills module was broken down into specific areas (punctuation, basic grammar and usage, sentence structure, strategy, organization, and style), a pattern emerged. In general, Loyola freshmen who scored in the top quartile tended to have scores comparable to high scoring students in the reference group, while Loyola freshmen in the lowest 25% of the distribution tend to have higher scores than their counterparts at the reference institutions (see Table 1).

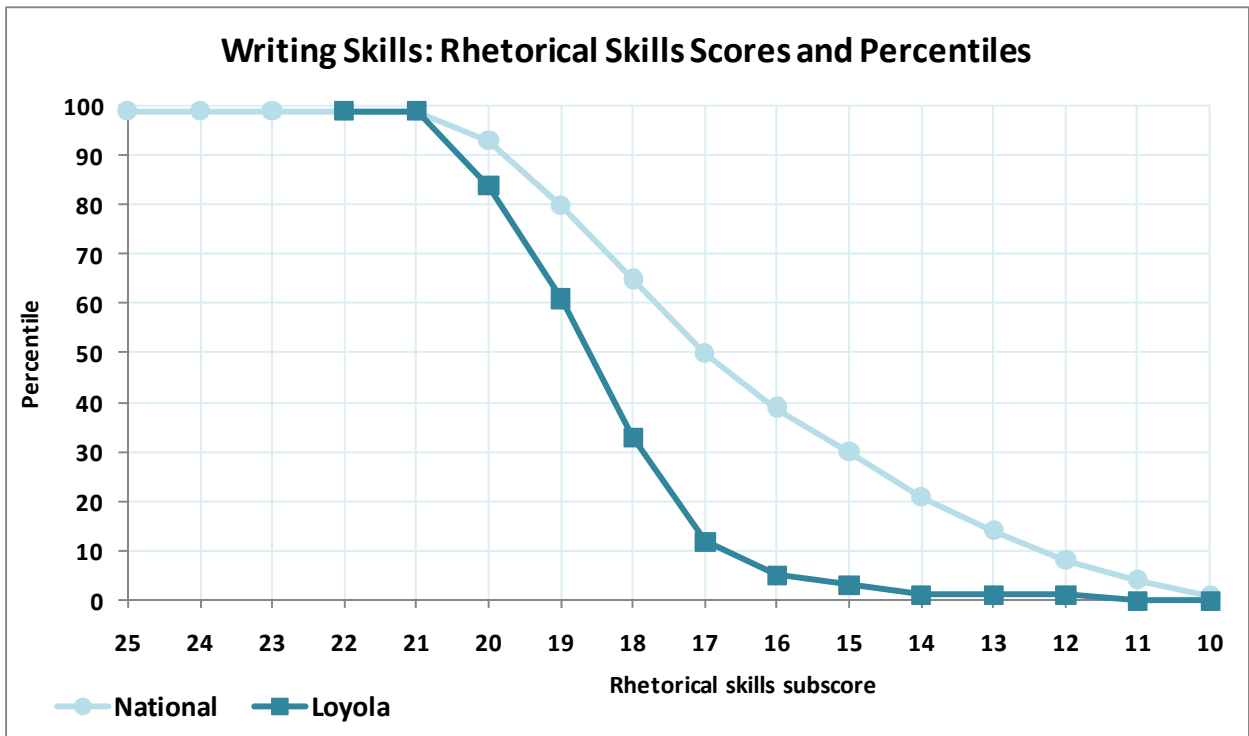
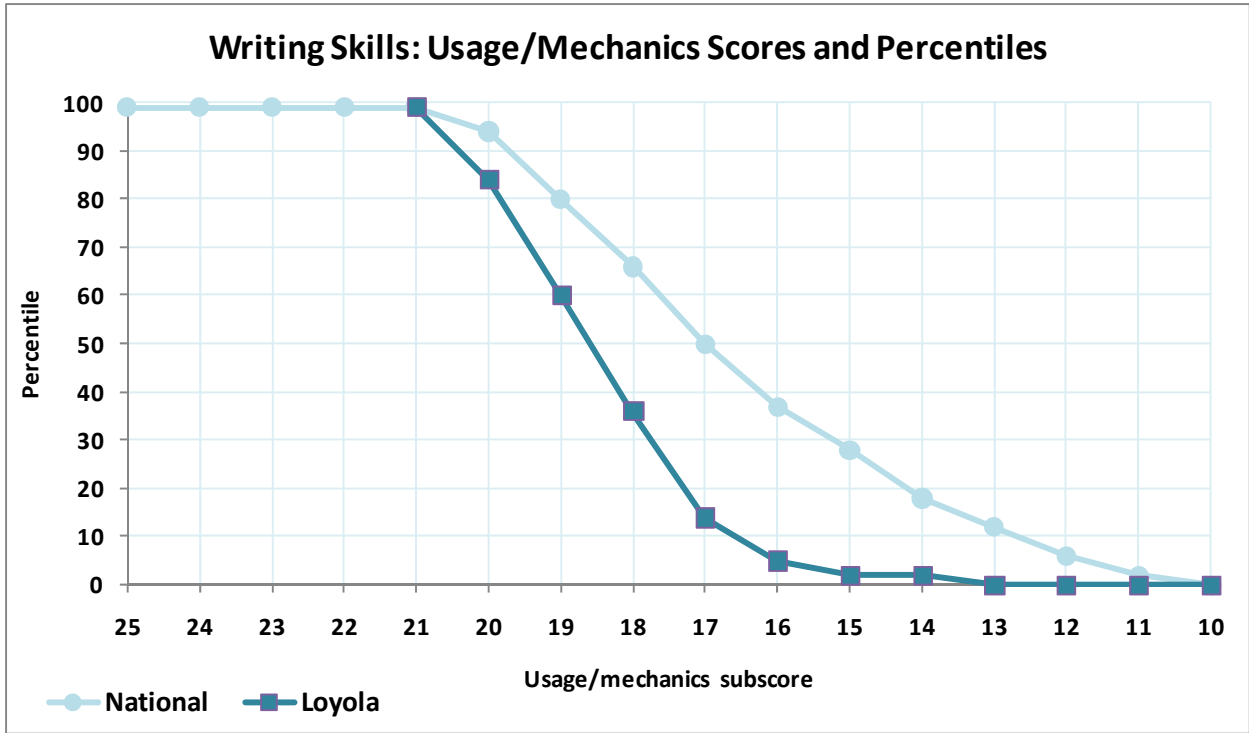
#### **Change from ACT to CAAP**

- Because all Loyola students taking the CAAP had also taken the ACT before entering Loyola, it is possible to compare individual students' scores on the two tests. ACT calculates a measure of "progress" from the ACT to the CAAP, comparing each student's actual progress to the progress that would be expected based on the progress of students in the reference group. Because in this case the reference group is adjusted by entering ACT scores so that it is similar to Loyola in terms of the ACT scores of the entering freshman class, these comparisons more useful. Because there is no ACT equivalent of the Critical Thinking Skills module, however, the only comparison possible is that between the ACT English test and the CAAP Writing Skills module.
  - Most Loyola students (87%) made progress at the expected level, as did those in the standardized reference group (85%) (see Table 2).
  - One percent of Loyola students made more than the expected level of progress and 12% made less progress than would be expected, which was comparable to students at the reference institutions.

## **Implications**

- Comparisons between Loyola and the reference group of institutions on test scores are not as useful as they might be, because the institutions in the reference group are, on average, less selective than is Loyola, and most are different types of institutions.
  - Thus, while Loyola students scored higher, on average, on both the Critical Thinking Skills and the Writing Skills modules, this is what one would expect, given the selectivity of Loyola compared to most of the reference institutions.
  - This is confirmed by the fact that once the reference institutions are standardized so that they are more similar to Loyola in selectivity, levels of progress of Loyola students from the ACT to the CAAP were almost identical to those of students at other institutions.
- The results of these test modules also suggest that while the top 25% of Loyola freshmen in Critical Thinking Skills and Writing Skills tended to have scores similar to those testing high at other institutions, students in the lower 75% of the distribution tended to do better than their counterparts at reference group institutions (especially on Writing Skills).
- Overall, the results of the CAAP suggest little difference between the writing skills and critical thinking skills of Loyola's 2006 entering class of new freshmen and their counterparts at other institutions. Any differences between Loyola and the reference group are probably due to the fact that Loyola is more selective than most of the other institutions.
- While it might seem to be a matter of concern that 12% of Loyola's CAAP takers were classified by ACT as making below expected progress based on a comparison of their ACT college entrance exam score and their CAAP score, this may be due to students taking the CAAP less seriously than the ACT, and therefore giving it less effort.





| <b>Table 1</b>  |            |            |         |
|---|------------|------------|---------|
| <b>Components of Test Modules: Differences Between Loyola and Reference Group</b>       |            |            |         |
| Positive Differences in Percent Correct Between Loyola and Reference Group <sup>1</sup> |            |            |         |
|   | Bottom 25% | Middle 50% | Top 25% |
| Writing Skills content categories   |            |            |         |
| Punctuation   | 30         | 13         | 5       |
| Basic grammar and usage   | 29         | 18         | 7       |
| Sentence structure  | 18         | 9          | 2       |
| Strategy  | 25         | 14         | 7       |
| Organization  | 24         | 15         | 5       |
| Style   | 26         | 11         | 1       |
| Critical Thinking content categories  |            |            |         |
| Analysis of arguments   | 19         | 15         | 3       |
| Evaluation of arguments   | 25         | 18         | 10      |
| Extension of arguments  | 24         | 15         | 3       |

CAAP spring 2007

<sup>1</sup> See appendix for institutions in reference group.

| <b>Table 2</b>   |                     |          |                      |
|--|---------------------|----------|----------------------|
| <b>Expected Progress in Writing Performance from ACT to CAAP</b> |                     |          |                      |
|  | Progress (%)        |          |                      |
|  | Lower than expected | Expected | Higher than expected |
| Loyola   | 12                  | 87       | 1                    |
| Reference group <sup>1</sup>                                     | 13                  | 85       | 2                    |

Source: CAAP spring 2007

<sup>1</sup> See appendix for institutions in reference group.

**CAAP Table 6d  
Four-Year Private College Freshmen  
Institution Names**

ALDERSON BROADDUS COLLEGE  
AIMACOLL  
AMERICAN UNIV OF BEIRUT  
ANTIOCH COLLEGE  
APPALACHIAN BIBLE COLLEGE  
ART CENTER  
ART INSTITUTE OF DALLAS  
AUGUSTANA COLLEGE  
BAKER COLLEGE OF FLINT  
BALDWIN WALLACE COLLEGE  
BAPTIST COLLEGE OF FLORIDA  
BARD COLLEGE  
BELHAVEN COLLEGE  
BEREA COLLEGE  
BETHANY LUTHERAN COLLEGE  
BETHEL UNIVERSITY  
BETHUNE-COOKMAN UNIVERSITY  
BOSTON BAPTIST COLLEGE  
BUTLER UNIVERSITY  
CST BENS ST JOHNS U  
CABARRUS COLLEGE OF HEALTH  
CALVIN COLLEGE  
CARDINAL STRITCH UNIVERSIT  
CENTRAL COLLEGE  
COE COLLEGE  
COLLEGE OF MOUNT SAINT JOS  
COLUMBIA BIBLE COLLEGE  
COLUMBIA COLLEGE  
CONCORDIA COLLEGE  
CONNECTICUT COLLEGE  
CORBAN COLLEGE  
CORNEIL COLLEGE  
CROWN COLLEGE  
CULVER-STOCKTON COLLEGE  
DAR AL-HEKMA COLLEGE  
DAVIS COLLEGE

DOANE COLLEGE  
DOMINICAN COLLEGE  
DORDT COLLEGE  
EAST TEXAS BAPTIST UNIVERS  
EDWARD WATERS COLLEGE  
EUGENE BIBLE COLLEGE  
FAITH BAPTIST BIBLE COLLEGE  
FERRUM COLLEGE  
FINLANDIA UNIVERSITY  
FURMAN UNIVERSITY  
GENEVA COLLEGE  
GRINNEIL COLLEGE  
GROVE CITY COLLEGE  
GUILFORD COLLEGE  
GUSTAVUS ADOLPHUS COLLEGE  
HAMILTON COLLEGE  
HAMPSHIRE COLLEGE  
HOPE COLLEGE  
IOWA WESLEYAN COLLEGE  
JUDSON COLLEGE  
KANSAS WESLEYAN UNIVERSITY  
KENTUCKY WESLEYAN COLLEGE  
KUYPER COLLEGE  
LAKELAND COLLEGE  
IEES-MCRAE COLLEGE  
LIBERTY UNIVERSITY  
LINCOLN MEMORIAL UNIVERSIT  
IOWA COLLEGE  
LOYOLA UNIVERSITY OF CHICA  
IUBBOCK CHRISTIAN UNIVERSI  
MAGNOLIA BIBLE COLLEGE  
MALONE COLLEGE  
MARIAN COLLEGE OF FOND DU  
MENLO COLLEGE  
MERCER UNIVERSITY  
METROPOLITAN COLLEGE OF NY

MID-AMERICA CHRISTIAN UNIV  
MID-CONTINENT UNIVERSITY  
MILLIGAN COLLEGE  
MISSISSIPPI COLLEGE  
MOHAWK COLLEGE  
MONTREAT COLLEGE  
MORRIS COLLEGE  
MOUNT SAINT MARYS COLLEGE  
MOUNTAIN BIBLE COLLEGE  
NORTHWESTERN COLLEGE  
PAINE COLLEGE  
PIEDMONT BAPTIST COLLEGE  
QUINCY UNIVERSITY  
REGIS UNIVERSITY  
ROBERTS WESLEYAN COLLEGE  
SAINT LOUIS UNIV-MAIN CAMP  
SAINT XAVIER UNIVERSITY  
SAVANNAH COLLEGE OF ART AN  
SOUTHEASTERN BIBLE COLLEGE  
ST JOHN VIANNEY SEMINARY  
SULLIVAN UNIVERSITY  
TUSKEGEE UNIVERSITY  
UNION COLLEGE  
UNITY COLLEGE  
UNIV OF MARY HARDIN-BAYLOR  
UNIVERSITY OF DUBUQUE  
UNIVERSITY OF NOTRE DAME  
UNIVERSITY OF SAINT THOMAS  
UNIVERSITY OF ST FRANOS  
WILSON COLLEGE  
WATKINS COLLEGE OF ART & DESI  
WAYLAND BAPTIST UNIV  
WHEATON COLLEGE  
WHITTIER COLLEGE  
YORK COLLEGE

**CAAP User Norms, Fall, 2007**