CLA

California State
University, Stanislaus

2011-2012 CLA INSTITUTIONAL REPORT

Your 2011-2012 results consist of two components:

- CLA Institutional Report and Appendices
- CLA Student Data File

Report

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

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)
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F Scaling Procedures (p. 30-31)
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Student Data File

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	Well Above	2.04	95	0.85	3.23	1128
Performance Task	Well Above	2.82	98	1.54	4.10	1121
Analytic Writing Task	Near	0.80	81	-0.41	2.01	1130
Make-an-Argument	Near	0.73	78	-0.56	2.02	1113
Critique-an-Argument	Near	0.71	81	-0.44	1.86	1148

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	10	1230	79	1120	1329	141
Performance Task	5	1291	91	1176	1329	146
Analytic Writing Task	5	1170	53	1090	1224	120
Make-an-Argument	5	1151	51	1029	1255	148
Critique-an-Argument	5	1189	57	1091	1217	139
EAA	10	1025	38	900	1170	169

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	48	1012	34	917	1090	143
Performance Task	23	1024	40	894	1113	150
Analytic Writing Task	25	1001	26	964	1085	139
Make-an-Argument	25	1000	25	898	1132	171
Critique-an-Argument	25	1002	31	901	1091	147
EAA	48	903	13	830	990	141

3.4 Student Sample Summary

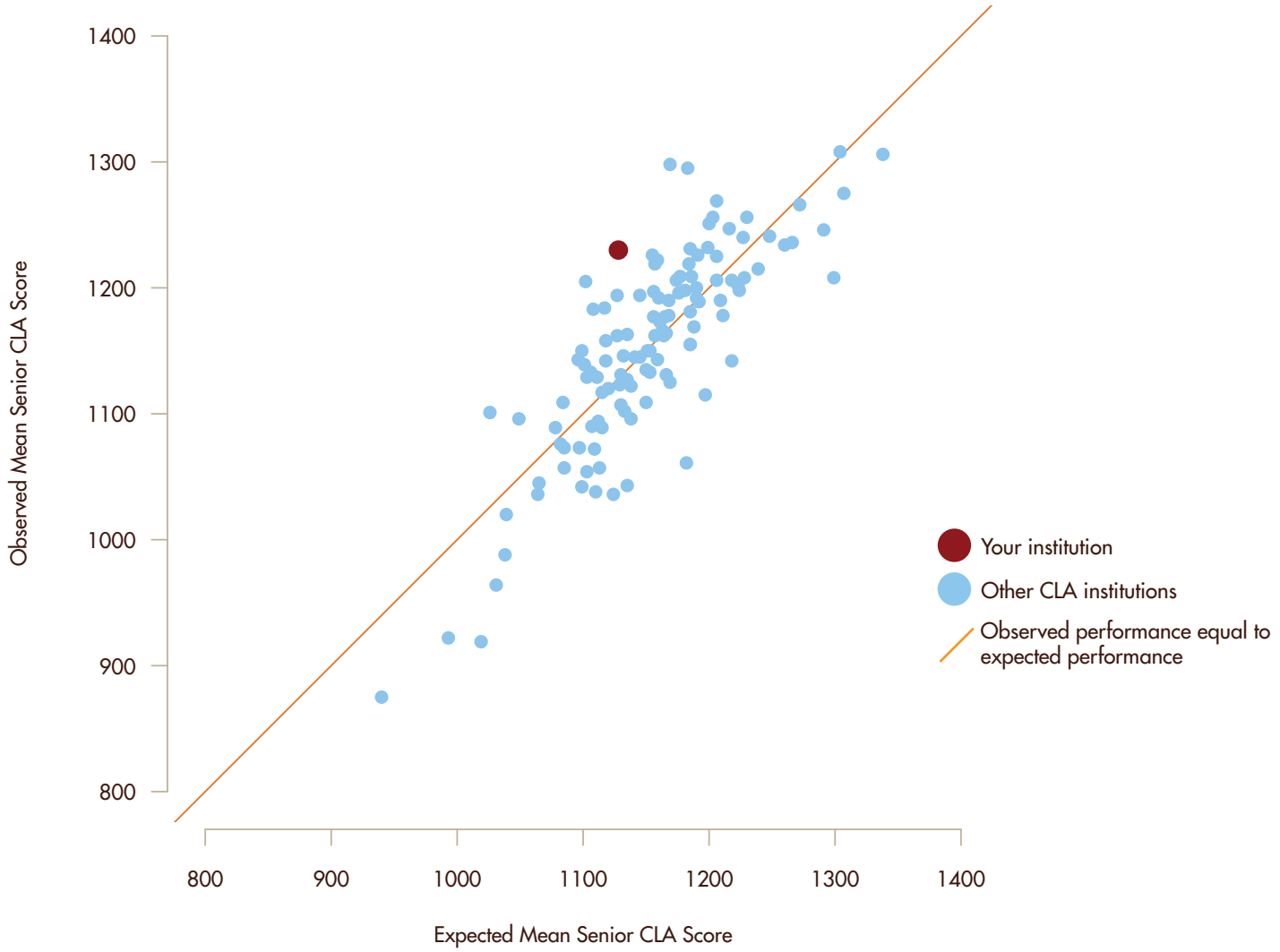
	Number of Freshmen	Freshman Percentage	Average Freshman Percentage Across Schools*	Number of Seniors	Senior Percentage	Average Senior Percentage Aross Schools
Transfer						
Transfer Students	0	0	N/A	2	20	17
Non-Transfer Students	48	100	N/A	8	80	83
Gender						
Male	12	25	38	1	10	36
Female	36	75	61	9	90	63
Decline to State	0	0	1	0	0	1
Primary Language						
English Primary Language	18	38	87	7	70	87
Other Primary Language	30	63	13	3	30	13
Field of Study						
Sciences and Engineering	7	15	22	2	20	21
Social Sciences	10	21	12	1	10	18
Humanities and Languages	5	10	11	5	50	17
Business	4	8	12	0	0	15
Helping / Services	15	31	26	1	10	22
Undecided / Other / N/A	7	15	17	1	10	7
Race / Ethnicity						
American Indian / Alaska Native	0	0	1	0	0	1
Asian / Pacific Islander	7	15	7	1	10	7
Black, Non-Hispanic	3	6	14	0	0	10
Hispanic	32	67	15	3	30	11
White, Non-Hispanic	4	8	59	6	60	63
Other	2	4	3	0	0	4
Decline to State	0	0	2	0	0	4
Parent Education						
Less than High School	20	42	6	1	10	5
High School	16	33	23	3	30	16
Some College	9	19	24	3	30	28
Bachelor's Degree	1	2	28	2	20	29
Graduate or Professional Degree	2	4	20	1	10	22

* Average percentages across schools are not reported by transfer status because institutions do not necessarily define freshman transfers the same way.

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

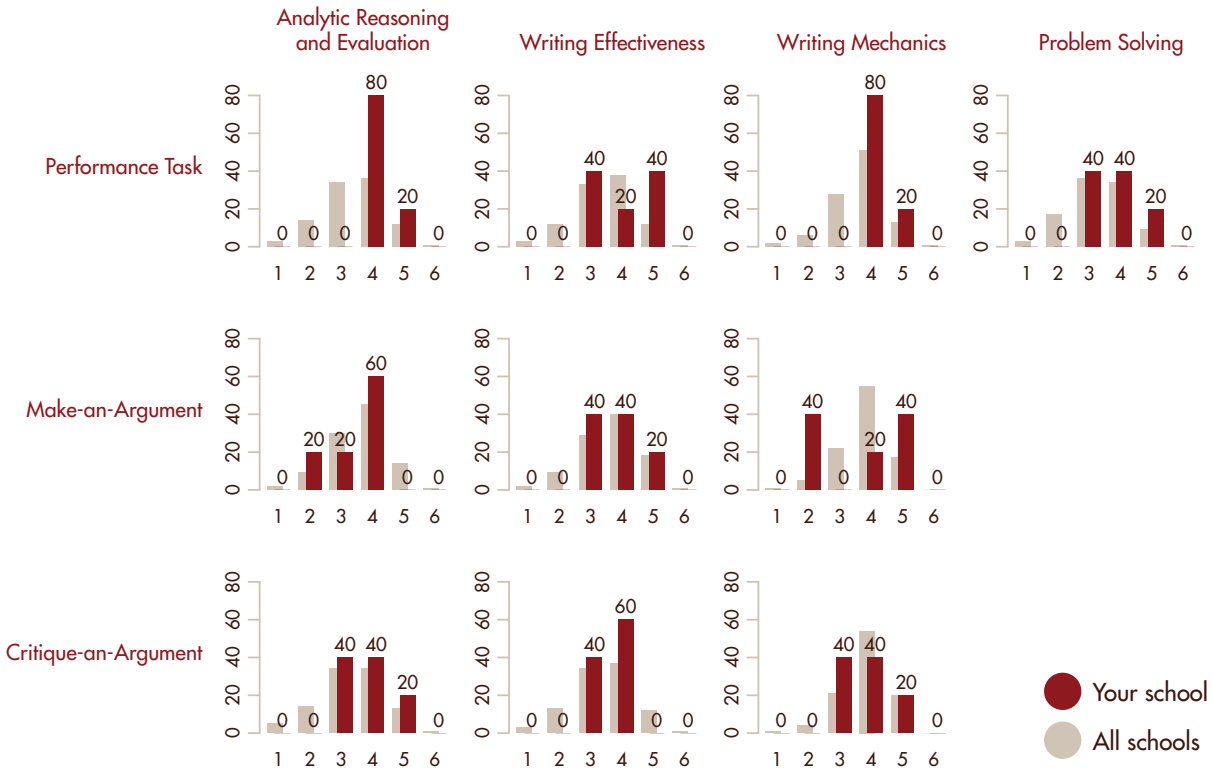


* Due to the low statistical reliability of small sample sizes, schools that tested fewer than 50 students are not included in Figure 3.5.

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.

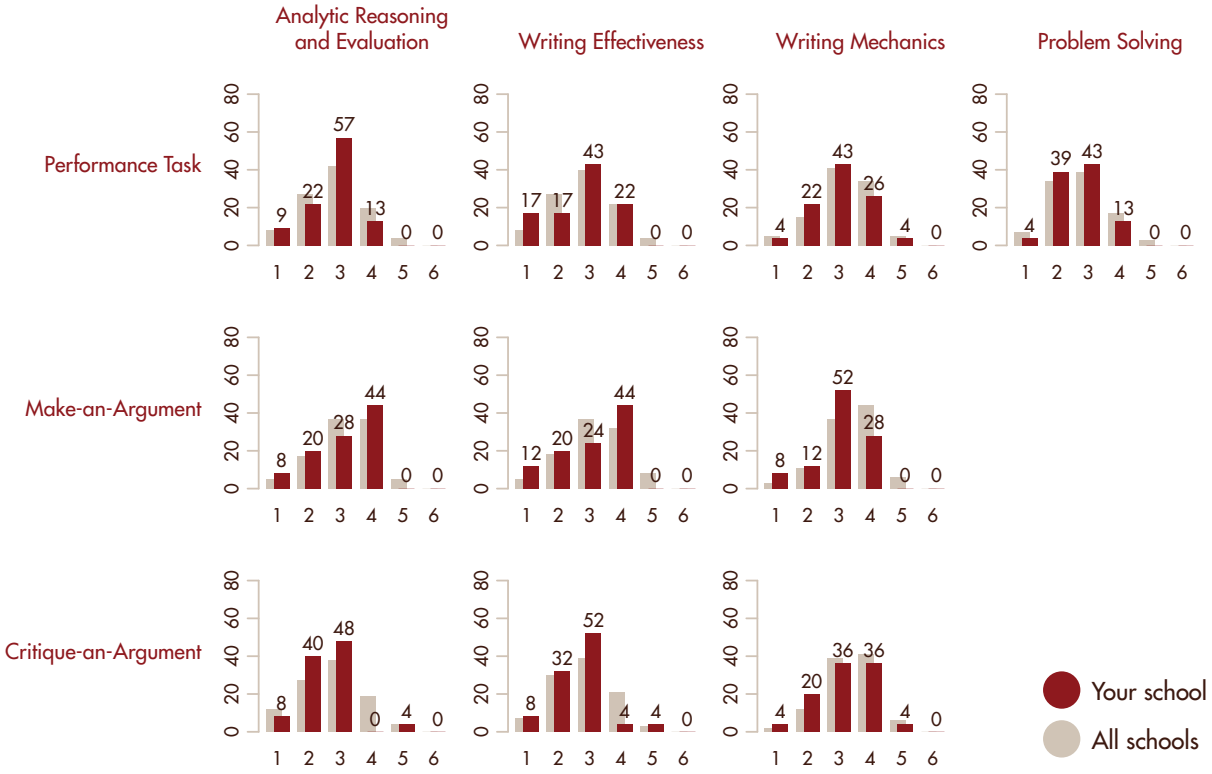
3.6 Seniors: Distribution of Subscores



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	4.2	3.4	4.0	3.5	4.2	3.7	3.8	3.3
	Standard Deviation	0.4	0.9	1.0	0.9	0.4	0.8	0.8	0.9
Make-an-Argument	Mean	3.4	3.6	3.8	3.7	3.6	3.8		
	Standard Deviation	0.9	0.8	0.8	0.9	1.5	0.7		
Critique-an-Argument	Mean	3.8	3.4	3.6	3.5	3.8	3.9		
	Standard Deviation	0.8	0.9	0.5	0.9	0.8	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	2.7	2.9	2.7	2.9	3.0	3.2	2.7	2.7
	Standard Deviation	0.8	0.8	1.0	0.9	0.9	0.8	0.8	0.8
Make-an-Argument	Mean	3.1	3.2	3.0	3.2	3.0	3.4		
	Standard Deviation	1.0	0.8	1.1	0.9	0.9	0.8		
Critique-an-Argument	Mean	2.5	2.8	2.6	2.8	3.2	3.4		
	Standard Deviation	0.8	0.9	0.9	0.8	0.9	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

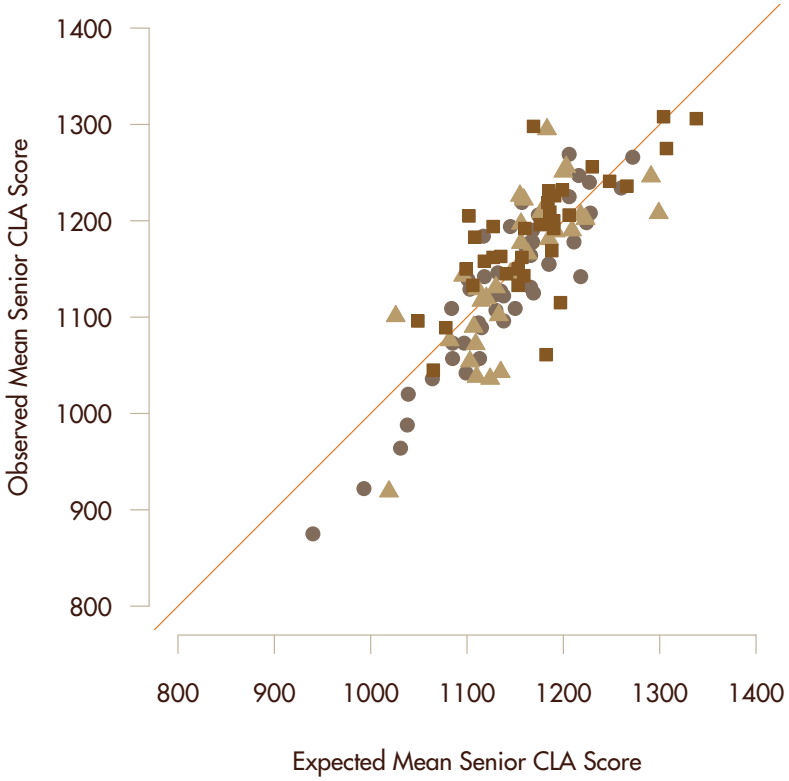
	Number of Schools*	Mean Score	25th Percentile Score	75th Percentile Score	Standard Deviation
Total CLA Score	172	1162	1108	1220	87
Performance Task	171	1165	1115	1229	95
Analytic Writing Task	172	1157	1107	1214	84
Make-an-Argument	172	1142	1084	1201	86
Critique-an-Argument	172	1170	1126	1226	91
EAA	172	1062	1009	1115	102

4.2 Freshmen

	Number of Schools*	Mean Score	25th Percentile Score	75th Percentile Score	Standard Deviation
Total CLA Score	169	1048	991	1110	93
Performance Task	167	1048	985	1117	98
Analytic Writing Task	169	1048	995	1106	89
Make-an-Argument	169	1047	997	1110	96
Critique-an-Argument	169	1046	987	1102	88
EAA	169	1031	968	1094	110

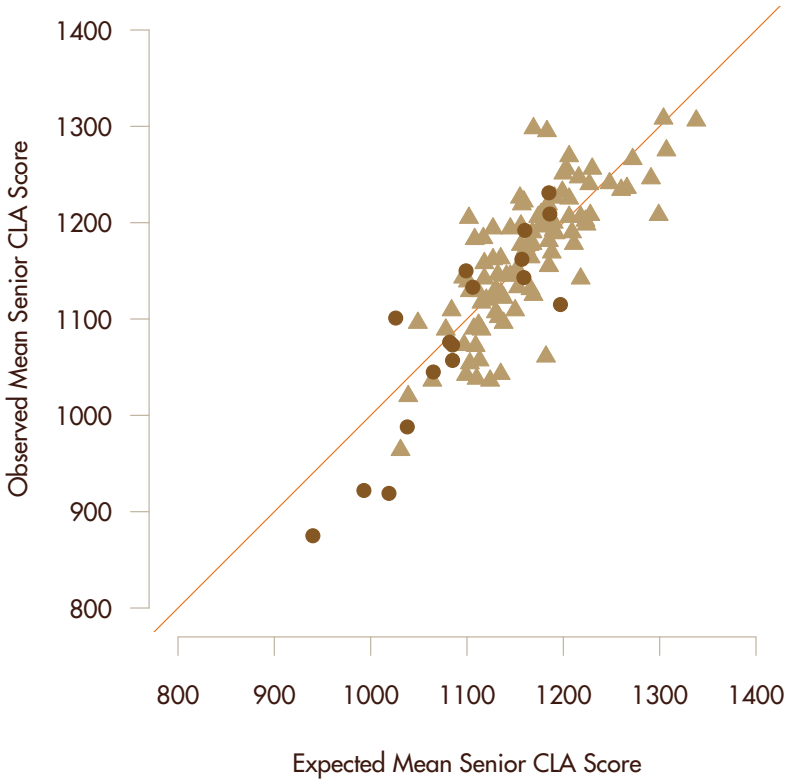
* 158 institutions tested both freshmen and seniors.

4.3 Peer Group Comparisons



Insitution Size
(Number of FTE undergraduates)

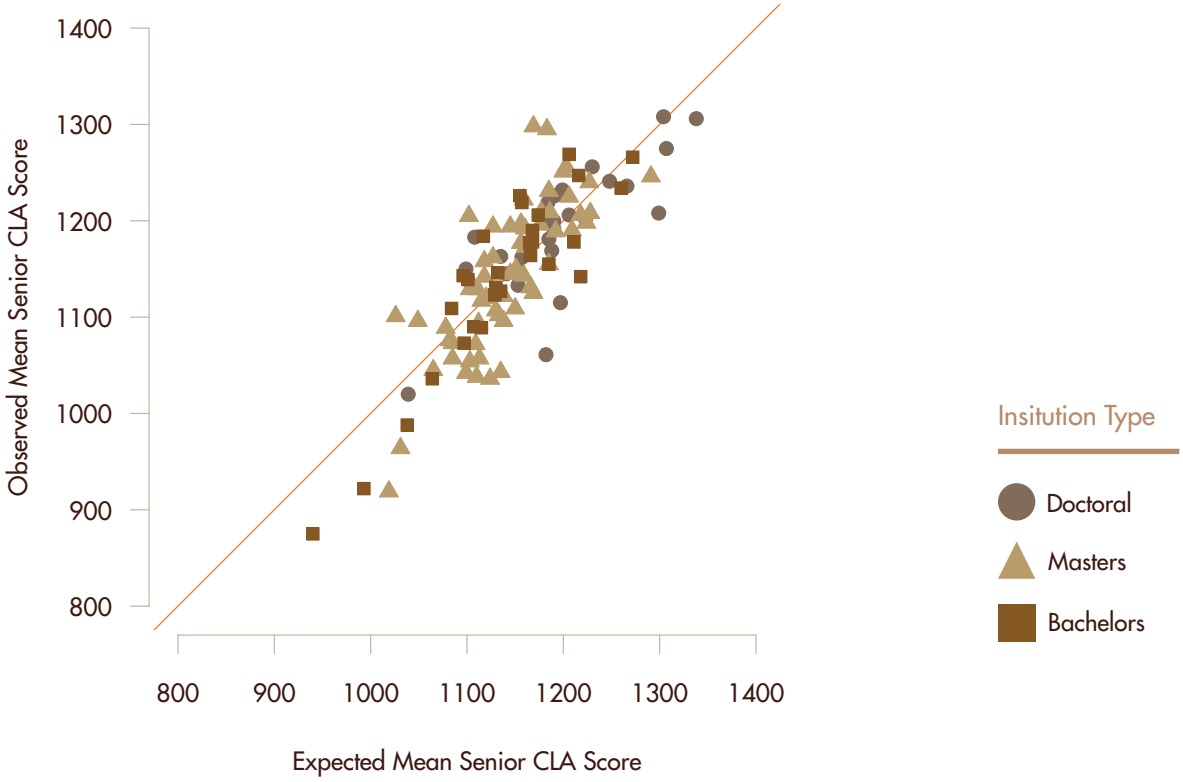
- Small (up to 3,000)
- Midsized (3,001-10,000)
- Large (10,001 or more)

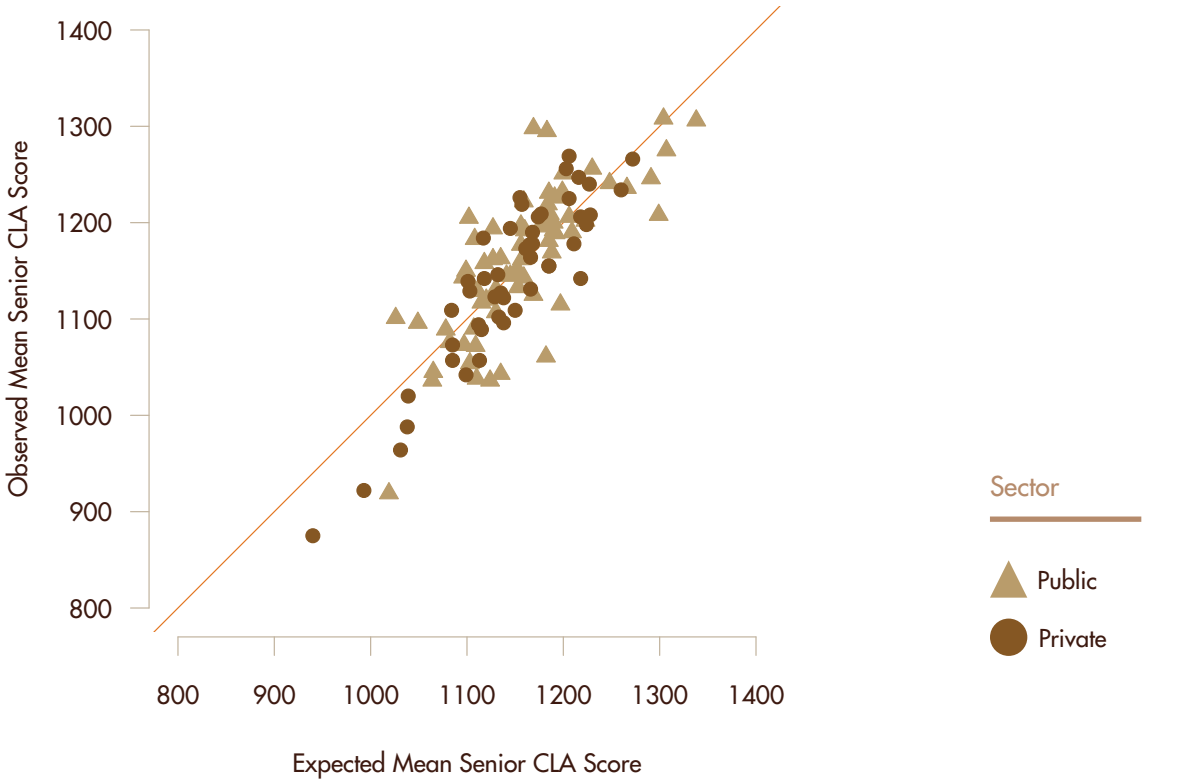


Minority-Serving Institutions

- Non-minority-serving institutions
- Minority-serving institutions

4.3 Peer Group Comparisons (continued)





Sample Representativeness

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 23 points higher than that of the entire senior class*: 1070 versus 1047 (n = 155 institutions). Further, the correlation between the average EAA score of CLA seniors and their classmates was high (r = 0.85, n = 155 institutions).

The pattern for freshmen was similar. The average EAA score of CLA freshmen was only 6 points higher than that of the entire freshman class (1032 versus 1026, over n = 156 institutions), and the correlation between the average EAA score of CLA freshmen and their classmates was similarly high (r = 0.92, n = 156 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

	Nation (n = 1,587)		CLA (n = 161)	
Carnegie Classification	Number	Percentage	Number	Percentage
Doctorate-granting Universities	275	17	30	19
Master's Colleges and Universities	619	39	81	50
Baccalaureate Colleges	693	44	50	31

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	54
Percentage Historically Black College or University (HBCU)	5	6
Mean percentage of undergraduates receiving Pell grants	31	34
Mean six-year graduation rate	51	50
Mean Barron's selectivity rating	3.6	3.1
Mean estimated median SAT score	1058	1028
Mean number of FTE undergraduate students (rounded)	3,869	6,504
Mean student-related expenditures per FTE student (rounded)	$12,330	$10,107

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
Arizona State University
Augsburg College
Averett University
Baker University
Barton College
Bellarmine University
Bethel University
Bluefield State College
Bowling Green State University
Brooklyn College
Burlington College
Cabrini College
California Baptist University
California Maritime Academy
California State Polytechnic University, Pomona
California State Polytechnic University, San Luis Obispo
California State University, Bakersfield
California State University, Channel Islands
California State University, Chico
California State University, Dominguez Hills
California State University, East Bay
California State University, Fresno
California State University, Fullerton
California State University, Long Beach
California State University, Los Angeles
California State University, Monterey Bay
California State University, Northridge
California State University, Sacramento
California State University, San Bernardino
California State University, San Marcos
California State University, Stanislaus
Carlow University
Carthage College
Central Connecticut State University
Charleston Southern University
Clarke University
College of Our Lady of the Elms
College of Saint Benedict / St. John's University
Concord University
Culver-Stockton College
Delaware State University
Dillard University
Dominican University
Earlham College
East Carolina University
Eastern Connecticut State University
Eastern Illinois University
Elizabethtown College
Emory & Henry College
Emporia State University
Fairmont State University
Fayetteville State University
Flagler College
Florida International University Honors College
Florida State University
Fort Hays State University
Glenville State College
Gordon College
Greenville College
Hardin-Simmons University
Hawaii Pacific University College of Natural and Computational Sciences
Holy Spirit College
Hong Kong Baptist University
Humboldt State University
Illinois College
Indiana University of Pennsylvania
Indiana Wesleyan University
Jacksonville State University
Jamestown College
Kansas State University
Keene State College
Kent State University
King's College
LaGrange College
Lane College
Lewis University
Louisiana Tech University
Loyola University of New Orleans
Luther College
Lynchburg College
Lynn University
Macalester College
Marshall University
McMaster University, Faculty of Social Sciences
Mills College
Minot State University
Misericordia University
Monmouth University
Morgan State University
Morningside College
Mount St. Mary's College
New Mexico State University
New York Institute of Technology
New York University - Abu Dhabi
Newman University
Nicholls State University
Norfolk State University Department of Interdisciplinary Studies
Northern Illinois University
Northwestern State University
Notre Dame Maryland University
Oakland University
Our Lady of the Lake University
Pittsburg State University
Point Loma Nazarene University
Presbyterian College
Queen's University, Faculty of Engineering and Applied Science
Ramapo College of New Jersey
Randolph-Macon College
Rhodes College
Rice University
Robert Morris University
Roger Williams University
Rutgers University-New Brunswick
Saginaw Valley State University
Saint Paul's College
Saint Xavier University
San Diego State University
San Francisco State University
San Jose State University
San Jose State University History Department
Seton Hill University
Shepherd University
Sheridan College Institute of Technology and Advanced Learning, Four-Year Bachelor's Degree Programs
Slippery Rock University
Sonoma State University
Southern Cross University
Southern Oregon University
Southwestern University
St. Ambrose University
St. Cloud State University
Stonehill College
SUNY College at Oneonta
Texas A&M University-Kingsville
Texas Lutheran University
Texas State University San Marcos
Texas Tech University
The Citadel
The City College of New York
The College of Idaho
The College of St. Scholastica
The College of Wooster
The University of British Columbia - Okanagan
The University of Montana
Transylvania University
Trinity Christian College
Truman State University
University of Baltimore
University of Bridgeport
University of Charleston
University of Evansville

University of Georgia
University of Great Falls
University of Guelph, Bachelor of Arts, Honours & Bachelor of Science, Honours
University of Hawaii at Hilo College of Business and Economics
University of Houston
University of Kentucky
University of Massachusetts, Amherst
University of Missouri - St. Louis
University of New Hampshire
University of Pittsburgh
University of Saint Mary
University of San Diego School of Business Administration
University of St. Thomas (TX)
University of Texas - Pan American
University of Texas at Arlington
University of Texas at Austin
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 the Virgin Islands
University of Vermont
University of Washington Bothell
University of Wyoming
Upper Iowa University
Ursuline College
Weber State University
Wesley College
West Liberty University
West Virginia State University
West Virginia University
West Virginia University Institute of Technology
Western Carolina University
Western Governors University
Western Michigan University
Westminster College (MO)
Westminster College (UT)
Wichita State University
William Paterson University
William Peace University
Winston-Salem State University
Wisconsin Lutheran College
Wofford College
Wright State University
Wyoming Catholic College

CWRA Schools

Abington Friends School
Akins High School
Albemarle County Public Schools
American Canyon High School
Anson New Tech High School
Asheville School
Barrie School
Bayside High School
Beaver Country Day School
Brimmer and May School
Catalina Foothills High School
Collegiate School
Colorado Academy
Crystal Springs Uplands School
Culver Academies
Currey Ingram Academy
Da Vinci Charter Academy
Eagle Rock School
First Colonial High School
Floyd Kellam High School
Frank W. Cox High School
Friends School of Baltimore
Gilmour Academy
Graettinger-Terril High School
Green Run High School
Greensboro Day School
Hebron Academy
Heritage Hall
Hillside New Tech High School
Illinois Mathematics and Science Academy
James B. Castle High School
Kahuku High & Intermediate School
Ke Kula O Samuel M Kamakau
Kempsville High School
Kimball Union Academy
Lake Forest Academy
Lakeview Academy
Landstown High School
Le Jardin Academy
Los Angeles School of Global Studies
Maryknoll School
Math, Engineering, Technology, and Science Academy (METSA)
McKinley Academy
Mead High School
Menlo School
Metairie Park Country Day School
Mid-Pacific Institute
Moorestown Friends School
Moses Brown School
Mount Vernon Presbyterian School
Mt. Spokane High School
Nanakuli High and Intermediate School
Napa High School
Napa New Tech High School
New Tech at Ruston
Newell-Fonda High School
Ocean Lakes High School
Palisades High School
Parish Episcopal School
Porterville Unified School District
Princess Anne High School
Ramsey High School
Regional School Unit 13
Renaissance Academy
Riverdale Country School
Sacramento City Unified School District
Sacramento New Tech High School
Sacred Hearts Academy
Salem High School
San Francisco Day 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
St. Mark's School
Staunton River High School
Stevenson School
Stuart Country Day School
Tallwood High School
Tech Valley High School
Tesseract School
The Haverford School
The Hotchkiss School
The Hun School of Princeton
The Lawrenceville School
The Lovett School
The Sustainability Workshop
The Webb School
Tilton School
Traverse Bay Area Intermediate School District
Trinity School of Midland
Upper Arlington High School
Vintage High School
Waianae High School
Wardlaw-Hartridge School
Warren New Tech High School
Warwick Valley High School
Watershed School
Westtown School
Wildwood School
York School

CCLA Schools

Arizona Western College
Bronx Community College
Collin College
Fanshawe College of Applied Arts and Technology, Health Science Program
Howard Community College
LaGuardia Community College
Middlesex County College
Northern Marianas 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*).

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: *www.claintheclassroom.org*).

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

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

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

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

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.

Scoring Criteria Performance Task

	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	• Asserts an insightful position and provides multiple (at least four) sound reasons to justify it. • 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).	• Organizes response in a logically cohesive way that makes it very easy to follow the writer's argument. • Provides valid and comprehensive elaboration on each reason for the writer's position.	• 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.
5	• States a thoughtful position and provides multiple (at least three) sound reasons to support it. • 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).	• Organizes response in a logically cohesive way that makes it fairly easy to follow the writer's argument. • Provides valid elaboration on each reason for the writer's position.	• 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.
4	• States a clear position and some (two to three) sound reasons to support it. • Provides some careful analysis, but it lacks consideration of the issue's complexity.	• Organizes response in a way that makes the writer's argument and its logic apparent but not obvious. • Provides valid elaboration on reasons for the writer's position several times.	• 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.
3	• States or implies a position and provides few (one to two) reasons to support it. • Provides some superficial analysis of the issue.	• Provides a limited or somewhat unclear argument. Presents relevant information, but that information is not woven into an argument. • Provides valid elaboration on reasons for the writer's position a few times.	• 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.
2	• States or implies a position and provides vague or very few reasons to support it. • Provides little analysis, and that analysis may reflect an oversimplification of the issue.	• Provides limited, invalid, overstated, or very unclear argument. May present information in a disorganized fashion or undermine own points. • 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).	• 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.
1	• States an unclear position (if any) and fails to provide reasons to support it. • Provides very little evidence of analysis. May not understand the issue.	• Fails to develop a convincing argument. The writing may be disorganized and confusing. • Fails to provide elaboration on reasons for the writer's position.	• 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.

	Analytic Reasoning & Evaluation 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.	Writing Effectiveness Constructing organized and logically cohesive arguments. Strengthening the writer's position by elaborating on deficiences in the argument (e.g., providing explanations and examples).	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	• Demonstrates accurate understanding of the complete argument. • Identifies many (at least five) deficiencies in the argument and provides analysis that goes beyond the obvious.	• Organizes response in a logically cohesive way that makes it very easy to follow the writer's critique. • Provides valid and comprehensive elaboration for each identified deficiency.	• 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.
5	• Demonstrates accurate understanding of much of the argument. • Identifies many (at least four) deficiencies in the argument.	• Organizes response in a logically cohesive way that makes it fairly easy to follow the writer's critique. • Provides valid elaboration for each identified deficiency.	• 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.
4	• Demonstrates accurate understanding of several aspects of the argument, but disregards a few. • Identifies several (at least three) deficiencies in the argument.	• Organizes response in a way that makes the writer's critique and its logic apparent but not obvious. • Provides valid elaboration on identified deficiencies several times.	• 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.
3	• Disregards several aspects of the argument or makes minor misinterpretations of the argument. • Identifies a few (two to three) deficiencies in the argument.	• Provides a limited or somewhat unclear critique. Presents relevant information, but that information is not woven into an argument. • Provides valid elaboration on identified deficiencies a few times.	• 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.
2	• Disregards or misinterprets much of the information in the argument. • Identifies very few (one to two) deficiencies in the argument and may accept unreliable evidence as credible.	• Provides limited, invalid, overstated, or very unclear critique. May present information in a disorganized fashion or undermine own points. • Any elaboration on identified deficiencies tends to be vague, irrelevant, inaccurate, or unreliable (e.g., based entirely on writer's opinion).	• 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.
1	• Disregards or severely misinterprets important information in the argument. • Fails to identify deficiencies in the argument or provides no evidence of critical analysis.	• Fails to develop a convincing critique or agrees entirely with the flawed argument. The writing may be disorganized and confusing. • Fails to provide elaboration on identified deficiencies.	• 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.

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.

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

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

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

where $\overline{CLA}_{\mathrm{fr},j}$ 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*.
- β_{0j} is the student-level intercept (equal to the mean CLA score at school *j*).
- β_{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 σ^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): $\beta_{0j} = \gamma_{00} + \gamma_{01}(\overline{EAA}_j) + \gamma_{02}(\overline{CLA}_{\text{fr},j}) + u_{0j}$ and $\beta_{1j} = \gamma_{10}$

- $\overline{CLA}_{\text{fr},j}$ is the mean freshman CLA score at school *j*.
- γ_{00} is the school-level value-added equation intercept.
- γ_{01} is the school-level value-added equation slope coefficient for senior mean EAA.
- γ_{02} is the school-level value-added equation slope coefficient for freshman mean CLA.
- γ_{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 τ_{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):

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

Estimated Parameters for Value-Added Model

	γ_{00}	γ_{10}	γ_{01}	γ_{02}	Standard Deviation
Total Score	341.48	0.40	0.46	0.31	50.11
Performance Task	331.73	0.43	0.53	0.25	60.22
Analytic Writing Task	372.61	0.36	0.38	0.36	50.48
Make-an-Argument	350.18	0.36	0.35	0.40	52.82
Critique-an-Argument	390.98	0.37	0.46	0.27	58.51

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 = $\dfrac{(\text{observed senior mean CLA score}) - (\text{expected senior mean CLA score})}{\text{standard deviation}}$

H.1 Freshman CLA Scores, 50th-99th Percentiles

Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	EAA
99	1275	1288	1262	1259	1270	1304
98	1243	1244	1242	1234	1248	1266
97	1201	1213	1216	1221	1247	1251
96	1196	1202	1201	1202	1208	1233
95	1188	1200	1193	1187	1178	1222
94	1186	1197	1174	1176	1175	1206
93	1181	1181	1171	1172	1169	1200
92	1176	1168	1169	1170	1168	1176
91	1170	1166	1159	1155	1157	1159
90	1156	1163	1151	1151	1151	1154
89	1150	1162	1149	1150	1146	1148
88	1144	1157	1146	1147	1139	1147
87	1142	1156	1143	1142	1137	1144
86	1136	1151	1134	1140	1136	1142
85	1135	1145	1133	1133	1133	1135
84	1133	1140	1132	1132	1131	1133
83	1130	1134	1130	1131	1128	1129
82	1126	1133	1125	1130	1127	1128
81	1123	1132	1124	1128	1123	1125
80	1121	1124	1115	1125	1122	1109
79	1116	1122	1114	1123	1120	1108
78	1112	1121	1112	1118	1115	1105
77	1111	1121	1108	1114	1109	1103
76	1110	1120	1107	1113	1105	1098
75	1110	1117	1106	1109	1102	1093
74	1109	1115	1105	1102	1099	1092
73	1107	1111	1104	1102	1099	1088
72	1103	1110	1103	1101	1098	1082
71	1102	1106	1101	1100	1094	1081
70	1101	1103	1097	1099	1093	1080
69	1100	1102	1096	1098	1091	1079
68	1099	1097	1095	1094	1090	1078
67	1098	1096	1094	1093	1089	1076
66	1096	1091	1092	1091	1085	1073
65	1087	1088	1087	1088	1084	1071
64	1086	1087	1081	1085	1076	1070
63	1085	1086	1079	1084	1070	1067
62	1082	1084	1073	1081	1066	1064
61	1080	1078	1072	1075	1064	1060
60	1079	1077	1070	1075	1063	1059
59	1078	1073	1069	1074	1061	1056
58	1074	1069	1067	1073	1057	1055
57	1070	1064	1065	1072	1055	1050
56	1065	1062	1061	1070	1054	1049
55	1062	1060	1060	1068	1053	1048
54	1057	1059	1057	1062	1050	1046
53	1055	1058	1055	1059	1049	1042
52	1053	1056	1047	1057	1047	1038
51	1048	1055	1044	1053	1045	1032
50	1047	1052	1043	1048	1043	1031

H.2 Freshman CLA Scores, 1st-49th Percentiles

Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	EAA
49	1042	1050	1042	1045	1039	1027
48	1038	1049	1039	1042	1036	1025
47	1037	1046	1038	1041	1035	1024
46	1036	1037	1033	1037	1034	1022
45	1035	1036	1032	1036	1032	1020
44	1034	1033	1032	1036	1031	1017
43	1034	1031	1031	1035	1028	1016
42	1033	1026	1029	1032	1028	1015
41	1030	1025	1028	1029	1027	1013
40	1027	1024	1027	1028	1025	1012
39	1026	1021	1023	1025	1022	1011
38	1025	1018	1021	1023	1020	1010
37	1023	1014	1020	1022	1017	1009
36	1017	1013	1019	1019	1013	1005
35	1014	1011	1017	1015	1010	997
34	1012	1008	1013	1013	1008	993
33	1009	1004	1013	1012	1005	992
32	1004	997	1012	1011	1004	988
31	1000	995	1010	1010	1002	987
30	998	993	1007	1008	1001	984
29	997	990	1005	1005	1000	982
28	995	988	1004	1005	993	978
27	994	986	1003	1004	992	977
26	992	985	1000	1002	987	972
25	989	984	993	997	984	969
24	988	982	993	996	982	968
23	983	980	992	987	976	961
22	980	978	981	983	975	954
21	978	971	980	982	974	951
20	975	964	978	980	973	946
19	974	961	976	976	972	936
18	969	958	967	970	971	932
17	963	957	966	966	962	924
16	961	955	961	964	961	921
15	958	951	959	950	956	917
14	949	946	956	948	954	916
13	934	927	954	939	949	903
12	929	921	946	933	941	896
11	926	919	945	923	931	894
10	924	917	928	914	923	880
9	917	901	920	903	915	865
8	916	893	918	902	911	864
7	900	878	907	900	904	857
6	890	874	897	899	900	853
5	883	861	891	882	887	852
4	871	851	888	875	881	835
3	863	837	870	860	876	833
2	835	811	838	794	839	742
1	773	753	793	758	804	703

H.3 Senior CLA Scores, 50th-99th Percentiles

Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	EAA
99	1354	1379	1370	1315	1485	1428
98	1327	1360	1326	1291	1347	1292
97	1313	1325	1316	1285	1337	1276
96	1308	1323	1302	1284	1323	1272
95	1304	1318	1292	1277	1311	1253
94	1295	1310	1278	1258	1306	1242
93	1287	1307	1268	1255	1285	1231
92	1275	1306	1266	1254	1278	1225
91	1266	1290	1265	1253	1276	1195
90	1264	1279	1258	1249	1272	1192
89	1258	1274	1247	1244	1263	1180
88	1257	1271	1244	1238	1262	1175
87	1256	1269	1243	1234	1256	1170
86	1251	1266	1242	1233	1254	1160
85	1246	1260	1241	1230	1253	1158
84	1241	1254	1236	1228	1252	1154
83	1236	1253	1232	1226	1250	1150
82	1234	1249	1231	1224	1243	1148
81	1232	1246	1226	1220	1236	1143
80	1231	1245	1225	1219	1235	1141
79	1228	1242	1223	1216	1233	1133
78	1226	1238	1222	1214	1232	1132
77	1225	1237	1218	1206	1230	1124
76	1223	1234	1217	1203	1229	1123
75	1221	1229	1214	1202	1228	1116
74	1219	1226	1213	1198	1222	1114
73	1217	1225	1208	1196	1218	1111
72	1216	1222	1206	1195	1217	1109
71	1215	1218	1205	1189	1217	1106
70	1209	1215	1202	1188	1216	1104
69	1208	1210	1198	1187	1213	1099
68	1207	1210	1197	1185	1212	1097
67	1206	1209	1195	1182	1211	1095
66	1205	1208	1193	1180	1209	1094
65	1200	1207	1191	1179	1208	1090
64	1199	1205	1190	1178	1207	1089
63	1198	1204	1189	1175	1205	1088
62	1196	1204	1188	1174	1203	1086
61	1194	1203	1185	1173	1199	1085
60	1192	1202	1182	1172	1197	1084
59	1190	1198	1181	1170	1193	1082
58	1187	1197	1179	1164	1190	1079
57	1184	1194	1178	1163	1189	1077
56	1183	1189	1176	1162	1187	1076
55	1181	1186	1172	1161	1186	1074
54	1178	1183	1171	1154	1184	1073
53	1177	1179	1170	1153	1181	1069
52	1175	1178	1169	1152	1180	1068
51	1173	1175	1168	1151	1179	1063
50	1166	1173	1166	1150	1176	1062

H.4 Senior CLA Scores, 1st-49th Percentiles

Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	EAA
49	1164	1172	1164	1148	1175	1056
48	1163	1171	1162	1146	1172	1053
47	1162	1168	1160	1145	1168	1049
46	1158	1160	1157	1144	1166	1044
45	1155	1158	1156	1141	1163	1043
44	1153	1156	1154	1140	1162	1042
43	1150	1153	1152	1138	1159	1038
42	1146	1152	1150	1138	1158	1031
41	1145	1147	1149	1137	1157	1030
40	1144	1145	1148	1136	1156	1029
39	1143	1144	1146	1133	1154	1026
38	1142	1140	1146	1131	1152	1025
37	1139	1139	1145	1130	1148	1024
36	1137	1139	1140	1127	1146	1023
35	1133	1138	1135	1121	1141	1022
34	1132	1137	1132	1119	1139	1021
33	1131	1135	1126	1117	1137	1019
32	1129	1131	1123	1114	1135	1018
31	1127	1128	1120	1111	1133	1017
30	1125	1125	1115	1101	1132	1016
29	1122	1124	1114	1099	1130	1015
28	1120	1120	1112	1098	1129	1014
27	1115	1119	1109	1090	1128	1012
26	1109	1117	1107	1085	1127	1009
25	1107	1112	1104	1081	1124	1006
24	1104	1101	1098	1079	1123	1004
23	1102	1099	1095	1076	1114	1003
22	1101	1093	1092	1074	1109	1000
21	1096	1089	1089	1072	1107	993
20	1095	1081	1088	1071	1106	987
19	1094	1076	1085	1070	1100	986
18	1090	1074	1083	1068	1098	982
17	1085	1072	1082	1067	1095	974
16	1079	1063	1080	1064	1089	970
15	1073	1060	1076	1052	1084	965
14	1067	1057	1073	1047	1079	955
13	1061	1054	1070	1046	1075	954
12	1057	1051	1063	1044	1070	953
11	1054	1050	1059	1040	1069	949
10	1045	1042	1057	1029	1067	943
9	1042	1037	1047	1020	1054	933
8	1038	1028	1045	1010	1053	920
7	1036	1024	1031	1006	1045	894
6	1020	1017	1020	1001	1021	893
5	1002	982	996	991	995	861
4	988	980	970	986	961	857
3	922	913	935	915	933	853
2	875	846	905	874	896	778
1	837	841	832	795	769	750

H.5 Value-Added Scores, 50th-99th Percentiles

Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument
99	3.25	3.15	3.71	2.35	4.92
98	2.23	2.50	2.02	1.82	1.70
97	2.17	2.48	2.00	1.81	1.63
96	2.05	2.07	1.49	1.68	1.44
95	1.50	2.04	1.40	1.66	1.34
94	1.50	1.69	1.38	1.63	1.34
93	1.35	1.45	1.35	1.39	1.09
92	1.34	1.33	1.31	1.35	1.06
91	1.27	1.27	1.19	1.30	1.04
90	1.24	1.27	1.11	1.25	0.95
89	1.14	1.19	1.11	1.24	0.93
88	1.04	1.02	1.06	1.22	0.91
87	1.01	1.02	1.04	1.22	0.88
86	0.98	1.00	1.00	1.13	0.87
85	0.93	0.95	0.94	1.02	0.81
84	0.92	0.94	0.86	1.01	0.80
83	0.81	0.89	0.83	0.99	0.79
82	0.80	0.88	0.81	0.94	0.77
81	0.77	0.83	0.79	0.79	0.71
80	0.76	0.81	0.69	0.74	0.71
79	0.74	0.79	0.68	0.74	0.68
78	0.71	0.70	0.68	0.73	0.67
77	0.70	0.68	0.65	0.72	0.67
76	0.69	0.66	0.59	0.69	0.60
75	0.64	0.62	0.57	0.66	0.58
74	0.63	0.58	0.56	0.60	0.57
73	0.61	0.53	0.51	0.53	0.56
72	0.60	0.52	0.50	0.49	0.56
71	0.53	0.51	0.49	0.45	0.54
70	0.52	0.50	0.45	0.42	0.51
69	0.50	0.46	0.44	0.42	0.49
68	0.49	0.44	0.42	0.40	0.44
67	0.45	0.40	0.39	0.37	0.42
66	0.45	0.35	0.39	0.36	0.38
65	0.41	0.35	0.37	0.35	0.35
64	0.40	0.33	0.34	0.35	0.35
63	0.38	0.29	0.33	0.33	0.33
62	0.33	0.28	0.28	0.31	0.29
61	0.29	0.24	0.28	0.30	0.28
60	0.24	0.23	0.28	0.27	0.24
59	0.23	0.22	0.28	0.25	0.23
58	0.21	0.21	0.21	0.23	0.20
57	0.20	0.20	0.19	0.19	0.17
56	0.19	0.17	0.15	0.18	0.14
55	0.08	0.15	0.11	0.18	0.13
54	0.07	0.15	0.09	0.17	0.11
53	0.06	0.10	0.09	0.17	0.09
52	0.04	0.06	0.08	0.13	0.08
51	0.03	0.00	0.07	0.13	0.06
50	0.01	0.00	0.04	0.09	0.05

H.6 Value-Added Scores, 1st-49th Percentiles

Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument
49	0.00	0.00	0.04	0.09	0.04
48	-0.01	-0.01	0.01	0.07	0.04
47	-0.03	-0.05	-0.05	0.05	0.00
46	-0.05	-0.11	-0.07	0.03	-0.01
45	-0.06	-0.11	-0.08	0.00	-0.05
44	-0.08	-0.14	-0.11	-0.03	-0.08
43	-0.11	-0.14	-0.14	-0.08	-0.13
42	-0.15	-0.16	-0.15	-0.17	-0.18
41	-0.15	-0.16	-0.18	-0.17	-0.18
40	-0.23	-0.18	-0.18	-0.23	-0.20
39	-0.24	-0.24	-0.19	-0.24	-0.22
38	-0.30	-0.24	-0.22	-0.24	-0.23
37	-0.33	-0.27	-0.24	-0.28	-0.25
36	-0.34	-0.29	-0.25	-0.28	-0.25
35	-0.38	-0.34	-0.28	-0.31	-0.27
34	-0.38	-0.35	-0.28	-0.32	-0.30
33	-0.40	-0.35	-0.29	-0.33	-0.30
32	-0.41	-0.37	-0.30	-0.36	-0.33
31	-0.41	-0.40	-0.31	-0.36	-0.35
30	-0.48	-0.42	-0.37	-0.38	-0.35
29	-0.51	-0.44	-0.39	-0.40	-0.41
28	-0.52	-0.45	-0.39	-0.43	-0.42
27	-0.52	-0.48	-0.43	-0.44	-0.46
26	-0.55	-0.50	-0.44	-0.47	-0.46
25	-0.56	-0.52	-0.51	-0.53	-0.51
24	-0.60	-0.53	-0.52	-0.56	-0.54
23	-0.61	-0.53	-0.54	-0.61	-0.55
22	-0.64	-0.62	-0.61	-0.67	-0.57
21	-0.64	-0.63	-0.61	-0.73	-0.58
20	-0.66	-0.64	-0.64	-0.74	-0.71
19	-0.70	-0.83	-0.68	-0.77	-0.76
18	-0.74	-0.89	-0.68	-0.78	-0.76
17	-0.82	-0.95	-0.79	-0.85	-0.79
16	-0.84	-0.98	-0.84	-0.85	-0.79
15	-0.90	-1.00	-0.88	-0.91	-0.85
14	-0.99	-1.03	-0.94	-0.98	-0.89
13	-1.06	-1.11	-1.03	-1.01	-1.00
12	-1.14	-1.18	-1.08	-1.02	-1.03
11	-1.19	-1.34	-1.08	-1.06	-1.08
10	-1.34	-1.38	-1.17	-1.20	-1.17
9	-1.34	-1.44	-1.23	-1.30	-1.25
8	-1.43	-1.46	-1.33	-1.53	-1.28
7	-1.52	-1.57	-1.62	-1.66	-1.44
6	-1.63	-1.62	-1.67	-1.72	-1.46
5	-1.82	-1.79	-1.75	-1.89	-1.50
4	-1.99	-1.87	-1.99	-2.16	-1.70
3	-2.42	-1.89	-2.45	-2.16	-1.70
2	-2.75	-2.46	-3.64	-3.10	-3.91
1	-2.88	-2.49	-3.66	-4.09	-4.10

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.

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