

# LEARN

Humboldt State  
University

2012-2013 CLA INSTITUTIONAL REPORT

Your 2012-2013 results consist of two components:

- CLA Institutional Report and Appendices
- CLA Student Data File

### Report

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The report introduces readers to the CLA and its methodology (including an enhanced value-added equation), presents your results, and offers guidance on interpretation and next steps.

- 1 Introduction to the CLA (p. 3)
- 2 Methods (p. 4-5)
- 3 Your Results (p. 6-10)
- 4 Results Across CLA Institutions (p. 11-14)
- 5 Sample of CLA Institutions (p. 15-18)
- 6 Moving Forward (p. 19)

### Appendices

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The report appendices offer more detail on CLA tasks, scoring and scaling, value-added equations, and the Student Data File.

- A Task Overview (p. 20-23)
- B Diagnostic Guidance (p. 24)
- C Task Development (p. 25)
- D Scoring Criteria (p. 26-28)
- E Scoring Process (p. 29)
- F Scaling Procedures (p. 30-31)
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- H Percentile Lookup Tables (p. 37-42)
- I Student Data File (p. 43)
- J CAE Board of Trustees and Officers (p. 44)

### Student Data File

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Your Student Data File was distributed separately as a password-protected Excel file. Your Student Data File may be used to link with other data sources and to generate hypotheses for additional research.

## Assessing Higher-Order Skills

The Collegiate Learning Assessment (CLA) is a major initiative of the Council for Aid to Education. The CLA offers a value-added, constructed-response approach to the assessment of higher-order skills, such as critical thinking and written communication. Hundreds of institutions and hundreds of thousands of students have participated in the CLA to date.

The institution—not the student—is the primary unit of analysis. The CLA is designed to measure an institution's contribution, or value added, to the development of higher-order skills. This approach allows an institution to compare its student learning results on the CLA with learning results at similarly selective institutions.

The CLA is intended to assist faculty, school administrators, and others interested in programmatic change to improve teaching and

learning, particularly with respect to strengthening higher-order skills.

Included in the CLA are Performance Tasks and Analytic Writing Tasks. Performance Tasks present realistic problems that require students to analyze complex materials. Several different types of materials are used that vary in credibility, relevance to the task, and other characteristics. Students' written responses to the tasks are graded to assess their abilities to think critically, reason analytically, solve problems, and write clearly and persuasively.

The CLA helps campuses follow a continuous improvement model that positions faculty as central actors in the link between assessment and the teaching and learning process.

The continuous improvement model requires multiple indicators beyond the CLA because no single test can serve as

the benchmark for all student learning in higher education. There are, however, certain skills deemed to be important by most faculty and administrators across virtually all institutions; indeed, the higher-order skills the CLA focuses on fall into this category.

The signaling quality of the CLA is important because institutions need to have a frame of reference for where they stand and how much progress their students have made relative to the progress of students at other colleges. Yet, the CLA is not about ranking institutions. Rather, it is about highlighting differences between them that can lead to improvements. The CLA is an instrument designed to contribute directly to the improvement of teaching and learning. In this respect it is in a league of its own.

## CLA Methodology

The CLA uses constructed-response tasks and value-added methodology to evaluate your students' performance reflecting the following higher-order skills: Analytic Reasoning and Evaluation, Writing Effectiveness, Writing Mechanics, and Problem Solving.

Schools test a sample of entering students (freshmen) in the fall and exiting students (seniors) in the spring. Students take one Performance Task or a combination of one Make-an-Argument prompt and one Critique-an-Argument prompt.

The interim results that your institution received after the fall testing window reflected the performance of your entering students.

Your institution's interim institutional report presented information on each

of the CLA task types, including means (averages), standard deviations (a measure of the spread of scores in the sample), and percentile ranks (the percentage of schools that had lower performance than yours). Also included was distributional information for each of the CLA subscores: Analytic Reasoning and Evaluation, Writing Effectiveness, Writing Mechanics, and Problem Solving.

This report is based on the performance of both your entering and exiting students.\* Value-added modeling is often viewed as an equitable way of estimating an institution's contribution to learning. Simply comparing average achievement of all schools tends to paint selective institutions in a favorable light and discount the educational efficacy of schools admitting students from weaker academic backgrounds. Value-added modeling addresses this issue by

providing scores that can be interpreted as relative to institutions testing students of similar entering academic ability. This allows all schools, not just selective ones, to demonstrate their relative educational efficacy.

The CLA value-added estimation approach employs a statistical technique known as hierarchical linear modeling (HLM).\*\* Under this methodology, a school's value-added score indicates the degree to which the observed senior mean CLA score meets, exceeds, or falls below expectations established by (1) seniors' Entering Academic Ability (EAA) scores\*\*\* and (2) the mean CLA performance of freshmen at that school, which serves as a control for selection effects not covered by EAA. Only students with EAA scores are included in institutional analyses.

\* Note that the methods employed by the Community College Learning Assessment (CCLA) differ from those presented here. A description of those methods is available upon request.

\*\* A description of the differences between the original OLS model and the enhanced HLM model is available in the Frequently Asked Technical Questions document distributed with this report.

\*\*\* SAT Math + Critical Reading, ACT Composite, or Scholastic Level Exam (SLE) scores on the SAT scale. Hereinafter referred to as Entering Academic Ability (EAA).

When the average performance of seniors at a school is substantially better than expected, this school is said to have high “value added.” To illustrate, consider several schools admitting students with similar average performance on general academic ability tests (e.g., the SAT or ACT) and on tests of higher-order skills (e.g., the CLA). If, after four years of college education, the seniors at one school perform better on the CLA than is typical for schools admitting similar students, one can infer that greater gains in critical thinking and writing skills occurred at the highest performing school. Note that a low (negative) value-added score does not necessarily indicate that no gain occurred between freshman and senior year; however, it

does suggest that the gain was lower than would typically be observed at schools testing students of similar entering academic ability.

Value-added scores are placed on a standardized ( $z$ -score) scale and assigned performance levels. Schools that fall between -1.00 and +1.00 are classified as “near expected,” between +1.00 and +2.00 are “above expected,” between -1.00 and -2.00 are “below expected,” above +2.00 are “well above expected,” and below -2.00 are “well below expected.” Value-added estimates are also accompanied by confidence intervals, which provide information on the precision of the estimates; narrow confidence intervals indicate that the

estimate is more precise, while wider intervals indicate less precision.

Our analyses include results from all CLA institutions, regardless of sample size and sampling strategy. Therefore, we encourage you to apply due caution when interpreting your results if you tested a very small sample of students or believe that the students in your institution’s sample are not representative of the larger student body.

Moving forward, we will continue to employ methodological advances to maximize the precision of our value-added estimates. We will also continue developing ways to augment the value of CLA results for the improvement of teaching and learning.

## 3.1

## Value-Added and Precision Estimates

|                       | Performance Level | Value-Added Score | Value-Added Percentile Rank | Confidence Interval Lower Bound | Confidence Interval Upper Bound | Expected Mean CLA Score |
|-----------------------|-------------------|-------------------|-----------------------------|---------------------------------|---------------------------------|-------------------------|
| Total CLA Score       | Above             | 1.34              | 93                          | 0.56                            | 2.12                            | 1157                    |
| Performance Task      | Above             | 1.73              | 96                          | 0.88                            | 2.58                            | 1153                    |
| Analytic Writing Task | Near              | 0.50              | 71                          | -0.43                           | 1.43                            | 1162                    |
| Make-an-Argument      | Above             | 1.04              | 87                          | -0.01                           | 2.09                            | 1153                    |
| Critique-an-Argument  | Near              | 0.06              | 53                          | -0.83                           | 0.95                            | 1165                    |

## 3.2

## Seniors: Unadjusted Performance

|                       | Number of Seniors | Mean Score | Mean Score Percentile Rank | 25th Percentile Score | 75th Percentile Score | Standard Deviation |
|-----------------------|-------------------|------------|----------------------------|-----------------------|-----------------------|--------------------|
| Total CLA Score       | 34                | 1227       | 78                         | 1129                  | 1346                  | 138                |
| Performance Task      | 17                | 1266       | 88                         | 1192                  | 1349                  | 135                |
| Analytic Writing Task | 17                | 1187       | 64                         | 1104                  | 1278                  | 132                |
| Make-an-Argument      | 17                | 1205       | 78                         | 1094                  | 1291                  | 143                |
| Critique-an-Argument  | 17                | 1169       | 46                         | 1041                  | 1273                  | 155                |
| EAA                   | 34                | 1068       | 55                         | 964                   | 1220                  | 158                |

## 3.3

## Freshmen: Unadjusted Performance

|                       | Number of Freshmen | Mean Score | Mean Score Percentile Rank | 25th Percentile Score | 75th Percentile Score | Standard Deviation |
|-----------------------|--------------------|------------|----------------------------|-----------------------|-----------------------|--------------------|
| Total CLA Score       | 70                 | 1031       | 39                         | 925                   | 1157                  | 158                |
| Performance Task      | 39                 | 1030       | 40                         | 888                   | 1176                  | 179                |
| Analytic Writing Task | 31                 | 1031       | 39                         | 946                   | 1134                  | 129                |
| Make-an-Argument      | 34                 | 1059       | 47                         | 961                   | 1181                  | 154                |
| Critique-an-Argument  | 33                 | 997        | 29                         | 888                   | 1144                  | 159                |
| EAA                   | 75                 | 1010       | 42                         | 900                   | 1140                  | 172                |

## 3.4 Student Sample Summary

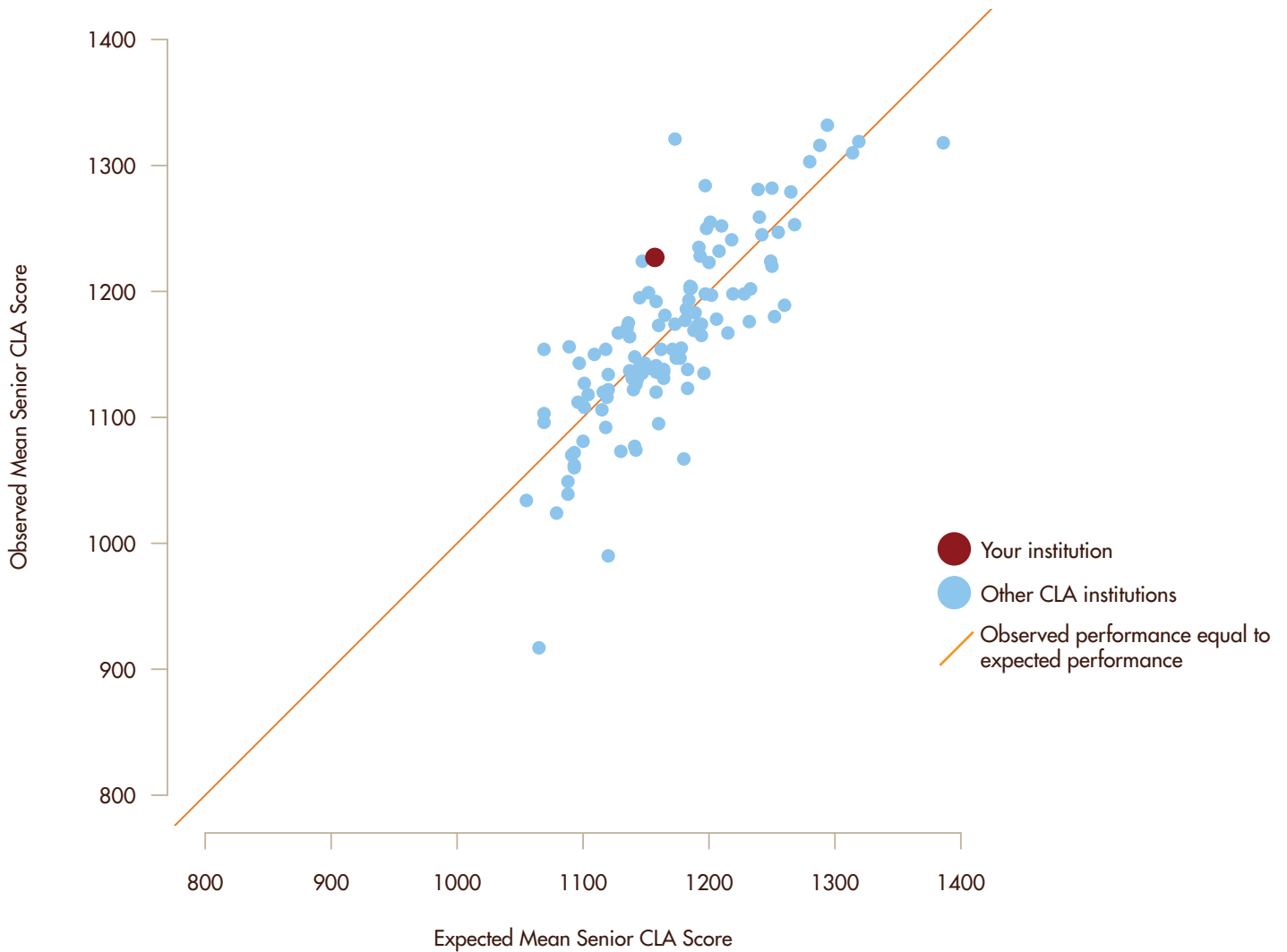
|                                 | Number of Freshmen | Freshman Percentage | Average Freshman Percentage Across Schools | Number of Seniors | Senior Percentage | Average Senior Percentage Across Schools |
|---------------------------------|--------------------|---------------------|--|-------------------|-------------------|--|
| <b>Transfer</b>                 |                    |                     |  |                   |                   |  |
| Transfer Students               |                    |                     |  | 17                | 50                | 17                                       |
| Non-Transfer Students           |                    |                     |  | 17                | 50                | 83                                       |
| <b>Gender</b>                   |                    |                     |  |                   |                   |  |
| Male                            | 28                 | 40                  | 38   | 25                | 74                | 39                                       |
| Female                          | 42                 | 60                  | 61   | 8                 | 24                | 61                                       |
| Decline to State                | 0                  | 0                   | 0  | 1                 | 3                 | 1  |
| <b>Primary Language</b>         |                    |                     |  |                   |                   |  |
| English Primary Language        | 54                 | 77                  | 84   | 32                | 94                | 86                                       |
| Other Primary Language          | 16                 | 23                  | 16   | 2                 | 6                 | 14                                       |
| <b>Field of Study</b>           |                    |                     |  |                   |                   |  |
| Sciences and Engineering        | 26                 | 37                  | 24   | 18                | 53                | 22                                       |
| Social Sciences                 | 9                  | 13                  | 12   | 16                | 47                | 18                                       |
| Humanities and Languages        | 7                  | 10                  | 10   | 0                 | 0                 | 16                                       |
| Business                        | 5                  | 7                   | 11   | 0                 | 0                 | 16                                       |
| Helping / Services              | 6                  | 9                   | 25   | 0                 | 0                 | 22                                       |
| Undecided / Other / N/A         | 17                 | 24                  | 18   | 0                 | 0                 | 6  |
| <b>Race / Ethnicity</b>         |                    |                     |  |                   |                   |  |
| American Indian / Alaska Native | 1                  | 1                   | 1  | 0                 | 0                 | 0  |
| Asian / Pacific Islander        | 4                  | 6                   | 9  | 2                 | 6                 | 8  |
| Black, Non-Hispanic             | 3                  | 4                   | 11   | 1                 | 3                 | 10                                       |
| Hispanic                        | 25                 | 36                  | 16   | 3                 | 9                 | 14                                       |
| White, Non-Hispanic             | 30                 | 43                  | 55   | 22                | 65                | 60                                       |
| Other                           | 3                  | 4                   | 4  | 2                 | 6                 | 4  |
| Decline to State                | 4                  | 6                   | 4  | 4                 | 12                | 3  |
| <b>Parent Education</b>         |                    |                     |  |                   |                   |  |
| Less than High School           | 7                  | 10                  | 6  | 0                 | 0                 | 5  |
| High School                     | 20                 | 29                  | 23   | 3                 | 9                 | 16                                       |
| Some College                    | 14                 | 20                  | 23   | 10                | 29                | 27                                       |
| Bachelor's Degree               | 13                 | 19                  | 27   | 11                | 32                | 29                                       |
| Graduate or Professional Degree | 16                 | 23                  | 21   | 10                | 29                | 23                                       |

Performance Compared to Other Institutions

Figure 3.5 shows the performance of all four-year colleges and universities,\* relative to their expected performance as predicted by the value-added model. The vertical distance from the diagonal line indicates the value added by the institution; institutions falling above the diagonal line are those that add more value than expected based on the model. Your institution is highlighted in red. See Appendix G for details on how the Total CLA Score value-added estimates displayed in this figure were computed.

3.5

Observed CLA Scores vs. Expected CLA Scores



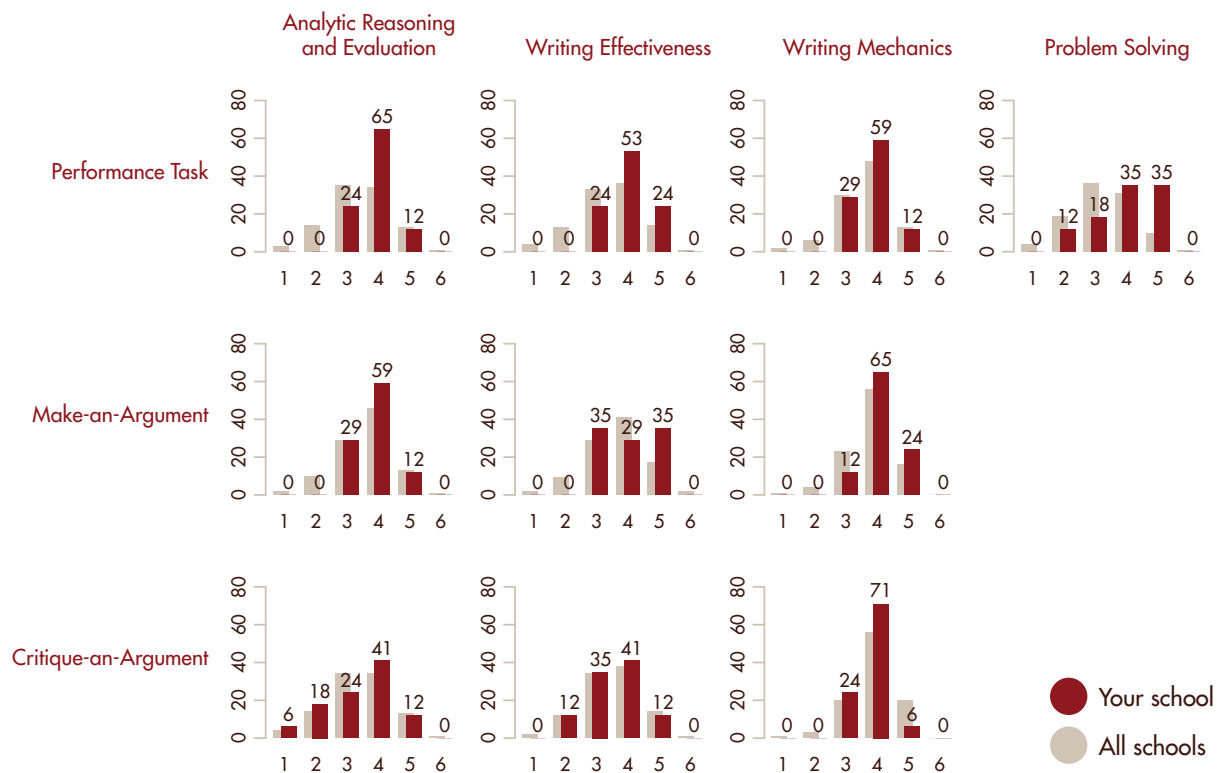
\* Due to the low statistical reliability of small sample sizes, schools that tested fewer than 50 students are not included in Figure 3.5.



## Subscore Distributions

Figures 3.6 and 3.8 display the distribution of your students' performance in the subscore categories of Analytic Reasoning and Evaluation, Writing Effectiveness, Writing Mechanics, and Problem Solving. The numbers on the graph correspond to the percentage of *your* students that performed at each score level. The distribution of subscores across *all* schools is presented for comparative purposes. The score levels range from 1 to 6. Note that the graphs presented are not directly comparable due to potential differences in difficulty among task types and among subscore categories. See *Diagnostic Guidance* and *Scoring Criteria* for more details on the interpretation of subscore distributions. Tables 3.7 and 3.9 present the mean and standard deviation of each of the subscores across CLA task types—for your school and all schools.

## 3.6 Seniors: Distribution of Subscores

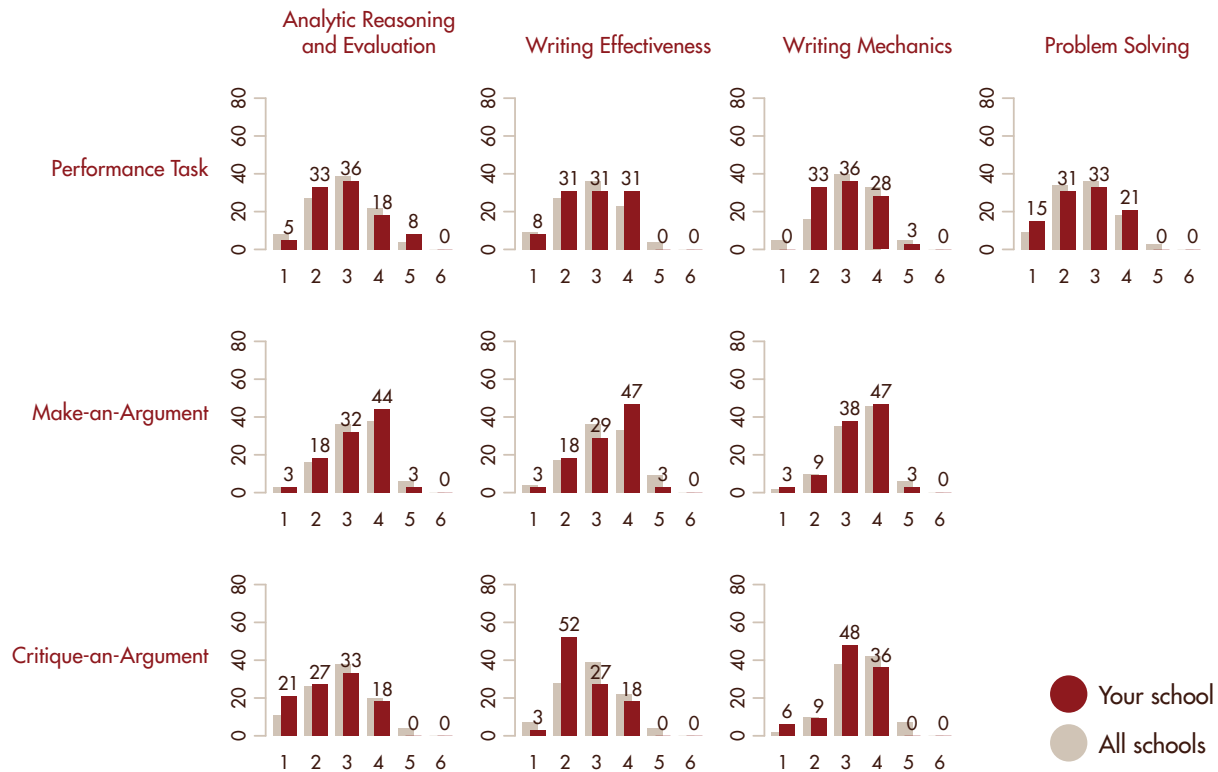


## 3.7 Seniors: Summary Subscore Statistics

|                      |                    | Analytic Reasoning and Evaluation |             | Writing Effectiveness |             | Writing Mechanics |             | Problem Solving |             |
|----------------------|--------------------|-----------------------------------|-------------|-----------------------|-------------|-------------------|-------------|-----------------|-------------|
|                      |                    | Your School                       | All Schools | Your School           | All Schools | Your School       | All Schools | Your School     | All Schools |
| Performance Task     | Mean               | 3.9                               | 3.4         | 4.0                   | 3.5         | 3.8               | 3.7         | 3.9             | 3.3         |
|                      | Standard Deviation | 0.6                               | 0.9         | 0.7                   | 0.9         | 0.6               | 0.8         | 1.0             | 0.9         |
| Make-an-Argument     | Mean               | 3.8                               | 3.6         | 4.0                   | 3.7         | 4.1               | 3.8         |                 |             |
|                      | Standard Deviation | 0.6                               | 0.8         | 0.9                   | 0.9         | 0.6               | 0.7         |                 |             |
| Critique-an-Argument | Mean               | 3.4                               | 3.4         | 3.5                   | 3.5         | 3.8               | 3.9         |                 |             |
|                      | Standard Deviation | 1.1                               | 0.9         | 0.9                   | 0.9         | 0.5               | 0.7         |                 |             |

## 3.8

## Freshmen: Distribution of Subscores



## 3.9

## Freshmen: Summary Subscore Statistics

|                      |                    | Analytic Reasoning and Evaluation |             | Writing Effectiveness |             | Writing Mechanics |             | Problem Solving |             |
|----------------------|--------------------|-----------------------------------|-------------|-----------------------|-------------|-------------------|-------------|-----------------|-------------|
|                      |                    | Your School                       | All Schools | Your School           | All Schools | Your School       | All Schools | Your School     | All Schools |
| Performance Task     | Mean               | 2.9                               | 2.9         | 2.8                   | 2.9         | 3.0               | 3.2         | 2.6             | 2.7         |
|                      | Standard Deviation | 1.0                               | 0.9         | 1.0                   | 0.9         | 0.9               | 0.9         | 1.0             | 0.8         |
| Make-an-Argument     | Mean               | 3.3                               | 3.3         | 3.3                   | 3.3         | 3.4               | 3.4         |                 |             |
|                      | Standard Deviation | 0.9                               | 0.8         | 0.9                   | 0.9         | 0.8               | 0.8         |                 |             |
| Critique-an-Argument | Mean               | 2.5                               | 2.8         | 2.6                   | 2.9         | 3.2               | 3.4         |                 |             |
|                      | Standard Deviation | 1.0                               | 0.9         | 0.8                   | 0.9         | 0.8               | 0.8         |                 |             |

### Performance Distributions

Tables 4.1 and 4.2 show the distribution of performance on the CLA across participating institutions. Note that the unit of analysis in both tables is schools, not students.

Figure 4.3, on the following page, shows various comparisons of different groups of institutions. Depending on which factors you consider to define your institution's peers, these comparisons may show you how your institution's value added compares to those of institutions similar to yours.

#### 4.1 Seniors

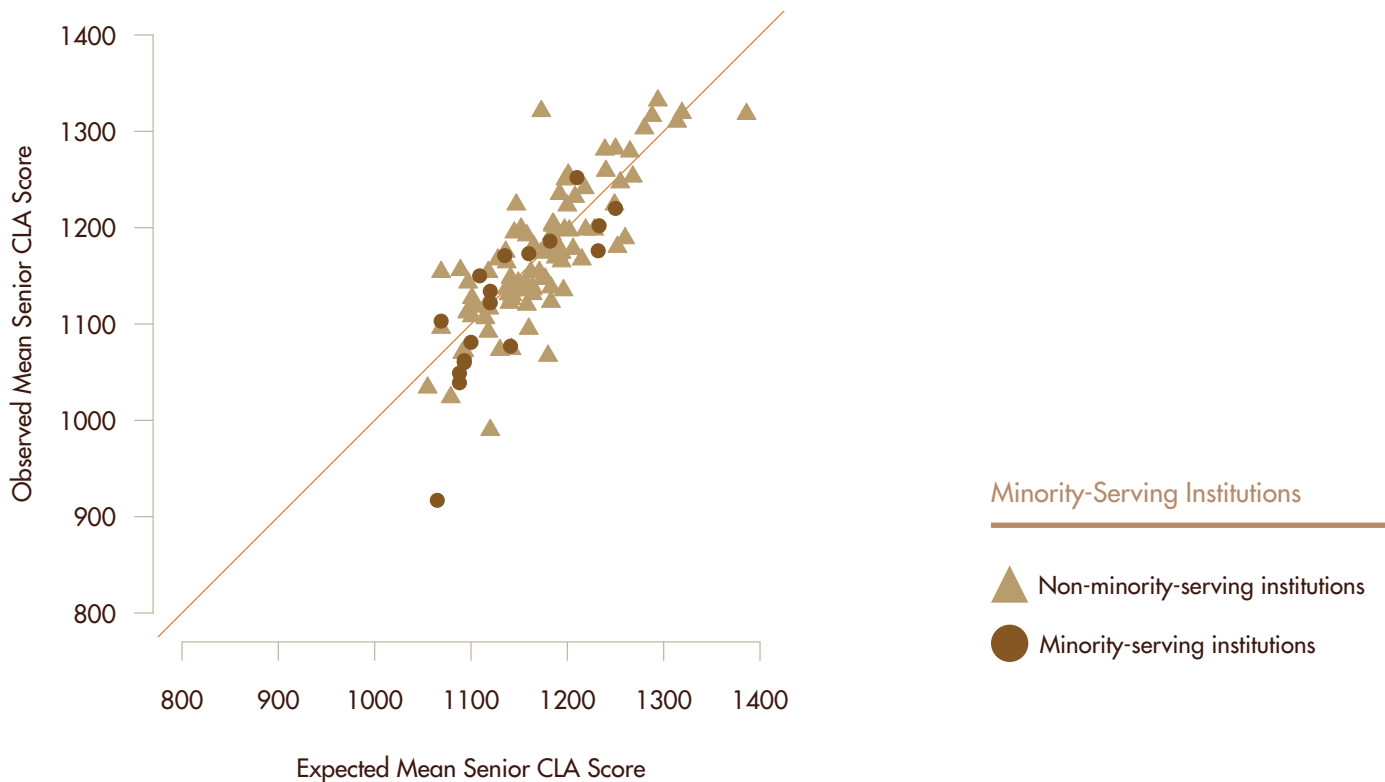
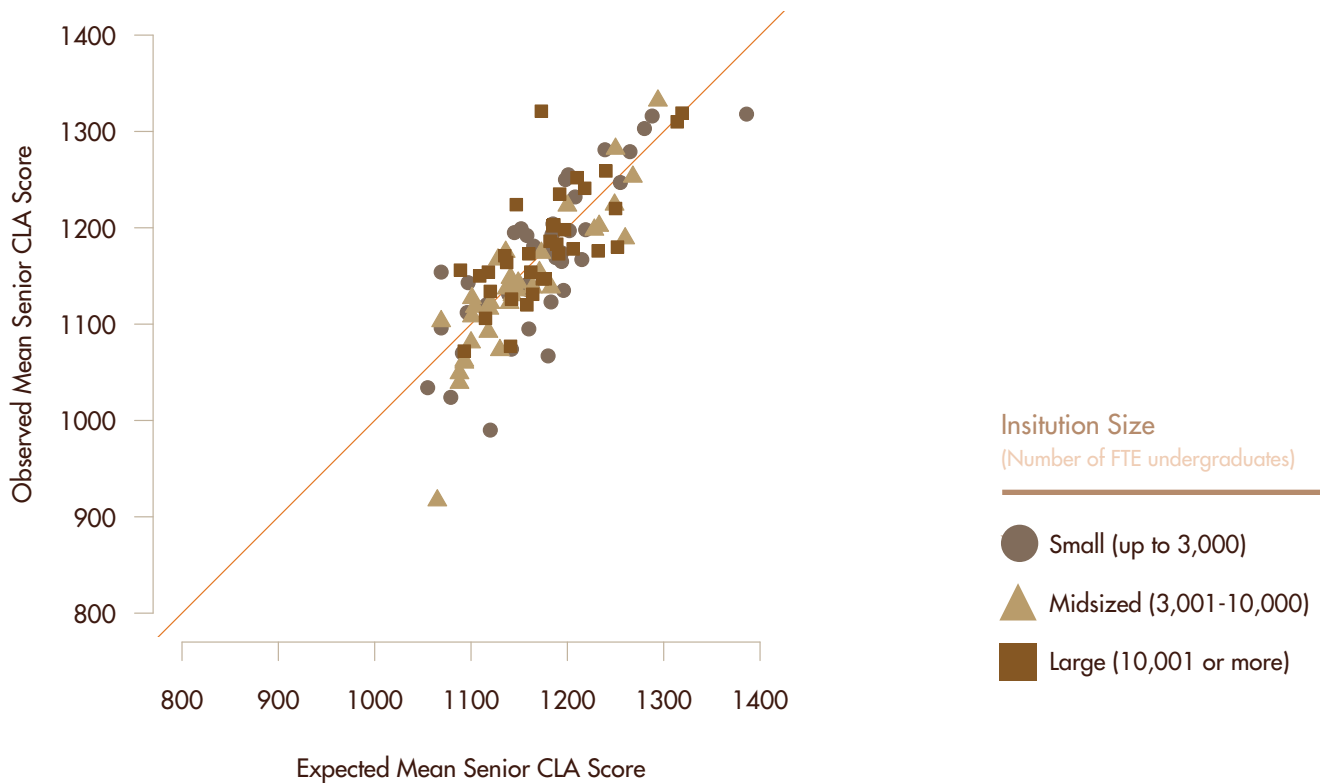
|                       | Number of Schools* | Mean Score | 25th Percentile Score | 75th Percentile Score | Standard Deviation |
|-----------------------|--------------------|------------|-----------------------|-----------------------|--------------------|
| Total CLA Score       | 155                | 1162       | 1122                  | 1220                  | 81                 |
| Performance Task      | 154                | 1162       | 1118                  | 1222                  | 91                 |
| Analytic Writing Task | 154                | 1163       | 1119                  | 1210                  | 79                 |
| Make-an-Argument      | 154                | 1144       | 1094                  | 1195                  | 80                 |
| Critique-an-Argument  | 154                | 1178       | 1130                  | 1231                  | 85                 |
| EAA                   | 155                | 1062       | 993                   | 1127                  | 105                |

#### 4.2 Freshmen

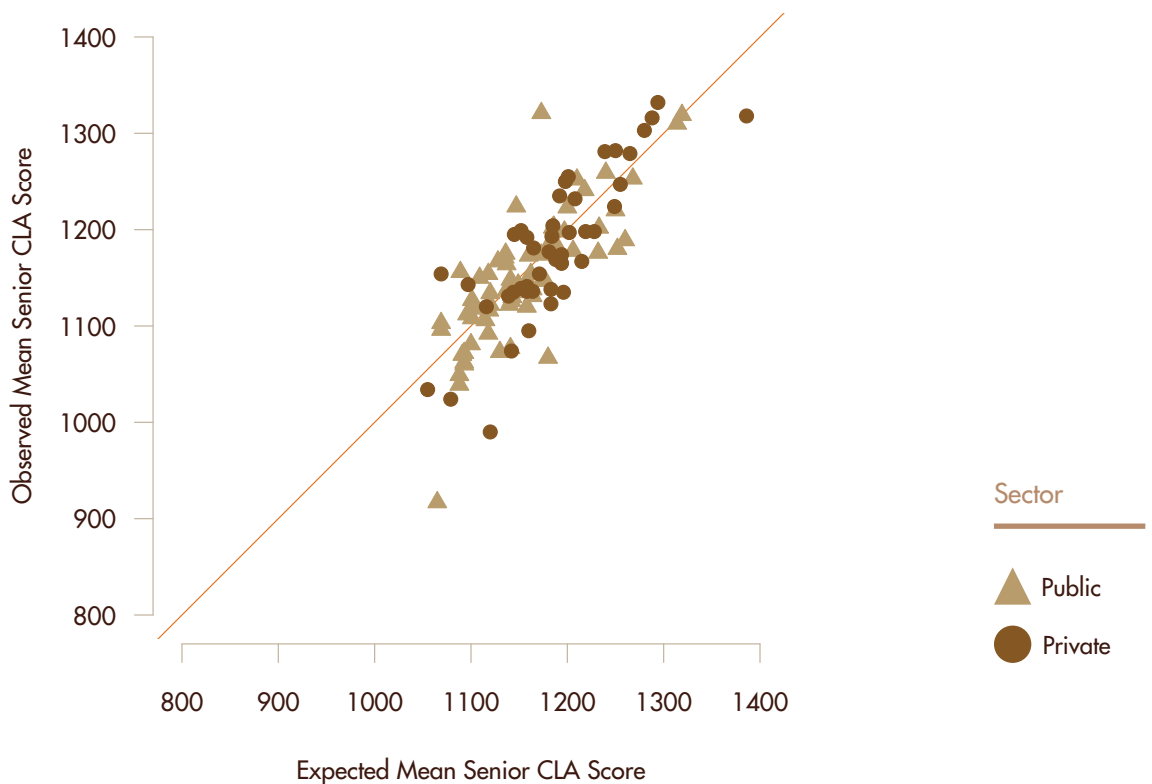
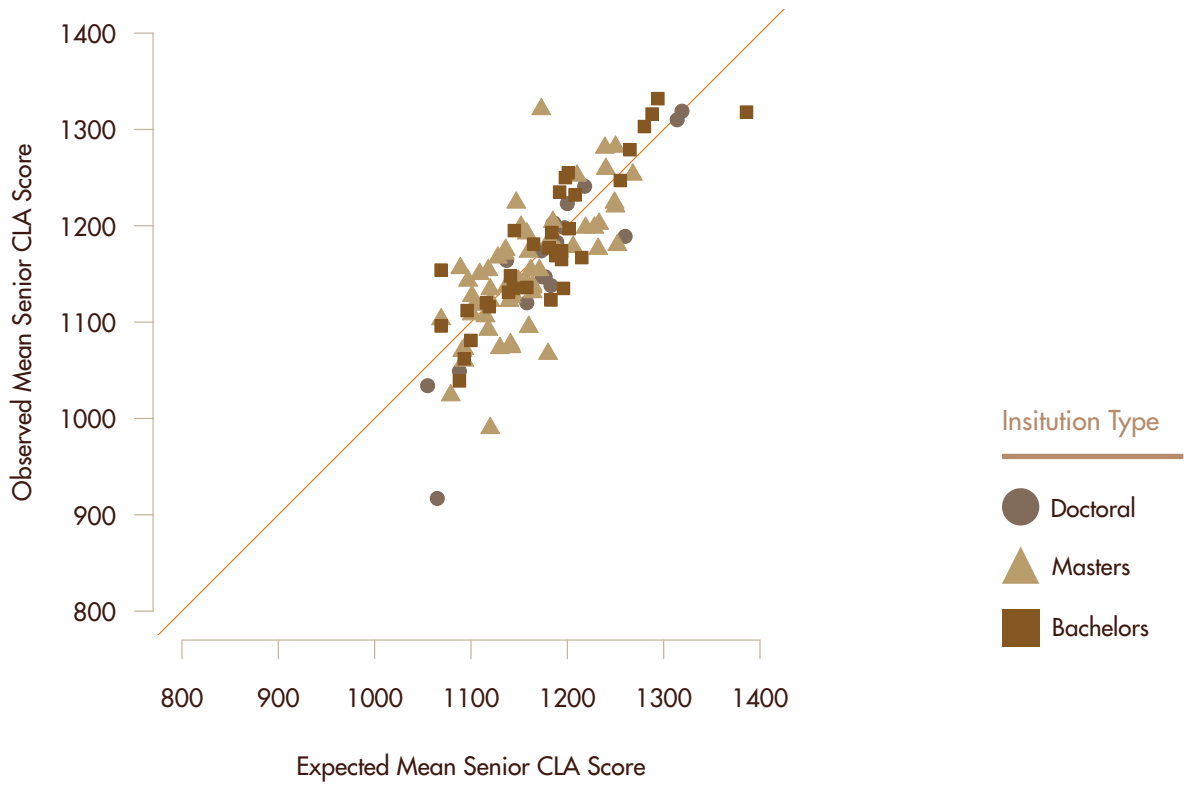
|                       | Number of Schools* | Mean Score | 25th Percentile Score | 75th Percentile Score | Standard Deviation |
|-----------------------|--------------------|------------|-----------------------|-----------------------|--------------------|
| Total CLA Score       | 161                | 1055       | 989                   | 1115                  | 89                 |
| Performance Task      | 161                | 1050       | 991                   | 1113                  | 97                 |
| Analytic Writing Task | 161                | 1060       | 997                   | 1117                  | 86                 |
| Make-an-Argument      | 161                | 1059       | 1006                  | 1114                  | 88                 |
| Critique-an-Argument  | 161                | 1056       | 988                   | 1112                  | 89                 |
| EAA                   | 161                | 1039       | 964                   | 1112                  | 112                |

\* 152 institutions tested both freshmen and seniors.

4.3 Peer Group Comparisons



Peer Group Comparisons (continued)



### Sample Representativeness

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CLA-participating students appeared to be generally representative of their classmates with respect to entering ability levels as measured by Entering Academic Ability (EAA) scores.

Specifically, across institutions, the average EAA score of CLA seniors (as verified by the registrar) was only 16 points higher than that of the entire senior class\*: 1067 versus 1051 ( $n = 132$  institutions). Further, the correlation between the average EAA score of CLA seniors and their classmates was high ( $r = 0.94$ ,  $n = 132$  institutions).

The pattern for freshmen was similar. The average EAA score of CLA freshmen was only 2 points higher than that of the entire freshman class (1048 versus 1046, over  $n = 131$  institutions), and the correlation between the average EAA score of CLA freshmen and their classmates was similarly high ( $r = 0.94$ ,  $n = 131$  institutions).

These data suggest that as a group, CLA participants were similar to all students at participating schools. This correspondence increases confidence in the inferences that can be made from the results with the samples of students that were tested at a school to all the students at that institution.

\* As reported by school registrars.

Carnegie Classification

Table 5.1 shows CLA schools grouped by Basic Carnegie Classification. The spread of schools corresponds fairly well with that of the 1,587 four-year, not-for-profit institutions across the nation.

Table 5.1 counts exclude some institutions that do not fall into these categories, such as Special Focus Institutions and institutions based outside of the United States.

5.1 Carnegie Classification of Institutional Sample

| Carnegie Classification            | Nation (n = 1,587) |            | CLA (n = 146) |            |
|------------------------------------|--------------------|------------|---------------|------------|
|                                    | Number             | Percentage | Number        | Percentage |
| Doctorate-granting Universities    | 275                | 17         | 21            | 14         |
| Master's Colleges and Universities | 619                | 39         | 76            | 52         |
| Baccalaureate Colleges             | 693                | 44         | 48            | 33         |

Source: Carnegie Foundation for the Advancement of Teaching, *Carnegie Classifications Data File, February 11, 2010.*

### School Characteristics

Table 5.2 provides statistics on some important characteristics of colleges and universities across the nation compared with CLA schools. These statistics suggest that CLA schools are fairly representative of four-year, not-for-profit institutions nationally. Percentage public and undergraduate student body size are exceptions.

### 5.2 School Characteristics of Institutional Sample

| School Characteristic                                       | Nation   | CLA      |
|---|----------|----------|
| Percentage public   | 32       | 56       |
| Percentage Historically Black College or University (HBCU)  | 5        | 4        |
| Mean percentage of undergraduates receiving Pell grants     | 31       | 30       |
| Mean six-year graduation rate                               | 51       | 51       |
| Mean Barron's selectivity rating                            | 3.6      | 3.1      |
| Mean estimated median SAT score                             | 1058     | 1035     |
| Mean number of FTE undergraduate students (rounded)         | 3,869    | 6,844    |
| Mean student-related expenditures per FTE student (rounded) | \$12,330 | \$10,849 |

*Source: College Results Online dataset, managed by and obtained with permission from the Education Trust, covers most 4-year Title IV-eligible higher-education institutions in the United States. Data were constructed from IPEDS and other sources. Because all schools did not report on every measure in the table, the averages and percentages may be based on slightly different denominators.*



The institutions listed here in alphabetical order agreed to be identified as participating schools and may or may not have been included in comparative analyses.

### CLA Schools

|  |   |  |
|--|---|--|
| Alaska Pacific University                                | CUNY - Brooklyn College                               | Ouachita Baptist University                                    |
| Albion College   | CUNY - College of Staten Island                       | Our Lady of the Lake University                                |
| Amherst College  | CUNY - Hunter College                                 | Pacific Lutheran University                                    |
| Ashland University                                       | CUNY - John Jay College of Criminal Justice           | Pittsburg State University                                     |
| Auburn University  | CUNY - Lehman College                                 | Presbyterian College   |
| Augsburg College   | CUNY - New York City College of Technology            | Quest University   |
| Augustana College (SD)                                   | CUNY - Queens College                                 | Randolph-Macon College   |
| Barton College   | CUNY - The City College of New York                   | Robert Morris University                                       |
| Bellarmino University                                    | CUNY - York College                                   | Rockford College   |
| Beloit College   | Dillard University                                    | Saginaw Valley State University                                |
| Bluefield State College                                  | Eckerd College  | Saint Anselm College   |
| Bowling Green State University                           | Emory & Henry College                                 | Saint Xavier University  |
| Bradley University                                       | Emporia State University                              | San Diego State University                                     |
| Brigham Young University - Idaho                         | Fairmont State University                             | San Francisco State University                                 |
| Buena Vista University                                   | Fayetteville State University                         | San Jose State University                                      |
| Buffalo State College - SUNY                             | Flagler College                                       | Seton Hill University  |
| California Maritime Academy                              | Florida International University Honors College       | Shepherd University  |
| California State Polytechnic University, Pomona          | Florida State University                              | Slippery Rock University                                       |
| California State Polytechnic University, San Luis Obispo | Fort Hays State University                            | Sonoma State University  |
| California State University System                       | Gordon College  | Southern Oregon University                                     |
| California State University, Bakersfield                 | Grand Canyon University                               | Southwestern University  |
| California State University, Channel Islands             | Hardin-Simmons University                             | St. Olaf College   |
| California State University, Chico                       | Hastings College                                      | Sul Ross State University                                      |
| California State University, Dominguez Hills             | Humboldt State University                             | SUNY College of Technology at Canton                           |
| California State University, East Bay                    | Illinois College                                      | Texas A&M University-Kingsville                                |
| California State University, Fresno                      | Indiana University of Pennsylvania                    | Texas State University-San Marcos                              |
| California State University, Fullerton                   | Indiana Wesleyan University, Department of Psychology | The Citadel  |
| California State University, Long Beach                  | Jacksonville State University                         | The College of Idaho   |
| California State University, Los Angeles                 | Jamestown College                                     | The College of St. Scholastica                                 |
| California State University, Monterey Bay                | Johnson & Wales University                            | The Richard Stockton College of New Jersey                     |
| California State University, Northridge                  | Kalamazoo College                                     | The Sage Colleges  |
| California State University, Sacramento                  | Kent State University                                 | The University of Toledo                                       |
| California State University, San Bernardino              | King's College  | Transylvania University  |
| California State University, San Marcos                  | LaGrange College                                      | Truman State University  |
| California State University, Stanislaus                  | Lewis University                                      | University of Bridgeport                                       |
| Centenary College  | Loyola University New Orleans                         | University of Evansville                                       |
| Centenary College of Louisiana                           | Luther College  | University of Great Falls                                      |
| Central Michigan University                              | Lynchburg College                                     | University of Hartford   |
| Chatham University                                       | Lynn University                                       | University of Hawaii at Hilo College of Business and Economics |
| City University of New York, 4-Year Colleges             | Macalester College                                    | University of Houston-Downtown                                 |
| Clarke University  | Marshall University                                   | University of Missouri-St. Louis                               |
| College of Saint Benedict and Saint John's University    | McMurry University                                    | University of Ottawa   |
| Colorado Mountain College, Bachelors Program             | Mercer University                                     | University of Pittsburgh                                       |
| Colorado State University                                | Morgan State University                               | University of Saint Mary                                       |
| Concord University                                       | Nevada State College                                  | University of St. Thomas (TX)                                  |
| CUNY - Baruch College                                    | New York University, Abu Dhabi                        | University of Texas - Pan American                             |
|  | Newman University                                     | University of Texas at Arlington                               |
|  | Northern Illinois University                          | University of Texas at Austin                                  |
|  | Nyack College   | University of Texas at Dallas                                  |

University of Texas at El Paso  
 University of Texas at San Antonio  
 University of Texas at Tyler  
 University of Texas of the Permian Basin  
 University of Texas System  
 University of the Ryukyus, Department of  
 Languages and Cultures  
 University of the Virgin Islands  
 University of Vermont  
 University of Windsor, Faculties of Nursing, Arts  
 & Social Science, and Engineering  
 Weber State University  
 West Liberty University  
 West Virginia State Colleges and Universities  
 West Virginia University  
 Western Governors University  
 Western Washington University  
 Westminster College (MO)  
 Westminster College (UT)  
 Wichita State University  
 Wichita State University (School of Engineering)  
 William Peace University  
 Winston-Salem State University  
 Wisconsin Lutheran College  
 Wyoming Catholic College

### CWRA Schools

Akins High School  
 Albemarle High School  
 Anson New Tech High School  
 Asheville School  
 Barrie School  
 Bayside High School  
 Bosque School  
 Brimmer and May School  
 Brooks School  
 Catalina Foothills High School  
 Collegiate School  
 Colorado Academy  
 Colorado Rocky Mountain School  
 Crystal Springs Uplands School  
 Culver Academies  
 Currey Ingram Academy  
 Da Vinci Charter Academy  
 Eagle Rock School  
 First Colonial High School  
 Floyd Kellam High School  
 Fountain Valley School of Colorado  
 Frank W. Cox High School  
 Friends School of Baltimore  
 Gilmour Academy

Graettinger-Terrill High School  
 Green Run High School  
 Greensboro Day School  
 Hebron Academy  
 Heritage Hall  
 Hillside New Tech High School  
 Illinois Mathematics and Science Academy  
 Jefferson Forest High School  
 Kempsville High School  
 Kimball Union Academy  
 Lake Forest Academy  
 Lake Highland Preparatory School  
 Landstown High School  
 Le Jardin Academy  
 Los Angeles School of Global Studies  
 Maryknoll School  
 Math, Engineering, Technology, and Science  
 Academy  
 McKinley Academy  
 Mead High School  
 Mead School District  
 Metairie Park Country Day School  
 Mid-Pacific Institute  
 Monticello High School  
 Moorestown Friends School  
 Moses Brown School  
 Mount Vernon Presbyterian School  
 Mt. Spokane High School  
 Murray High School  
 Nanakuli High and Intermediate School  
 Napa New Tech High School  
 National Association of Independent Schools  
 New Tech Network  
 Newell-Fonda High School  
 Ocean Lakes High School  
 Palisades High School  
 Prairie Lakes Area Education Agency  
 Princess Anne High School  
 Ramsey High School  
 Reading Memorial High School  
 Regional School Unit 13  
 Renaissance Academy  
 Riverdale Country School  
 Sacramento New Tech High School  
 Sacred Hearts Academy  
 Salem Academy  
 Salem High School  
 Sandia Preparatory School  
 School of IDEAS  
 Severn School  
 Sonoma Academy  
 St. Andrew's School

St. Christopher's School  
 St. George's Independent School  
 St. Gregory College Preparatory School  
 St. Luke's School  
 St. Margaret's Episcopal School  
 Staunton River High School  
 Stevenson School  
 Stuart Country Day School  
 Takatuf Scholars  
 Tallwood High School  
 Tech Valley High School  
 Tesseract School  
 The Haverford School  
 The Hotchkiss School  
 The Hun School of Princeton  
 The Lovett School  
 The Taft School  
 The Webb School  
 Traverse Bay Area Intermediate School District  
 Upper Arlington High School  
 Virginia Beach School District  
 Waianae High School  
 Warren New Tech High School  
 Warwick Valley High School  
 Watershed School  
 Western Albemarle High School  
 Westtown School  
 Wildwood School  
 York School

### CCLA Schools

Arizona Western College  
 Cecil College  
 City University of New York, Community  
 Colleges  
 Collin College  
 Colorado Mountain College  
 CUNY - Borough of Manhattan Community  
 College  
 CUNY - Bronx Community College  
 CUNY - Hostos Community College  
 CUNY - Kingsborough Community College  
 CUNY - LaGuardia Community College  
 CUNY - Medgar Evers College  
 CUNY - Queensborough Community College  
 Fanshawe College of Applied Arts and  
 Technology, Health Science Program  
 Howard Community College  
 Truckee Meadows Community College

## Using the CLA to Improve Institutional Performance

The information presented in your institutional report—enhanced most recently through the provision of subscores (see pages 9-10)—is designed to help you better understand the contributions your institution is making toward your students' learning gains. However, the institutional report alone provides but a snapshot of student performance.

When combined with the other tools and services the CLA has to offer, the institutional report can become a powerful tool in helping you and your institution target specific areas of improvement, while effectively and authentically aligning teaching, learning, and assessment practices in ways that may improve institutional performance over time.

We encourage institutions to examine performance across CLA tasks and communicate the results across campus, link student-level CLA results with other data sources, pursue in-depth sampling, collaborate with their peers, and participate in professional development offerings.

Student-level CLA results are provided for you to link to other data sources (e.g., course-taking patterns, grades, portfolios, student surveys, etc.). These results are strengthened by the provision of additional scores in the areas of Analytic Reasoning and Evaluation, Writing Effectiveness, Writing Mechanics, and Problem Solving to help you pinpoint specific areas that may need improvement. Internal analyses, which you can pursue through in-depth sampling, can help you generate hypotheses for additional research.

While peer-group comparisons are provided to you in this report (see pages 12-13), the true strength of peer learning comes through collaboration. CLA facilitates collaborative relationships among our participating schools by encouraging the formation of consortia, hosting periodic web conferences featuring campuses doing promising work using the CLA, and sharing school-specific contact information (where permission has been granted) via our CLA contact map ([www.collegiatelearningassessment.org/contact](http://www.collegiatelearningassessment.org/contact)).

Our professional development services shift the focus from general assessment to the course-level work of faculty members. Performance Task Academies—two-day hands-on training workshops—provide opportunities for faculty to receive guidance in creating their own CLA-like performance tasks, which can be used as classroom or homework assignments, curriculum devices, or even local-level assessments (see: [cae.org/performance-assessment/category/training-workshops](http://cae.org/performance-assessment/category/training-workshops)).

Through the steps noted above, we encourage institutions to move toward a continuous system of improvement stimulated by the CLA. Our programs and services—when used in combination—are designed to emphasize the notion that, in order to successfully improve higher-order skills, institutions must genuinely connect their teaching, learning, and assessment practices in authentic and effective ways.

Without your contributions, the CLA would not be on the exciting path that it is today. We look forward to your continued involvement!

### An Introduction to the CLA Tasks

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The CLA consists of a Performance Task and an Analytic Writing Task. Students are randomly assigned to take one or the other. The Analytic Writing Task includes a pair of prompts called Make-an-Argument and Critique-an-Argument.

All CLA tasks are administered online and consist of open-ended prompts that require constructed responses. There are no multiple-choice questions.

The CLA requires that students use critical thinking and written communication skills to perform cognitively demanding tasks. The integration of these skills mirrors the requirements of serious thinking and writing tasks faced in life outside of the classroom.

## Performance Task

Each Performance Task requires students to use an integrated set of critical thinking, analytic reasoning, problem solving, and written communication skills to answer several open-ended questions about a hypothetical but realistic situation. In addition to directions and questions, each Performance Task also has its own Document Library that includes a range of information sources, such as: letters, memos, summaries of research reports, newspaper articles, maps, photographs, diagrams, tables, charts, and interview notes or transcripts. Students are instructed to use these materials in preparing their answers to the Performance Task's questions within the allotted 90 minutes.

The first portion of each Performance Task contains general instructions and introductory material. The student is then presented with a split screen. On the right side of the screen is a list of the materials in the Document Library. The student selects a particular document to view by using a pull-down menu. A question and a response box are on the

left side of the screen. There is no limit on how much a student can type. Upon completing a question, students then select the next question in the queue.

No two Performance Tasks assess the exact same combination of skills. Some ask students to identify and then compare and contrast the strengths and limitations of alternative hypotheses, points of view, courses of action, etc. To perform these and other tasks, students may have to weigh different types of evidence, evaluate the credibility of various documents, spot possible bias, and identify questionable or critical assumptions.

Performance Tasks may also ask students to suggest or select a course of action to resolve conflicting or competing strategies and then provide a rationale for that decision, including why it is likely to be better than one or more other approaches. For example, students may be asked to anticipate potential difficulties or hazards that are associated with different ways of dealing with a problem, including the likely

short- and long-term consequences and implications of these strategies. Students may then be asked to suggest and defend one or more of these approaches. Alternatively, students may be asked to review a collection of materials or a set of options, then analyze and organize them on multiple dimensions, and ultimately defend that organization.

Performance Tasks often require students to marshal evidence from different sources; distinguish rational arguments from emotional ones and fact from opinion; understand data in tables and figures; deal with inadequate, ambiguous, and/or conflicting information; spot deception and holes in the arguments made by others; recognize information that is and is not relevant to the task at hand; identify additional information that would help to resolve issues; and weigh, organize, and synthesize information from several sources.

### Analytic Writing Task

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Students write answers to two types of essay tasks: a Make-an-Argument prompt that asks them to support or reject a position on some issue; and a Critique-an-Argument prompt that asks them to evaluate the validity of an argument made by someone else. Both of these tasks measure a student's skill in articulating complex ideas, examining claims and evidence, supporting ideas with relevant reasons and examples, sustaining a coherent discussion, and using standard written English.

### Make-an-Argument

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A Make-an-Argument prompt typically presents an opinion on some issue and asks students to write, in 45 minutes, a persuasive analytic essay to support a position on the issue. Key elements include: establishing a thesis or a position on an issue; maintaining the thesis throughout the essay; supporting the thesis with relevant and persuasive examples (e.g., from personal experience, history, art, literature, pop culture, or current events); anticipating and countering opposing arguments to the position; fully developing ideas, examples, and arguments; organizing the structure of the essay to maintain the flow of the argument (e.g., paragraphing, ordering of ideas and sentences within paragraphs, use of transitions); and employing varied sentence structure and advanced vocabulary.

### Critique-an-Argument

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A Critique-an-Argument prompt asks students to evaluate, in 30 minutes, the reasoning used in an argument (rather than simply agreeing or disagreeing with the position presented). Key elements of the essay include: identifying a variety of logical flaws or fallacies in a specific argument; explaining how or why the logical flaws affect the conclusions in that argument; and presenting a critique in a written response that is grammatically correct, organized, well-developed, and logically sound.

### Example Performance Task

You advise Pat Williams, the president of DynaTech, a company that makes precision electronic instruments and navigational equipment. Sally Evans, a member of DynaTech's sales force, recommended that DynaTech buy a small private plane (a SwiftAir 235) that she and other members of the sales force could use to visit customers. Pat was about to approve the purchase when there was an accident involving a SwiftAir 235.

### Example Document Library

Your Document Library contains the following materials:

- Newspaper article about the accident
- Federal Accident Report on in-flight breakups in single-engine planes
- Internal correspondence (Pat's email to you and Sally's email to Pat)
- Charts relating to SwiftAir's performance characteristics
- Excerpt from a magazine article comparing SwiftAir 235 to similar planes
- Pictures and descriptions of SwiftAir Models 180 and 235

### Example Questions

- Do the available data tend to support or refute the claim that the type of wing on the SwiftAir 235 leads to more in-flight breakups?
- What is the basis for your conclusion?
- What other factors might have contributed to the accident and should be taken into account?
- What is your preliminary recommendation about whether or not DynaTech should buy the plane and what is the basis for this recommendation?

### Example Make-an-Argument

There is no such thing as "truth" in the media. The one true thing about information media is that it exists only to entertain.

### Example Critique-an-Argument

A well-respected professional journal with a readership that includes elementary school principals recently published the results of a two-year study on childhood obesity. (Obese individuals are usually considered to be those who are 20% above their recommended weight for height and age.) This study sampled 50 schoolchildren, ages five to 11, from Smith Elementary School.

A fast food restaurant opened near the school just before the study began. After two years, students who remained in the sample group were more likely to be overweight—relative to the national average. Based on this study, the principal of Jones Elementary School decided to confront her school's obesity problem by opposing any fast food restaurant openings near her school.

## Interpreting CLA Results

CLA results operate as a signaling tool of overall institutional performance on tasks that measure higher-order skills. Examining performance across CLA task types can serve as an initial diagnostic exercise. The three types of CLA tasks—Performance Task, Make-an-Argument, and Critique-an-Argument—differ in the combination of skills necessary to perform well.

The Make-an-Argument and Critique-an-Argument tasks measure Analytic Reasoning and Evaluation, Writing Effectiveness, and Writing Mechanics. The Performance Task measures Problem Solving in addition to the three aforementioned skills. Each of the skills are assessed in slightly different ways within the context of each task type. For example, in the context of the Performance Task and the Critique-an-Argument task, Analytic Reasoning and Evaluation involves interpreting,

analyzing, and evaluating the quality of information. In the Make-an-Argument task, Analytic Reasoning and Evaluation involves stating a position, providing valid reasons to support the writer’s position, and considering and possibly refuting alternative viewpoints.

Subscores are assigned on a scale of 1 (lowest) to 6 (highest). Subscores are not directly comparable to one another because they are not adjusted for difficulty like CLA scale scores. The subscores remain unadjusted because they are intended to facilitate criterion-referenced interpretations. For example, a “4” in Analytic Reasoning and Evaluation means that a response had certain qualities (e.g., “Identifies a few facts or ideas that support or refute all major arguments”), and any adjustment to that score would compromise the interpretation.

The ability to make claims like, “Our students seem to be doing better in Writing Effectiveness than in Problem Solving on the Performance Task” is clearly desirable. This can be done by comparing each subscore distribution to its corresponding reference distribution displayed in Figures 3.6 and 3.8 of your institutional report. You can support claims like the one above if you see, for example, that students are performing above average in Writing Effectiveness, but not in Problem Solving on the Performance Task.

Please examine the results presented in Figures 3.6 & 3.8 and Tables 3.7 & 3.9 in combination with the *Scoring Criteria* in the next section to explore the areas where your students may need improvement.



### Iterative Development Process

A team of researchers and writers generates ideas for Make-an-Argument and Critique-an-Argument prompts and Performance Task storylines, and then contributes to the development and revision of the prompts and Performance Task documents.

For Analytic Writing Tasks, multiple prompts are generated, revised and pre-piloted, and those prompts that elicit good critical thinking and writing responses during pre-piloting are further revised and submitted to more extensive piloting.

During the development of Performance Tasks, care is taken to ensure that sufficient information is provided to permit multiple reasonable solutions to the issues present in the Performance Task. Documents are crafted such that information is presented in multiple formats (e.g., tables, figures, news articles, editorials, letters, etc.).

While developing a Performance Task, a list of the intended content from each document is established and revised. This list is used to ensure that each piece of information is clearly reflected in the document and/or across documents, and to ensure that no additional pieces of information are embedded in the document that were not intended. This list serves as a draft starting point for the analytic scoring items used in the Performance Task scoring rubrics.

During revision, information is either added to documents or removed from documents to ensure that students could arrive at approximately three or four different conclusions based on a variety of evidence to back up each conclusion. Typically, some conclusions are designed to be supported better than others.

Questions for the Performance Task are also drafted and revised during the development of the documents. The questions are designed such that the initial questions prompt students to read and attend to multiple sources of information in the documents, and later questions require students to evaluate the documents and then use their analyses to draw conclusions and justify those conclusions.

After several rounds of revision, the most promising of the Performance Tasks and the Make-an-Argument and Critique-an-Argument prompts are selected for pre-piloting. Student responses from the pre-pilot test are examined to identify what pieces of information are unintentionally ambiguous, and what pieces of information in the documents should be removed. After revision and additional pre-piloting, the best-functioning tasks (i.e., those that elicit the intended types and ranges of student responses) are selected for full piloting.

During piloting, students complete both an operational task and one of the new tasks. At this point, draft scoring rubrics are revised and tested in grading the pilot responses, and final revisions are made to the tasks to ensure that the task is eliciting the types of responses intended.

**Analytic Reasoning & Evaluation**

Interpreting, analyzing, and evaluating the quality of information. This entails identifying information that is relevant to a problem, highlighting connected and conflicting information, detecting flaws in logic and questionable assumptions, and explaining why information is credible, unreliable, or limited.

**Writing Effectiveness**

Constructing organized and logically cohesive arguments. Strengthening the writer's position by providing elaboration on facts or ideas (e.g., explaining how evidence bears on the problem, providing examples, and emphasizing especially convincing evidence).

**Writing Mechanics**

Facility with the conventions of standard written English (agreement, tense, capitalization, punctuation, and spelling) and control of the English language, including syntax (sentence structure) and diction (word choice and usage).

**Problem Solving**

Considering and weighing information from discrete sources to make decisions (draw a conclusion and/or propose a course of action) that logically follow from valid arguments, evidence, and examples. Considering the implications of decisions and suggesting additional research when appropriate.

6

- Identifies most facts or ideas that support or refute all major arguments (or salient features of all objects to be classified) presented in the Document Library. Provides analysis that goes beyond the obvious.
- Demonstrates accurate understanding of a large body of information from the Document Library.
- Makes several accurate claims about the quality of information.

- Organizes response in a logically cohesive way that makes it very easy to follow the writer's arguments.
- Provides valid and comprehensive elaboration on facts or ideas related to each argument and clearly cites sources of information.

- Demonstrates outstanding control of grammatical conventions.
- Consistently writes well-constructed, complex sentences with varied structure and length.
- Displays adept use of vocabulary that is precise, advanced, and varied.

- Provides a decision and a solid rationale based on credible evidence from a variety of sources. Weighs other options, but presents the decision as best given the available evidence.
- When applicable:
- Proposes a course of action that follows logically from the conclusion. Considers implications.
  - Recognizes the need for additional research. Recommends specific research that would address most unanswered questions.

5

- Identifies several facts or ideas that support or refute all major arguments (or salient features of all objects to be classified) presented in the Document Library.
- Demonstrates accurate understanding of much of the Document Library content.
- Makes a few accurate claims about the quality of information.

- Organizes response in a logically cohesive way that makes it fairly easy to follow the writer's arguments.
- Provides valid elaboration on facts or ideas related to each argument and cites sources of information.

- Demonstrates very good control of grammatical conventions.
- Consistently writes well-constructed sentences with varied structure and length.
- Uses varied and sometimes advanced vocabulary that effectively communicates ideas.

- Provides a decision and a solid rationale based largely on credible evidence from multiple sources and discounts alternatives.
- When applicable:
- Proposes a course of action that follows logically from the conclusion. May consider implications.
  - Recognizes the need for additional research. Suggests research that would address some unanswered questions.

4

- Identifies a few facts or ideas that support or refute all major arguments (or salient features of all objects to be classified) presented in the Document Library.
- Briefly demonstrates accurate understanding of important Document Library content, but disregards some information.
- Makes very few accurate claims about the quality of information.

- Organizes response in a way that makes the writer's arguments and logic of those arguments apparent but not obvious.
- Provides valid elaboration on facts or ideas several times and cites sources of information.

- Demonstrates good control of grammatical conventions with few errors.
- Writes well-constructed sentences with some varied structure and length.
- Uses vocabulary that clearly communicates ideas but lacks variety.

- Provides a decision and credible evidence to back it up. Possibly does not account for credible, contradictory evidence. May attempt to discount alternatives.
- When applicable:
- Proposes a course of action that follows logically from the conclusion. May briefly consider implications.
  - Recognizes the need for additional research. Suggests research that would address an unanswered question.

3

- Identifies a few facts or ideas that support or refute several arguments (or salient features of all objects to be classified) presented in the Document Library.
- Disregards important information or makes minor misinterpretations of information. May restate information "as is."
- Rarely, if ever, makes claims about the quality of information and may present some unreliable evidence as credible.

- Provides limited or somewhat unclear arguments. Presents relevant information in each response, but that information is not woven into arguments.
- Provides elaboration on facts or ideas a few times, some of which is valid. Sources of information are sometimes unclear.

- Demonstrates fair control of grammatical conventions with frequent minor errors.
- Writes sentences that read naturally but tend to have similar structure and length.
- Uses vocabulary that communicates ideas adequately but lacks variety.

- Provides or implies a decision and some reason to favor it, but the rationale may be contradicted by unaccounted for evidence.
- When applicable:
- Briefly proposes a course of action, but some aspects may not follow logically from the conclusion.
  - May recognize the need for additional research. Any suggested research tends to be vague or would not adequately address unanswered questions.

2

- Identifies very few facts or ideas that support or refute arguments (or salient features of all objects to be classified) presented in the Document Library.
- Disregards or misinterprets much of the Document Library. May restate information "as is."
- Does not make claims about the quality of information and presents some unreliable information as credible.

- Provides limited, invalid, overstated, or very unclear arguments. May present information in a disorganized fashion or undermine own points.
- Any elaboration on facts or ideas tends to be vague, irrelevant, inaccurate, or unreliable (e.g., based entirely on writer's opinion). Sources of information are often unclear.

- Demonstrates poor control of grammatical conventions with frequent minor errors and some distracting errors.
- Consistently writes sentences with similar structure and length, and some may be difficult to understand.
- Uses simple vocabulary, and some vocabulary may be used inaccurately or in a way that makes meaning unclear.

- Provides or implies a decision, but very little rationale is provided or it is based heavily on unreliable evidence.
- When applicable:
- Briefly proposes a course of action, but some aspects do not follow logically from the conclusion.
  - May recognize the need for additional research. Any suggested research is vague or would not adequately address unanswered questions.

1

- Does not identify facts or ideas that support or refute arguments (or salient features of all objects to be classified) presented in the Document Library or provides no evidence of analysis.
- Disregards or severely misinterprets important information.
- Does not make claims about the quality of evidence and bases response on unreliable information.

- Does not develop convincing arguments. Writing may be disorganized and confusing.
- Does not provide elaboration on facts or ideas.

- Demonstrates minimal control of grammatical conventions with many errors that make the response difficult to read or provides insufficient evidence to judge.
- Writes sentences that are repetitive or incomplete, and some are difficult to understand.
- Uses simple vocabulary, and some vocabulary is used inaccurately or in a way that makes meaning unclear.

- Provides no clear decision or no valid rationale for the decision.
- When applicable:
- Does not propose a course of action that follows logically from the conclusion.
  - Does not recognize the need for additional research or does not suggest research that would address unanswered questions.

**Analytic Reasoning & Evaluation**

Stating a position, providing valid reasons to support the writer’s position, and demonstrating an understanding of the complexity of the issue by considering and possibly refuting alternative viewpoints.

**Writing Effectiveness**

Constructing an organized and logically cohesive argument. Strengthening the writer’s position by elaborating on the reasons for that position (e.g., providing evidence, examples, and logical reasoning).

**Writing Mechanics**

Facility with the conventions of standard written English (agreement, tense, capitalization, punctuation, and spelling) and control of the English language, including syntax (sentence structure) and diction (word choice and usage).

|   |   |   |  |
|---|---|---|--|
| 6 | <ul style="list-style-type: none"> <li>Asserts an insightful position and provides multiple (at least four) sound reasons to justify it.</li> <li>Provides analysis that reflects a thorough consideration of the complexity of the issue. Possibly refutes major counterarguments or considers contexts integral to the issue (e.g., ethical, cultural, social, political).</li> </ul> | <ul style="list-style-type: none"> <li>Organizes response in a logically cohesive way that makes it very easy to follow the writer’s argument.</li> <li>Provides valid and comprehensive elaboration on each reason for the writer’s position.</li> </ul>   | <ul style="list-style-type: none"> <li>Demonstrates outstanding control of grammatical conventions.</li> <li>Consistently writes well-constructed, complex sentences with varied structure and length.</li> <li>Displays adept use of vocabulary that is precise, advanced, and varied.</li> </ul>   |
| 5 | <ul style="list-style-type: none"> <li>States a thoughtful position and provides multiple (at least three) sound reasons to support it.</li> <li>Provides analysis that reflects some consideration of the complexity of the issue. Possibly considers contexts integral to the issue (e.g., ethical, cultural, social, political).</li> </ul>  | <ul style="list-style-type: none"> <li>Organizes response in a logically cohesive way that makes it fairly easy to follow the writer’s argument.</li> <li>Provides valid elaboration on each reason for the writer’s position.</li> </ul>   | <ul style="list-style-type: none"> <li>Demonstrates very good control of grammatical conventions.</li> <li>Consistently writes well-constructed sentences with varied structure and length.</li> <li>Uses varied and sometimes advanced vocabulary that effectively communicates ideas.</li> </ul>   |
| 4 | <ul style="list-style-type: none"> <li>States a clear position and some (two to three) sound reasons to support it.</li> <li>Provides some careful analysis, but it lacks consideration of the issue’s complexity.</li> </ul>   | <ul style="list-style-type: none"> <li>Organizes response in a way that makes the writer’s argument and its logic apparent but not obvious.</li> <li>Provides valid elaboration on reasons for the writer’s position several times.</li> </ul>  | <ul style="list-style-type: none"> <li>Demonstrates good control of grammatical conventions with few errors.</li> <li>Writes well-constructed sentences with some varied structure and length.</li> <li>Uses vocabulary that clearly communicates ideas but lacks variety.</li> </ul>  |
| 3 | <ul style="list-style-type: none"> <li>States or implies a position and provides few (one to two) reasons to support it.</li> <li>Provides some superficial analysis of the issue.</li> </ul>   | <ul style="list-style-type: none"> <li>Provides a limited or somewhat unclear argument. Presents relevant information, but that information is not woven into an argument.</li> <li>Provides valid elaboration on reasons for the writer’s position a few times.</li> </ul>   | <ul style="list-style-type: none"> <li>Demonstrates fair control of grammatical conventions with frequent minor errors.</li> <li>Writes sentences that read naturally but tend to have similar structure and length.</li> <li>Uses vocabulary that communicates ideas adequately but lacks variety.</li> </ul>   |
| 2 | <ul style="list-style-type: none"> <li>States or implies a position and provides vague or very few reasons to support it.</li> <li>Provides little analysis, and that analysis may reflect an oversimplification of the issue.</li> </ul>   | <ul style="list-style-type: none"> <li>Provides limited, invalid, overstated, or very unclear argument. May present information in a disorganized fashion or undermine own points.</li> <li>Any elaboration on reasons for the writer’s position tend to be vague, irrelevant, inaccurate, or unreliable (e.g., based entirely on writer’s opinion).</li> </ul> | <ul style="list-style-type: none"> <li>Demonstrates poor control of grammatical conventions with frequent minor errors and some distracting errors.</li> <li>Consistently writes sentences with similar structure and length, and some may be difficult to understand.</li> <li>Uses simple vocabulary, and some vocabulary may be used inaccurately or in a way that makes meaning unclear.</li> </ul>                              |
| 1 | <ul style="list-style-type: none"> <li>States an unclear position (if any) and fails to provide reasons to support it.</li> <li>Provides very little evidence of analysis. May not understand the issue.</li> </ul>   | <ul style="list-style-type: none"> <li>Fails to develop a convincing argument. The writing may be disorganized and confusing.</li> <li>Fails to provide elaboration on reasons for the writer’s position.</li> </ul>  | <ul style="list-style-type: none"> <li>Demonstrates minimal control of grammatical conventions with many errors that make the response difficult to read or provides insufficient evidence to judge.</li> <li>Writes sentences that are repetitive or incomplete, and some are difficult to understand.</li> <li>Uses simple vocabulary, and some vocabulary is used inaccurately or in a way that makes meaning unclear.</li> </ul> |

|   | Analytic Reasoning & Evaluation  | Writing Effectiveness   | Writing Mechanics   |
|---|--|---|---|
| 6 | <p>Interpreting, analyzing, and evaluating the quality of information. This entails highlighting conflicting information, detecting flaws in logic and questionable assumptions, and explaining why information is credible, unreliable, or limited.</p> <ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of the complete argument.</li> <li>• Identifies many (at least five) deficiencies in the argument and provides analysis that goes beyond the obvious.</li> </ul> | <p>Constructing organized and logically cohesive arguments. Strengthening the writer's position by elaborating on deficiencies in the argument (e.g., providing explanations and examples).</p> <ul style="list-style-type: none"> <li>• Organizes response in a logically cohesive way that makes it very easy to follow the writer's critique.</li> <li>• Provides valid and comprehensive elaboration for each identified deficiency.</li> </ul> | <p>Facility with the conventions of standard written English (agreement, tense, capitalization, punctuation, and spelling) and control of the English language, including syntax (sentence structure) and diction (word choice and usage).</p> <ul style="list-style-type: none"> <li>• Demonstrates outstanding control of grammatical conventions.</li> <li>• Consistently writes well-constructed, complex sentences with varied structure and length.</li> <li>• Displays adept use of vocabulary that is precise, advanced, and varied.</li> </ul> |
| 5 | <ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of much of the argument.</li> <li>• Identifies many (at least four) deficiencies in the argument.</li> </ul>  | <ul style="list-style-type: none"> <li>• Organizes response in a logically cohesive way that makes it fairly easy to follow the writer's critique.</li> <li>• Provides valid elaboration for each identified deficiency.</li> </ul>   | <ul style="list-style-type: none"> <li>• Demonstrates very good control of grammatical conventions.</li> <li>• Consistently writes well-constructed sentences with varied structure and length.</li> <li>• Uses varied and sometimes advanced vocabulary that effectively communicates ideas.</li> </ul>  |
| 4 | <ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of several aspects of the argument, but disregards a few.</li> <li>• Identifies several (at least three) deficiencies in the argument.</li> </ul>   | <ul style="list-style-type: none"> <li>• Organizes response in a way that makes the writer's critique and its logic apparent but not obvious.</li> <li>• Provides valid elaboration on identified deficiencies several times.</li> </ul>  | <ul style="list-style-type: none"> <li>• Demonstrates good control of grammatical conventions with few errors.</li> <li>• Writes well-constructed sentences with some varied structure and length.</li> <li>• Uses vocabulary that clearly communicates ideas but lacks variety.</li> </ul>   |
| 3 | <ul style="list-style-type: none"> <li>• Disregards several aspects of the argument or makes minor misinterpretations of the argument.</li> <li>• Identifies a few (two to three) deficiencies in the argument.</li> </ul>   | <ul style="list-style-type: none"> <li>• Provides a limited or somewhat unclear critique. Presents relevant information, but that information is not woven into an argument.</li> <li>• Provides valid elaboration on identified deficiencies a few times.</li> </ul>   | <ul style="list-style-type: none"> <li>• Demonstrates fair control of grammatical conventions with frequent minor errors.</li> <li>• Writes sentences that read naturally but tend to have similar structure and length.</li> <li>• Uses vocabulary that communicates ideas adequately but lacks variety.</li> </ul>  |
| 2 | <ul style="list-style-type: none"> <li>• Disregards or misinterprets much of the information in the argument.</li> <li>• Identifies very few (one to two) deficiencies in the argument and may accept unreliable evidence as credible.</li> </ul>  | <ul style="list-style-type: none"> <li>• Provides limited, invalid, overstated, or very unclear critique. May present information in a disorganized fashion or undermine own points.</li> <li>• Any elaboration on identified deficiencies tends to be vague, irrelevant, inaccurate, or unreliable (e.g., based entirely on writer's opinion).</li> </ul>  | <ul style="list-style-type: none"> <li>• Demonstrates poor control of grammatical conventions with frequent minor errors and some distracting errors.</li> <li>• Consistently writes sentences with similar structure and length, and some may be difficult to understand.</li> <li>• Uses simple vocabulary, and some vocabulary may be used inaccurately or in a way that makes meaning unclear.</li> </ul>   |
| 1 | <ul style="list-style-type: none"> <li>• Disregards or severely misinterprets important information in the argument.</li> <li>• Fails to identify deficiencies in the argument or provides no evidence of critical analysis.</li> </ul>  | <ul style="list-style-type: none"> <li>• Fails to develop a convincing critique or agrees entirely with the flawed argument. The writing may be disorganized and confusing.</li> <li>• Fails to provide elaboration on identified deficiencies.</li> </ul>  | <ul style="list-style-type: none"> <li>• Demonstrates minimal control of grammatical conventions with many errors that make the response difficult to read or provides insufficient evidence to judge.</li> <li>• Writes sentences that are repetitive or incomplete, and some are difficult to understand.</li> <li>• Uses simple vocabulary, and some vocabulary is used inaccurately or in a way that makes meaning unclear.</li> </ul>  |

## Scoring CLA Responses

The CLA uses a combination of automated and human scoring. Since fall 2010, we have relied primarily on Intelligent Essay Assessor (IEA) for scoring. IEA is the automated scoring engine developed by Pearson Knowledge Technologies to evaluate the meaning of text, not just writing mechanics. Pearson has trained IEA for the CLA using a broad range of real CLA responses and scores to ensure its consistency with scores generated by human scorers.

Though the majority of scoring is handled by IEA, some responses are scored by trained human scorers. IEA identifies unusual responses, which are automatically sent to the human scoring queue. In addition, ten percent of responses are scored by both IEA and humans in order to continually evaluate the quality of scoring.

All scorer candidates undergo rigorous training in order to become certified

CLA scorers. Training includes an orientation to the prompts and scoring rubrics/guides, repeated practice grading a wide range of student responses, and extensive feedback and discussion after scoring each response. To ensure continuous human scorer calibration, CAE developed the E-Verification system for the online Scoring Interface. The E-Verification system was developed to improve and streamline scoring. Calibration of scorers through the E-Verification system requires scorers to score previously-scored results or “Verification Papers”\* when they first start scoring, as well as throughout the scoring window. The system will periodically present Verification Papers to scorers, though the scorers are not alerted to the Verification Papers. The system does not indicate when a scorer has successfully scored a Verification Paper, but if the scorer fails to accurately score a series of Verification Papers, he or she will be removed from scoring and must

participate in a remediation process.

At this point, scorers are either further coached or removed from scoring.

Each response receives subscores in the categories of Analytic Reasoning and Evaluation, Writing Effectiveness, and Writing Mechanics. An additional scale, Problem Solving, is used to evaluate only the Performance Tasks. Subscores are assigned on a scale of 1 (lowest) to 6 (highest). For all task types, blank responses or responses that are entirely unrelated to the task (e.g., writing about what they had for breakfast) are flagged for removal from results.

Because the prompts (specific tasks within each task type) differ in the possible arguments and pieces of information students can or should use in their responses, prompt-specific guidance is provided to scorers in addition to the scoring criteria that appear in the previous section.

\* The Verification Papers were drawn from responses collected during the 2010-2011 administration that were scored by both human scorers and the automated scoring engine. Each Verification Paper and its scores were reviewed by a lead scorer prior to being designated as a Verification Paper.

Scaling EAA Scores

To facilitate reporting results across schools, ACT scores are converted (using the ACT-SAT crosswalk to the right) to the scale of measurement used to report SAT scores.

For institutions where a majority of students did not have ACT or SAT scores (e.g., two-year institutions and open admission schools), we make available the Scholastic Level Exam (SLE), a short-form cognitive ability measure, as part of the CLA. The SLE is produced by Wonderlic, Inc. SLE scores are converted to SAT scores using data from 1,148 students participating in spring 2006 that had both SAT and SLE scores.

These converted scores (both ACT to SAT and SLE to SAT) are referred to simply as entering academic ability (EAA) scores.

Standard ACT to SAT Crosswalk

| ACT | to | SAT  |
|-----|----|------|
| 36  |    | 1600 |
| 35  |    | 1560 |
| 34  |    | 1510 |
| 33  |    | 1460 |
| 32  |    | 1420 |
| 31  |    | 1380 |
| 30  |    | 1340 |
| 29  |    | 1300 |
| 28  |    | 1260 |
| 27  |    | 1220 |
| 26  |    | 1190 |
| 25  |    | 1150 |
| 24  |    | 1110 |
| 23  |    | 1070 |
| 22  |    | 1030 |
| 21  |    | 990  |
| 20  |    | 950  |
| 19  |    | 910  |
| 18  |    | 870  |
| 17  |    | 830  |
| 16  |    | 790  |
| 15  |    | 740  |
| 14  |    | 690  |
| 13  |    | 640  |
| 12  |    | 590  |
| 11  |    | 530  |

Source:

ACT (2008). *ACT/College Board Joint Statement*. Retrieved from <http://www.act.org/aap/concordance/pdf/report.pdf>

## Converting Scores to a Common Scale

For each task, raw subscores are summed to produce a raw total score. Because not all tasks have the exact same level of difficulty, raw total scores from the different tasks are converted to a common scale of measurement. This process results in scale scores that reflect comparable levels of proficiency across tasks. For example, a given CLA scale score indicates approximately the same percentile rank regardless of the task on which it was earned. This feature of the CLA scale score allows combining scores from different tasks to compute a school's mean scale score for each task type as well as a total average scale score across types.

A linear scale transformation is used to convert raw scores to scale scores. This process results in a scale score distribution with the same mean and standard deviation as the SAT (or converted ACT) scores of the college freshmen who took that measure. This type of scaling preserves the shape of the raw score distribution and maintains the relative standing of students. For

example, the student with the highest raw score on a task will also have the highest scale score on that task, the student with the next highest raw score will be assigned the next highest scale score, and so on.

This type of scaling makes it such that a very high raw score earned on the task (not necessarily the highest possible score) corresponds approximately to the highest SAT (or converted ACT) score of any freshman who took that task.

Similarly, a very low raw score earned on a task would be assigned a scale score value that is close to the lowest SAT (or converted ACT) score of any freshman who took that task. On rare occasions that students achieve exceptionally high or low raw scores, this scaling procedure may produce scale scores that fall outside the normal SAT (Math + Critical Reading) score range of 400 to 1600.

From fall 2006 to spring 2010, CAE used the same scaling equations for each assessment cycle in order to

facilitate year-to-year comparisons.

With the introduction of new scoring criteria in fall 2010, raw scores are now on a different scale than they were in previous years, which makes it necessary to revise the scaling equations. Under the new scaling equations, fall 2010 responses tend to receive somewhat lower scores than responses of the same quality would have received in previous years. If you are interested in drawing comparisons between the average CLA scale scores in your current institutional report and those reported prior to fall 2010, we encourage you to use the equation below to convert pre-fall 2010 scale scores to current scale scores. The correlation between institution average scores on the old and new score scales is .99, and this equation characterizes the strong linear relationship between those scores. The equation can apply to all institution-level score types: Total, Performance Task, Analytic Writing Task, Make-an-Argument, and Critique-an-Argument.

$$score_{\text{new}} = 102.29 + (0.8494 \cdot score_{\text{old}})$$

### Modeling Student-Level Scores

Within each school, an equation like the following is used to model the relationship between senior students' EAA scores and their CLA scores:

$$CLA_{ij} = \overline{CLA}_j + 0.43(EAA_{ij} - \overline{EAA}_j) + r_{ij}$$

(Note that coefficients are for illustrative purposes only; see p. 35 for the coefficients used in this year's analysis.)

In this equation,  $CLA_{ij}$  is student  $i$  in school  $j$ 's CLA score, and this is modeled as a function of school  $j$ 's average senior CLA score ( $\overline{CLA}_j$ ) and student  $i$ 's EAA score ( $EAA_{ij}$ ) minus the average EAA score of participating

seniors at school  $j$ . Specifically, a student's CLA score equals (a) the school's average senior CLA score plus (b) an adjustment based on the student's EAA score relative to the average among senior participants in school  $j$  and (c) a residual term  $r_{ij}$  equal to the difference between a student's observed and expected CLA performance, with positive numbers meaning "better than expected." Here, the student-level slope coefficient for EAA is 0.43, which indicates that for every 1 point difference in EAA, one would expect a 0.43 point difference in CLA performance. To illustrate the use of this equation for computing a

student's expected CLA score, consider a school with an average senior CLA score of 1200 and an average EAA score of 1130. A senior student in this school with an EAA score of 1080 would be expected to have a CLA score of  $1200 + 0.43(1080 - 1130) = 1179$ . If this student actually scored a 1210 on the CLA, the residual term  $r_{ij}$  would be +31 because this student scored 31 points higher than one would expect given his or her EAA. Using the equation described here would produce student-level deviation scores that differ slightly from those that inform the performance levels reported in your Student Data File.

### Modeling School-Level Scores

Institutional value-added scores are derived from the school-level equation of the HLM, which takes the form

$$\overline{CLA}_j = 355 + 0.32(\overline{EAA}_j) + 0.45(\overline{CLA}_{fr,j}) + u_j$$

where  $\overline{CLA}_{fr,j}$  is the average CLA score of participating freshmen at school  $j$ , and  $u_j$  is that school's value-added score estimate ( $\overline{CLA}_j$  and  $\overline{EAA}_j$  are defined the same as in the student-level equation). Specifically,  $u_j$  is the

difference between a school's observed and expected average senior CLA performance. In this equation, 355 is the school-level intercept, 0.32 is the school-level slope coefficient for average EAA, and 0.45 is the school-level slope coefficient for average freshman CLA. Combined with average EAA and average freshman CLA scores, these coefficients allow for computing expected senior average CLA scores.

It may seem unconventional to use the average freshman CLA score from a different group of students as a predictor of the average senior CLA score, but analyses of CLA data consistently indicate that average freshman CLA performance adds significantly to the model. That is, average EAA and average freshman CLA account for different but nevertheless important characteristics of students as they enter college. Moreover,



this model would not be credible as a value-added model for CLA scores if there was no control for CLA performance at the start of college.

As a conceptual illustration of this approach, consider several schools administering the CLA to groups of seniors that had similar academic skills upon entering college—as indicated by average SAT or ACT scores and average freshman CLA scores. If, at the time of graduation, average CLA performance at one school is greater than average performance at the other schools testing groups of students with similar entering characteristics, one can infer that greater gains in critical thinking and written communication skills occurred at this school. That is, this school has greater value added than the other schools.

To illustrate the use of the school-level equation for estimating value-added scores, consider a school with an average freshman CLA score of 1050, an average senior CLA score of 1200,

and an average senior EAA score of 1130. According to the school-level equation, one would expect the senior average CLA performance at this school to be  $355 + 0.32(1130) + 0.45(1050) = 1189$ . The observed senior average CLA performance was 1200, which is 11 points higher than the typical school testing students with similar EAA and freshman CLA scores. Converted to a standard scale, the value-added score would be 0.28, which would place the school in the “Near Expected” performance category of value added.

Value-added scores are properly interpreted as senior average CLA performance relative to the typical school testing students with similar academic skills upon entering college. The proper conditional interpretation of value-added scores is essential.

First, it underscores the major goal of value-added modeling: obtaining a benchmark for performance based on schools admitting similar students. Secondly, a high value-added score

does not necessarily indicate high absolute performance on the CLA. Schools with low absolute CLA performance may obtain high value-added scores by performing well relative to expected (i.e., relative to the typical school testing students with similar academic skills upon entering college). Likewise, schools with high absolute CLA performance may obtain low value-added scores by performing poorly relative to expected. Though it is technically acceptable to interpret value-added scores as relative to all other schools participating in the CLA after controlling for entering student characteristics, this is not the preferred interpretation because it encourages comparisons among disparate institutions.

## Interpreting Confidence Intervals

It is important to keep in mind that value-added scores are estimates of unknown quantities. Put another way, the value-added score each school receives is a “best guess” based on the available information. Given their inherent uncertainty, value-added scores must be interpreted in light of available information about their precision. HLM estimation (described in the *Methods* section of this report) provides standard errors for value-added scores, which can be used to compute a unique 95% confidence interval for each school. These standard errors reflect within- and between-school variation in CLA and EAA scores, and they are most strongly related to senior sample size. Schools testing larger samples of seniors obtain more precise estimates of value added and therefore have smaller standard errors and corresponding 95% confidence intervals.

With a senior sample size near 100, our example school has a standard error of 0.35 (on the standardized value-added score scale). This school’s 95% confidence interval has a range from -0.41 to 0.97, which was calculated as the value-added estimate plus or minus 1.96 multiplied by the standard error.

To provide some perspective, consider that the confidence interval would have been about 30% larger (from -0.60 to 1.16) if this school tested half as many students. If this school tested twice as many students, the confidence interval would have been about 20% smaller (from -0.26 to 0.83).

Unfortunately, inaccurate interpretations of confidence intervals are common. It is *not* correct to say that “there is a 95% chance that my school’s ‘true’ value-added score is somewhere between -0.41 and 0.97” because it is either in the interval or it is not in the interval. Unfortunately, we cannot know which. The confidence interval reflects uncertainty in the estimate of the true score (due to sampling variation), not uncertainty in the true score itself. Correctly interpreted, a 95% confidence interval indicates the variation in value-added scores we should expect if testing were repeated with different samples of students a large number of times. It may be stated that, “if testing were repeated 100 times with different samples of students, about 95 out of the 100 resulting confidence intervals would include my school’s ‘true’ value-added score.”

Using conventional rules for judging statistical significance, one could draw several inferences from this school’s 95% confidence interval. First, it can be said that this school’s value-added score is significantly different from value-added scores lower than -0.41 and greater than 0.97. Second, because 0 is within the range of the 95% confidence interval, it may be said that this school’s value-added score is not significantly different from 0. Note that a value-added score of 0 does *not* indicate zero learning; it instead indicates typical (or “near expected”) senior average CLA performance, which implies learning typical of schools testing students with similar academic skills upon entering college.

### Statistical Specification of the CLA Value-Added Model

**Level 1 (Student Level):**  $CLA_{ij} = \beta_{0j} + \beta_{1j}(EAA_{ij} - \overline{EAA}_j) + r_{ij}$

- $CLA_{ij}$  is the CLA score of student  $i$  at school  $j$ .
- $EAA_{ij}$  is the Entering Academic Ability score of student  $i$  at school  $j$ .
- $\overline{EAA}_j$  is the mean EAA score at school  $j$ .
- $\beta_{0j}$  is the student-level intercept (equal to the mean CLA score at school  $j$ ).
- $\beta_{1j}$  is the student-level slope coefficient for EAA at school  $j$  (assumed to be the same across schools).
- $r_{ij}$  is the residual for student  $i$  in school  $j$ , where  $r_{ij} \sim N(0, \sigma^2)$  and  $\sigma^2$  is the variance of the student-level residuals (the pooled within-school variance of CLA scores after controlling for EAA).

**Level 2 (School Level):**  $\beta_{0j} = \gamma_{00} + \gamma_{01}(\overline{EAA}_j) + \gamma_{02}(\overline{CLA}_{fr,j}) + u_{0j}$  and  $\beta_{1j} = \gamma_{10}$

- $\overline{CLA}_{fr,j}$  is the mean freshman CLA score at school  $j$ .
- $\gamma_{00}$  is the school-level value-added equation intercept.
- $\gamma_{01}$  is the school-level value-added equation slope coefficient for senior mean EAA.
- $\gamma_{02}$  is the school-level value-added equation slope coefficient for freshman mean CLA.
- $\gamma_{10}$  is the student-level slope coefficient for EAA (assumed to be the same across schools).
- $u_{0j}$  is the value-added equation residual for school  $j$  (i.e., the value-added score), where  $u_{0j} \sim N\left(\begin{bmatrix} 0 \\ 0 \end{bmatrix}, \begin{bmatrix} \tau_{00} & 0 \\ 0 & 0 \end{bmatrix}\right)$  and  $\tau_{00}$  is the variance of the school-level residuals (the variance in mean CLA scores after controlling for mean EAA and mean freshman CLA scores).

**Mixed Model (combining the school- and student-level equations):**

$$CLA_{ij} = \gamma_{00} + \gamma_{01}(\overline{EAA}_j) + \gamma_{02}(\overline{CLA}_{fr,j}) + \gamma_{10}(EAA_{ij} - \overline{EAA}_j) + u_{0j} + r_{ij}$$

### Estimated Parameters for Value-Added Model

|                       | $\gamma_{00}$ | $\gamma_{10}$ | $\gamma_{01}$ | $\gamma_{02}$ | Standard Deviation |
|-----------------------|---------------|---------------|---------------|---------------|--------------------|
| Total Score           | 416.91        | 0.41          | 0.37          | 0.34          | 52.16              |
| Performance Task      | 417.91        | 0.46          | 0.37          | 0.33          | 65.73              |
| Analytic Writing Task | 435.63        | 0.36          | 0.38          | 0.31          | 50.63              |
| Make-an-Argument      | 403.84        | 0.37          | 0.36          | 0.34          | 49.93              |
| Critique-an-Argument  | 446.62        | 0.36          | 0.38          | 0.31          | 61.18              |

The table above shows the estimated parameters for the value-added model. Using these estimated parameters and the instructions below (also described in the statistical models on the previous page), one can compute the expected senior CLA score for a given school. In combination with the observed mean score for seniors at that school, this can be used to compute the school's value-added score. These values can also be used to perform subgroup analyses.

### How to Calculate CLA Value-Added Scores

To calculate value-added scores for subgroups of students, you need:

- Samples of entering and exiting students with CLA and EAA scores (see your CLA Student Data File)
  - The estimated parameters for the value-added model (see table above)
1. Refer to your CLA Student Data File to identify your subgroup sample of interest. The subgroup must contain freshmen and seniors with CLA scores (Performance Task or Analytic Writing Task) and EAA scores (entering academic ability).
  2. Using your CLA Student Data File, compute:
    - The mean EAA score of seniors (exiting students) in the sample
    - The mean CLA score of freshmen (entering students) in the sample
    - The mean CLA score of seniors (exiting students) in the sample
  3. Calculate the senior subgroup sample's expected mean CLA score, using the parameters from the table above. Please note that the same equation can be used for individual task types, as well as for the total CLA score. Simply replace any "total score" parameters with those from the appropriate task type row in the table above.
    - The expected senior mean CLA score =  $\gamma_{00} + \gamma_{01} \cdot (\text{senior mean EAA}) + \gamma_{02} \cdot (\text{freshman mean CLA})$
  4. Use your expected score to calculate your subgroup sample's value-added score in standard deviation units:
    - Value-added score = 
$$\frac{(\text{observed senior mean CLA score}) - (\text{expected senior mean CLA score})}{\text{standard deviation}}$$

Freshman CLA Scores, 50th-99th Percentiles

| Percentile | Total CLA Score | Performance Task | Analytic Writing Task | Make-an-Argument | Critique-an-Argument | EAA  |
|------------|-----------------|------------------|-----------------------|------------------|----------------------|------|
| 99         | 1288            | 1300             | 1275                  | 1272             | 1272                 | 1444 |
| 98         | 1258            | 1285             | 1228                  | 1231             | 1222                 | 1288 |
| 97         | 1217            | 1275             | 1220                  | 1230             | 1220                 | 1285 |
| 96         | 1211            | 1229             | 1202                  | 1201             | 1209                 | 1250 |
| 95         | 1203            | 1202             | 1200                  | 1196             | 1206                 | 1247 |
| 94         | 1193            | 1196             | 1193                  | 1193             | 1201                 | 1238 |
| 93         | 1192            | 1192             | 1192                  | 1189             | 1195                 | 1221 |
| 92         | 1191            | 1190             | 1191                  | 1184             | 1190                 | 1208 |
| 91         | 1186            | 1183             | 1188                  | 1183             | 1185                 | 1203 |
| 90         | 1165            | 1161             | 1169                  | 1175             | 1176                 | 1196 |
| 89         | 1161            | 1159             | 1163                  | 1165             | 1172                 | 1184 |
| 88         | 1154            | 1158             | 1159                  | 1162             | 1167                 | 1169 |
| 87         | 1153            | 1156             | 1154                  | 1159             | 1164                 | 1166 |
| 86         | 1152            | 1153             | 1153                  | 1157             | 1163                 | 1155 |
| 85         | 1150            | 1146             | 1145                  | 1150             | 1157                 | 1152 |
| 84         | 1146            | 1143             | 1144                  | 1149             | 1152                 | 1146 |
| 83         | 1141            | 1136             | 1141                  | 1145             | 1146                 | 1144 |
| 82         | 1134            | 1132             | 1140                  | 1142             | 1142                 | 1138 |
| 81         | 1132            | 1125             | 1139                  | 1136             | 1140                 | 1136 |
| 80         | 1128            | 1124             | 1136                  | 1133             | 1134                 | 1135 |
| 79         | 1126            | 1123             | 1132                  | 1125             | 1129                 | 1130 |
| 78         | 1124            | 1122             | 1131                  | 1123             | 1125                 | 1127 |
| 77         | 1120            | 1115             | 1124                  | 1117             | 1120                 | 1121 |
| 76         | 1116            | 1113             | 1120                  | 1115             | 1112                 | 1116 |
| 75         | 1115            | 1111             | 1114                  | 1114             | 1109                 | 1114 |
| 74         | 1111            | 1109             | 1110                  | 1113             | 1108                 | 1112 |
| 73         | 1107            | 1102             | 1110                  | 1112             | 1107                 | 1110 |
| 72         | 1099            | 1097             | 1109                  | 1110             | 1104                 | 1108 |
| 71         | 1094            | 1092             | 1107                  | 1109             | 1099                 | 1105 |
| 70         | 1093            | 1091             | 1105                  | 1108             | 1097                 | 1104 |
| 69         | 1092            | 1090             | 1104                  | 1106             | 1094                 | 1100 |
| 68         | 1092            | 1088             | 1102                  | 1105             | 1093                 | 1096 |
| 67         | 1091            | 1087             | 1102                  | 1105             | 1090                 | 1095 |
| 66         | 1088            | 1085             | 1101                  | 1104             | 1088                 | 1093 |
| 65         | 1086            | 1083             | 1097                  | 1101             | 1087                 | 1090 |
| 64         | 1083            | 1082             | 1092                  | 1098             | 1085                 | 1084 |
| 63         | 1082            | 1080             | 1091                  | 1096             | 1084                 | 1083 |
| 62         | 1081            | 1077             | 1090                  | 1094             | 1082                 | 1082 |
| 61         | 1080            | 1072             | 1088                  | 1093             | 1082                 | 1081 |
| 60         | 1079            | 1071             | 1084                  | 1092             | 1081                 | 1077 |
| 59         | 1078            | 1069             | 1083                  | 1091             | 1080                 | 1075 |
| 58         | 1074            | 1068             | 1081                  | 1085             | 1079                 | 1064 |
| 57         | 1070            | 1063             | 1078                  | 1075             | 1077                 | 1060 |
| 56         | 1068            | 1061             | 1077                  | 1075             | 1075                 | 1056 |
| 55         | 1066            | 1058             | 1074                  | 1074             | 1073                 | 1051 |
| 54         | 1065            | 1057             | 1072                  | 1073             | 1070                 | 1047 |
| 53         | 1065            | 1056             | 1069                  | 1068             | 1067                 | 1041 |
| 52         | 1064            | 1055             | 1068                  | 1067             | 1066                 | 1040 |
| 51         | 1060            | 1053             | 1067                  | 1066             | 1060                 | 1037 |
| 50         | 1058            | 1052             | 1065                  | 1065             | 1058                 | 1036 |

## Freshman CLA Scores, 1st-49th Percentiles

| Percentile | Total CLA Score | Performance Task | Analytic Writing Task | Make-an-Argument | Critique-an-Argument | EAA  |
|------------|-----------------|------------------|-----------------------|------------------|----------------------|------|
| 49         | 1052            | 1050             | 1064                  | 1064             | 1055                 | 1028 |
| 48         | 1050            | 1043             | 1060                  | 1062             | 1053                 | 1021 |
| 47         | 1044            | 1042             | 1057                  | 1056             | 1053                 | 1019 |
| 46         | 1044            | 1041             | 1055                  | 1053             | 1052                 | 1017 |
| 45         | 1043            | 1039             | 1054                  | 1051             | 1048                 | 1016 |
| 44         | 1043            | 1037             | 1050                  | 1050             | 1047                 | 1016 |
| 43         | 1042            | 1035             | 1046                  | 1049             | 1045                 | 1015 |
| 42         | 1041            | 1032             | 1040                  | 1045             | 1040                 | 1010 |
| 41         | 1038            | 1031             | 1034                  | 1039             | 1035                 | 1010 |
| 40         | 1032            | 1028             | 1033                  | 1037             | 1031                 | 1009 |
| 39         | 1031            | 1023             | 1031                  | 1036             | 1030                 | 1008 |
| 38         | 1026            | 1021             | 1030                  | 1035             | 1022                 | 1003 |
| 37         | 1025            | 1020             | 1025                  | 1034             | 1020                 | 1002 |
| 36         | 1023            | 1017             | 1023                  | 1033             | 1016                 | 997  |
| 35         | 1022            | 1016             | 1022                  | 1030             | 1015                 | 996  |
| 34         | 1019            | 1014             | 1022                  | 1028             | 1010                 | 991  |
| 33         | 1018            | 1012             | 1021                  | 1026             | 1009                 | 987  |
| 32         | 1016            | 1007             | 1015                  | 1015             | 1005                 | 983  |
| 31         | 1012            | 1004             | 1013                  | 1014             | 999                  | 981  |
| 30         | 1009            | 1000             | 1011                  | 1013             | 998                  | 979  |
| 29         | 1003            | 999              | 1009                  | 1012             | 997                  | 977  |
| 28         | 1000            | 998              | 1003                  | 1011             | 996                  | 975  |
| 27         | 994             | 995              | 1002                  | 1010             | 993                  | 974  |
| 26         | 990             | 993              | 998                   | 1008             | 992                  | 968  |
| 25         | 985             | 987              | 997                   | 1006             | 985                  | 962  |
| 24         | 984             | 981              | 996                   | 1005             | 982                  | 961  |
| 23         | 983             | 975              | 994                   | 1003             | 981                  | 958  |
| 22         | 982             | 973              | 992                   | 1000             | 978                  | 957  |
| 21         | 980             | 970              | 988                   | 997              | 976                  | 953  |
| 20         | 978             | 969              | 987                   | 994              | 975                  | 949  |
| 19         | 974             | 962              | 984                   | 989              | 974                  | 932  |
| 18         | 970             | 959              | 983                   | 985              | 968                  | 931  |
| 17         | 967             | 952              | 975                   | 978              | 966                  | 924  |
| 16         | 965             | 950              | 973                   | 972              | 962                  | 914  |
| 15         | 956             | 943              | 969                   | 961              | 958                  | 911  |
| 14         | 951             | 941              | 961                   | 950              | 953                  | 909  |
| 13         | 949             | 938              | 957                   | 948              | 951                  | 908  |
| 12         | 943             | 928              | 949                   | 942              | 950                  | 907  |
| 11         | 942             | 926              | 944                   | 940              | 943                  | 904  |
| 10         | 930             | 922              | 940                   | 920              | 937                  | 902  |
| 9          | 928             | 916              | 934                   | 917              | 934                  | 898  |
| 8          | 920             | 911              | 924                   | 907              | 927                  | 881  |
| 7          | 919             | 904              | 924                   | 904              | 926                  | 880  |
| 6          | 916             | 878              | 923                   | 900              | 925                  | 858  |
| 5          | 908             | 876              | 920                   | 898              | 920                  | 855  |
| 4          | 900             | 844              | 905                   | 896              | 904                  | 834  |
| 3          | 884             | 841              | 895                   | 886              | 896                  | 833  |
| 2          | 845             | 831              | 846                   | 840              | 836                  | 793  |
| 1          | 806             | 792              | 823                   | 793              | 815                  | 718  |

## Senior CLA Scores, 50th-99th Percentiles

| Percentile | Total CLA Score | Performance Task | Analytic Writing Task | Make-an-Argument | Critique-an-Argument | EAA  |
|------------|-----------------|------------------|-----------------------|------------------|----------------------|------|
| 99         | 1332            | 1368             | 1329                  | 1311             | 1373                 | 1454 |
| 98         | 1319            | 1341             | 1321                  | 1303             | 1348                 | 1294 |
| 97         | 1318            | 1339             | 1314                  | 1293             | 1343                 | 1288 |
| 96         | 1314            | 1324             | 1313                  | 1289             | 1336                 | 1261 |
| 95         | 1310            | 1317             | 1305                  | 1279             | 1335                 | 1258 |
| 94         | 1303            | 1303             | 1296                  | 1272             | 1319                 | 1236 |
| 93         | 1284            | 1294             | 1293                  | 1269             | 1311                 | 1234 |
| 92         | 1281            | 1289             | 1288                  | 1260             | 1305                 | 1216 |
| 91         | 1277            | 1288             | 1278                  | 1255             | 1296                 | 1206 |
| 90         | 1271            | 1280             | 1273                  | 1253             | 1292                 | 1202 |
| 89         | 1260            | 1272             | 1264                  | 1251             | 1288                 | 1193 |
| 88         | 1259            | 1266             | 1262                  | 1249             | 1287                 | 1188 |
| 87         | 1255            | 1260             | 1259                  | 1236             | 1280                 | 1186 |
| 86         | 1253            | 1257             | 1256                  | 1235             | 1276                 | 1178 |
| 85         | 1250            | 1254             | 1251                  | 1229             | 1271                 | 1173 |
| 84         | 1245            | 1250             | 1250                  | 1227             | 1268                 | 1165 |
| 83         | 1241            | 1249             | 1245                  | 1220             | 1265                 | 1163 |
| 82         | 1235            | 1247             | 1239                  | 1218             | 1261                 | 1157 |
| 81         | 1234            | 1244             | 1237                  | 1214             | 1260                 | 1156 |
| 80         | 1230            | 1243             | 1226                  | 1212             | 1256                 | 1150 |
| 79         | 1229            | 1238             | 1225                  | 1208             | 1254                 | 1148 |
| 78         | 1227            | 1230             | 1220                  | 1205             | 1249                 | 1146 |
| 77         | 1224            | 1225             | 1217                  | 1201             | 1247                 | 1142 |
| 76         | 1223            | 1223             | 1214                  | 1198             | 1239                 | 1129 |
| 75         | 1220            | 1222             | 1210                  | 1197             | 1234                 | 1127 |
| 74         | 1218            | 1221             | 1209                  | 1194             | 1231                 | 1122 |
| 73         | 1216            | 1215             | 1204                  | 1192             | 1221                 | 1120 |
| 72         | 1204            | 1213             | 1200                  | 1191             | 1220                 | 1119 |
| 71         | 1203            | 1210             | 1199                  | 1189             | 1219                 | 1114 |
| 70         | 1202            | 1210             | 1197                  | 1185             | 1217                 | 1113 |
| 69         | 1199            | 1209             | 1195                  | 1184             | 1215                 | 1108 |
| 68         | 1198            | 1207             | 1192                  | 1181             | 1213                 | 1107 |
| 67         | 1197            | 1201             | 1190                  | 1175             | 1206                 | 1100 |
| 66         | 1194            | 1198             | 1188                  | 1173             | 1203                 | 1095 |
| 65         | 1193            | 1197             | 1188                  | 1171             | 1202                 | 1094 |
| 64         | 1189            | 1186             | 1187                  | 1170             | 1201                 | 1085 |
| 63         | 1186            | 1184             | 1186                  | 1168             | 1198                 | 1084 |
| 62         | 1181            | 1183             | 1184                  | 1163             | 1197                 | 1083 |
| 61         | 1178            | 1182             | 1183                  | 1162             | 1195                 | 1082 |
| 60         | 1177            | 1180             | 1182                  | 1161             | 1193                 | 1080 |
| 59         | 1175            | 1179             | 1179                  | 1159             | 1192                 | 1080 |
| 58         | 1174            | 1177             | 1173                  | 1156             | 1191                 | 1079 |
| 57         | 1174            | 1176             | 1172                  | 1152             | 1189                 | 1077 |
| 56         | 1173            | 1174             | 1169                  | 1152             | 1188                 | 1076 |
| 55         | 1169            | 1173             | 1166                  | 1151             | 1185                 | 1068 |
| 54         | 1167            | 1171             | 1165                  | 1150             | 1183                 | 1063 |
| 53         | 1165            | 1168             | 1165                  | 1149             | 1181                 | 1062 |
| 52         | 1164            | 1163             | 1164                  | 1148             | 1180                 | 1061 |
| 51         | 1162            | 1162             | 1163                  | 1147             | 1178                 | 1057 |
| 50         | 1159            | 1161             | 1162                  | 1146             | 1177                 | 1056 |

## Senior CLA Scores, 1st-49th Percentiles

| Percentile | Total CLA Score | Performance Task | Analytic Writing Task | Make-an-Argument | Critique-an-Argument | EAA  |
|------------|-----------------|------------------|-----------------------|------------------|----------------------|------|
| 49         | 1157            | 1159             | 1161                  | 1142             | 1175                 | 1055 |
| 48         | 1155            | 1158             | 1160                  | 1141             | 1174                 | 1053 |
| 47         | 1155            | 1157             | 1157                  | 1140             | 1173                 | 1052 |
| 46         | 1154            | 1157             | 1155                  | 1139             | 1169                 | 1040 |
| 45         | 1152            | 1156             | 1153                  | 1139             | 1167                 | 1039 |
| 44         | 1150            | 1151             | 1153                  | 1138             | 1167                 | 1038 |
| 43         | 1148            | 1151             | 1152                  | 1136             | 1166                 | 1034 |
| 42         | 1147            | 1150             | 1151                  | 1135             | 1163                 | 1034 |
| 41         | 1144            | 1149             | 1149                  | 1132             | 1161                 | 1033 |
| 40         | 1143            | 1148             | 1146                  | 1130             | 1159                 | 1032 |
| 39         | 1142            | 1146             | 1145                  | 1129             | 1156                 | 1030 |
| 38         | 1140            | 1143             | 1142                  | 1128             | 1154                 | 1025 |
| 37         | 1139            | 1137             | 1140                  | 1126             | 1153                 | 1024 |
| 36         | 1138            | 1136             | 1139                  | 1125             | 1152                 | 1023 |
| 35         | 1137            | 1135             | 1135                  | 1123             | 1152                 | 1022 |
| 34         | 1137            | 1134             | 1134                  | 1118             | 1151                 | 1020 |
| 33         | 1136            | 1133             | 1132                  | 1116             | 1149                 | 1011 |
| 32         | 1135            | 1132             | 1131                  | 1114             | 1145                 | 1010 |
| 31         | 1135            | 1129             | 1128                  | 1111             | 1141                 | 1009 |
| 30         | 1134            | 1128             | 1127                  | 1108             | 1140                 | 1008 |
| 29         | 1131            | 1127             | 1125                  | 1105             | 1136                 | 1007 |
| 28         | 1130            | 1125             | 1121                  | 1100             | 1135                 | 1005 |
| 27         | 1127            | 1122             | 1121                  | 1097             | 1133                 | 998  |
| 26         | 1126            | 1120             | 1120                  | 1095             | 1131                 | 995  |
| 25         | 1123            | 1118             | 1119                  | 1094             | 1130                 | 993  |
| 24         | 1122            | 1114             | 1115                  | 1089             | 1129                 | 989  |
| 23         | 1120            | 1113             | 1114                  | 1087             | 1123                 | 987  |
| 22         | 1117            | 1112             | 1112                  | 1083             | 1121                 | 980  |
| 21         | 1116            | 1109             | 1111                  | 1080             | 1117                 | 974  |
| 20         | 1112            | 1108             | 1108                  | 1077             | 1116                 | 973  |
| 19         | 1108            | 1107             | 1102                  | 1075             | 1115                 | 969  |
| 18         | 1103            | 1106             | 1097                  | 1074             | 1110                 | 967  |
| 17         | 1099            | 1101             | 1096                  | 1073             | 1107                 | 965  |
| 16         | 1095            | 1092             | 1094                  | 1072             | 1103                 | 962  |
| 15         | 1081            | 1088             | 1090                  | 1070             | 1099                 | 951  |
| 14         | 1077            | 1080             | 1086                  | 1069             | 1095                 | 949  |
| 13         | 1073            | 1071             | 1083                  | 1067             | 1088                 | 941  |
| 12         | 1072            | 1064             | 1082                  | 1064             | 1081                 | 936  |
| 11         | 1067            | 1045             | 1069                  | 1059             | 1074                 | 931  |
| 10         | 1060            | 1030             | 1056                  | 1056             | 1068                 | 931  |
| 9          | 1039            | 1027             | 1055                  | 1049             | 1053                 | 930  |
| 8          | 1024            | 1016             | 1053                  | 1037             | 1049                 | 925  |
| 7          | 1021            | 1002             | 1052                  | 1032             | 1044                 | 923  |
| 6          | 1009            | 990              | 1042                  | 1019             | 1031                 | 911  |
| 5          | 1000            | 983              | 1033                  | 999              | 1028                 | 880  |
| 4          | 988             | 974              | 1000                  | 968              | 993                  | 869  |
| 3          | 964             | 961              | 985                   | 957              | 981                  | 868  |
| 2          | 957             | 929              | 929                   | 893              | 951                  | 857  |
| 1          | 917             | 789              | 904                   | 858              | 925                  | 841  |



Value-Added Scores, 50th-99th Percentiles

| Percentile | Total CLA Score | Performance Task | Analytic Writing Task | Make-an-Argument | Critique-an-Argument |
|------------|-----------------|------------------|-----------------------|------------------|----------------------|
| 99         | 2.84            | 2.68             | 3.10                  | 2.74             | 4.03                 |
| 98         | 2.24            | 1.88             | 2.40                  | 1.94             | 2.80                 |
| 97         | 2.08            | 1.73             | 2.33                  | 1.91             | 2.51                 |
| 96         | 1.66            | 1.59             | 1.94                  | 1.73             | 1.97                 |
| 95         | 1.63            | 1.50             | 1.82                  | 1.50             | 1.84                 |
| 94         | 1.47            | 1.44             | 1.59                  | 1.47             | 1.67                 |
| 93         | 1.34            | 1.34             | 1.55                  | 1.44             | 1.56                 |
| 92         | 1.16            | 1.19             | 1.40                  | 1.36             | 1.40                 |
| 91         | 1.16            | 1.14             | 1.40                  | 1.17             | 1.39                 |
| 90         | 1.04            | 0.97             | 1.26                  | 1.11             | 1.33                 |
| 89         | 1.03            | 0.97             | 1.16                  | 1.08             | 1.26                 |
| 88         | 1.01            | 0.86             | 1.12                  | 1.05             | 1.22                 |
| 87         | 1.00            | 0.86             | 1.10                  | 1.04             | 1.03                 |
| 86         | 0.96            | 0.84             | 1.07                  | 1.03             | 1.03                 |
| 85         | 0.89            | 0.79             | 1.04                  | 1.01             | 0.99                 |
| 84         | 0.83            | 0.75             | 1.03                  | 0.98             | 0.92                 |
| 83         | 0.81            | 0.75             | 0.96                  | 0.96             | 0.91                 |
| 82         | 0.81            | 0.72             | 0.94                  | 0.92             | 0.85                 |
| 81         | 0.78            | 0.71             | 0.91                  | 0.89             | 0.82                 |
| 80         | 0.74            | 0.67             | 0.89                  | 0.86             | 0.81                 |
| 79         | 0.72            | 0.63             | 0.81                  | 0.80             | 0.73                 |
| 78         | 0.72            | 0.62             | 0.79                  | 0.80             | 0.70                 |
| 77         | 0.69            | 0.62             | 0.77                  | 0.74             | 0.65                 |
| 76         | 0.69            | 0.56             | 0.70                  | 0.74             | 0.60                 |
| 75         | 0.67            | 0.52             | 0.66                  | 0.70             | 0.54                 |
| 74         | 0.66            | 0.51             | 0.66                  | 0.69             | 0.53                 |
| 73         | 0.63            | 0.51             | 0.64                  | 0.68             | 0.52                 |
| 72         | 0.60            | 0.50             | 0.55                  | 0.66             | 0.52                 |
| 71         | 0.59            | 0.49             | 0.50                  | 0.60             | 0.48                 |
| 70         | 0.54            | 0.46             | 0.50                  | 0.60             | 0.48                 |
| 69         | 0.52            | 0.44             | 0.43                  | 0.57             | 0.38                 |
| 68         | 0.51            | 0.41             | 0.43                  | 0.56             | 0.37                 |
| 67         | 0.47            | 0.38             | 0.41                  | 0.51             | 0.36                 |
| 66         | 0.44            | 0.38             | 0.41                  | 0.50             | 0.35                 |
| 65         | 0.44            | 0.35             | 0.39                  | 0.48             | 0.30                 |
| 64         | 0.43            | 0.34             | 0.39                  | 0.46             | 0.28                 |
| 63         | 0.37            | 0.33             | 0.37                  | 0.42             | 0.26                 |
| 62         | 0.33            | 0.33             | 0.33                  | 0.42             | 0.26                 |
| 61         | 0.32            | 0.30             | 0.30                  | 0.40             | 0.25                 |
| 60         | 0.30            | 0.23             | 0.26                  | 0.35             | 0.20                 |
| 59         | 0.28            | 0.23             | 0.24                  | 0.31             | 0.20                 |
| 58         | 0.27            | 0.20             | 0.20                  | 0.29             | 0.17                 |
| 57         | 0.16            | 0.19             | 0.17                  | 0.29             | 0.17                 |
| 56         | 0.14            | 0.17             | 0.15                  | 0.23             | 0.16                 |
| 55         | 0.09            | 0.12             | 0.15                  | 0.21             | 0.12                 |
| 54         | 0.07            | 0.08             | 0.14                  | 0.15             | 0.08                 |
| 53         | 0.06            | 0.08             | 0.13                  | 0.15             | 0.06                 |
| 52         | 0.04            | 0.05             | 0.12                  | 0.09             | 0.02                 |
| 51         | 0.01            | 0.05             | 0.05                  | 0.08             | 0.02                 |
| 50         | 0.00            | -0.02            | -0.01                 | 0.04             | 0.00                 |

Value-Added Scores, 1st-49th Percentiles

| Percentile | Total CLA Score | Performance Task | Analytic Writing Task | Make-an-Argument | Critique-an-Argument |
|------------|-----------------|------------------|-----------------------|------------------|----------------------|
| 49         | -0.03           | -0.02            | -0.03                 | 0.03             | 0.00                 |
| 48         | -0.06           | -0.04            | -0.08                 | 0.02             | -0.04                |
| 47         | -0.08           | -0.05            | -0.08                 | -0.02            | -0.07                |
| 46         | -0.08           | -0.07            | -0.10                 | -0.07            | -0.09                |
| 45         | -0.10           | -0.10            | -0.10                 | -0.08            | -0.11                |
| 44         | -0.11           | -0.11            | -0.11                 | -0.09            | -0.13                |
| 43         | -0.15           | -0.14            | -0.12                 | -0.11            | -0.13                |
| 42         | -0.16           | -0.15            | -0.14                 | -0.13            | -0.15                |
| 41         | -0.17           | -0.15            | -0.14                 | -0.15            | -0.16                |
| 40         | -0.22           | -0.17            | -0.15                 | -0.15            | -0.16                |
| 39         | -0.23           | -0.19            | -0.16                 | -0.17            | -0.17                |
| 38         | -0.24           | -0.21            | -0.18                 | -0.20            | -0.18                |
| 37         | -0.25           | -0.22            | -0.28                 | -0.25            | -0.21                |
| 36         | -0.30           | -0.25            | -0.30                 | -0.28            | -0.21                |
| 35         | -0.33           | -0.25            | -0.32                 | -0.31            | -0.24                |
| 34         | -0.35           | -0.26            | -0.33                 | -0.33            | -0.26                |
| 33         | -0.35           | -0.32            | -0.36                 | -0.35            | -0.28                |
| 32         | -0.37           | -0.32            | -0.38                 | -0.38            | -0.31                |
| 31         | -0.39           | -0.39            | -0.41                 | -0.41            | -0.37                |
| 30         | -0.40           | -0.39            | -0.42                 | -0.41            | -0.38                |
| 29         | -0.41           | -0.44            | -0.45                 | -0.45            | -0.40                |
| 28         | -0.42           | -0.45            | -0.49                 | -0.50            | -0.42                |
| 27         | -0.48           | -0.51            | -0.50                 | -0.52            | -0.44                |
| 26         | -0.50           | -0.51            | -0.52                 | -0.54            | -0.45                |
| 25         | -0.53           | -0.52            | -0.54                 | -0.60            | -0.54                |
| 24         | -0.53           | -0.52            | -0.54                 | -0.61            | -0.54                |
| 23         | -0.56           | -0.54            | -0.56                 | -0.64            | -0.58                |
| 22         | -0.57           | -0.55            | -0.57                 | -0.67            | -0.62                |
| 21         | -0.58           | -0.56            | -0.65                 | -0.70            | -0.67                |
| 20         | -0.60           | -0.64            | -0.71                 | -0.78            | -0.69                |
| 19         | -0.63           | -0.67            | -0.75                 | -0.79            | -0.69                |
| 18         | -0.68           | -0.68            | -0.83                 | -0.88            | -0.70                |
| 17         | -0.74           | -0.74            | -0.86                 | -0.89            | -0.75                |
| 16         | -0.86           | -0.83            | -0.91                 | -0.90            | -0.76                |
| 15         | -0.94           | -0.83            | -0.91                 | -0.90            | -0.77                |
| 14         | -1.07           | -0.85            | -0.95                 | -0.99            | -0.79                |
| 13         | -1.09           | -0.99            | -0.96                 | -1.01            | -0.79                |
| 12         | -1.18           | -1.06            | -1.04                 | -1.15            | -0.93                |
| 11         | -1.22           | -1.08            | -1.04                 | -1.16            | -0.95                |
| 10         | -1.30           | -1.11            | -1.10                 | -1.25            | -1.05                |
| 9          | -1.31           | -1.14            | -1.14                 | -1.26            | -1.27                |
| 8          | -1.39           | -1.29            | -1.28                 | -1.34            | -1.36                |
| 7          | -1.62           | -1.31            | -1.29                 | -1.43            | -1.45                |
| 6          | -1.70           | -1.56            | -1.34                 | -1.62            | -1.51                |
| 5          | -1.81           | -1.65            | -1.90                 | -1.69            | -1.64                |
| 4          | -2.18           | -2.07            | -2.11                 | -1.73            | -1.92                |
| 3          | -2.50           | -2.26            | -2.14                 | -2.43            | -1.98                |
| 2          | -3.13           | -2.57            | -2.60                 | -2.96            | -2.21                |
| 1          | -3.31           | -6.22            | -3.16                 | -3.87            | -2.21                |

In tandem with your report, we provide a CLA Student Data File, which includes variables across three categories: self-reported information from students in their CLA online profile; CLA scores and identifiers; and information provided by the registrar.

We provide student-level information for linking with other data you collect (e.g., from NSSE, CIRP, portfolios, local assessments, course-taking patterns, participation in specialized programs, etc.) to help you hypothesize about factors related to institutional performance.

Student-level scores are not designed to be diagnostic at the individual level and should be considered as only one piece of evidence about a student's skills. In addition, correlations between individual CLA scores and other measures would be attenuated due to unreliability.

### Self-Reported Data

- Name (first, middle initial, last)
- Student ID
- Email address
- Date of birth
- Gender
- Race/ethnicity
- Parent education
- Primary and secondary academic major (36 categories)
- Field of study (six categories; based on primary academic major)
- English as primary language
- Attended school as freshman, sophomore, junior, senior
- Local survey responses (if applicable)

### CLA Scores and Identifiers

- For Performance Task, Analytic Writing Task, Make-an-Argument, and Critique-an-Argument (depending on the tasks taken and completeness of responses):
  - CLA scores
  - Performance Level categories (i.e., well below expected, below expected, near expected, above expected, well above expected)\*
  - Percentile rank across schools and within your school (among students in the same class year, based on score)
- Subscores in Analytic Reasoning and Evaluation, Writing Effectiveness, Writing Mechanics, and Problem Solving
- SLE score (if applicable, 1-50)
- Entering Academic Ability (EAA) score
- Unique CLA numeric identifiers
- Year, test window (fall or spring), date of test, and time spent on test

### Registrar Data

- Class standing
- Transfer student status
- Program code and name (for classification of students into different colleges, schools, fields of study, programs, etc., if applicable)
- SAT Total (Math + Critical Reading)
- SAT I Math
- SAT I Critical Reading (Verbal)
- SAT I Writing
- ACT Composite
- GPA (not applicable for entering students)

\* The residuals that inform these levels are from an OLS regression of CLA scores on EAA scores, across all schools. Roughly 20% of students (within class) fall into each performance level.

Roger Benjamin

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James Hundley

*Executive Vice President & Chief Operating Officer, Council for Aid to Education*

Katharine Lyall

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President Emeritus, University of Wisconsin System*

Richard Atkinson

*President Emeritus, University of California System*

Doug Bennett

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