cla

University of Wisconsin
La Crosse

Your 2010-2011 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.

Appendices

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

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.

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 teaching/learning.

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 judged 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.

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 value-added 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 + Verbal, 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.

Value-Added and Precision Estimates

3.1

	Performance Level	Value-Added Score	Value-Added Percentile Rank	Confidence Interval Lower Bound	Confidence Interval Upper Bound
Total CLA Score	Above	1.59	96	1	2.18
Performance Task	Above	1.7	96	1.01	2.39
Analytic Writing Task	Above	1.04	85	0.35	1.73
Make-an-Argument	Near	0.72	75	0	1.44
Critique-an-Argument	Above	1.14	88	0.4	1.88

Seniors: Unadjusted Performance

3.2

	Number of Seniors	Mean Score	Mean Score Percentile Rank	25th Percentile Score	75th Percentile Score	Standard Deviation
Total CLA Score	107	1285	94	1224	1355	124
Performance Task	55	1306	96	1251	1435	134
Analytic Writing Task	52	1263	91	1200	1334	110
Make-an-Argument	52	1248	89	1171	1328	129
Critique-an-Argument	52	1279	89	1209	1360	133
EAA	107	1181	85	1110	1260	97

Freshmen: Unadjusted Performance

3.3

|	Number of Freshmen	Mean Score	Mean Score Percentile Rank	25th Percentile Score	75th Percentile Score	Standard Deviation
Total CLA Score	110	1078	62	1000	1159	116
Performance Task	54	1072	61	972	1159	141
Analytic Writing Task	56	1084	63	1025	1156	86
Make-an-Argument	56	1104	71	1032	1181	106
Critique-an-Argument	56	1063	56	966	1144	118
EAA	110	1125	76	1070	1150	100

Student Sample Summary

3.4

	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	1	0	0	16
Non-Transfer Students	110	100	99	107	100	84
Gender						
Male	35	32	37	23	21	35
Female	75	68	62	84	79	65
Decline to State	0	0	0	0	0	1
Primary Language						
English Primary Language	110	100	90	107	100	90
Other Primary Language	0	0	11	0	0	10
Field of Study						
Sciences and Engineering	12	11	21	23	21	18
Social Sciences	15	14	12	20	19	18
Humanities and Languages	5	5	12	12	11	18
Business	12	11	11	17	16	18
Helping / Services	31	28	26	33	31	23
Undecided / Other / N/A	35	32	18	2	2	6
Race / Ethnicity						
American Indian / Alaska Native	0	0	1	0	0	1
Asian / Pacific Islander	2	2	6	3	3	6
Black, Non-Hispanic	2	2	13	0	0	10
Hispanic	3	3	12	1	1	10
White, Non-Hispanic	102	93	63	96	90	67
Other	0	0	4	2	2	4
Decline to State	1	1	2	5	5	3
Parent Education						
Less than High School	0	0	4	0	0	3
High School	13	12	21	13	12	17
Some College	26	24	24	31	29	27
Bachelor's Degree	41	37	29	32	30	29
Graduate or Professional Degree	30	27	22	31	29	23

Performance Compared to Other Institutions

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

3.5 Observed CLA Scores vs. Expected CLA Scores
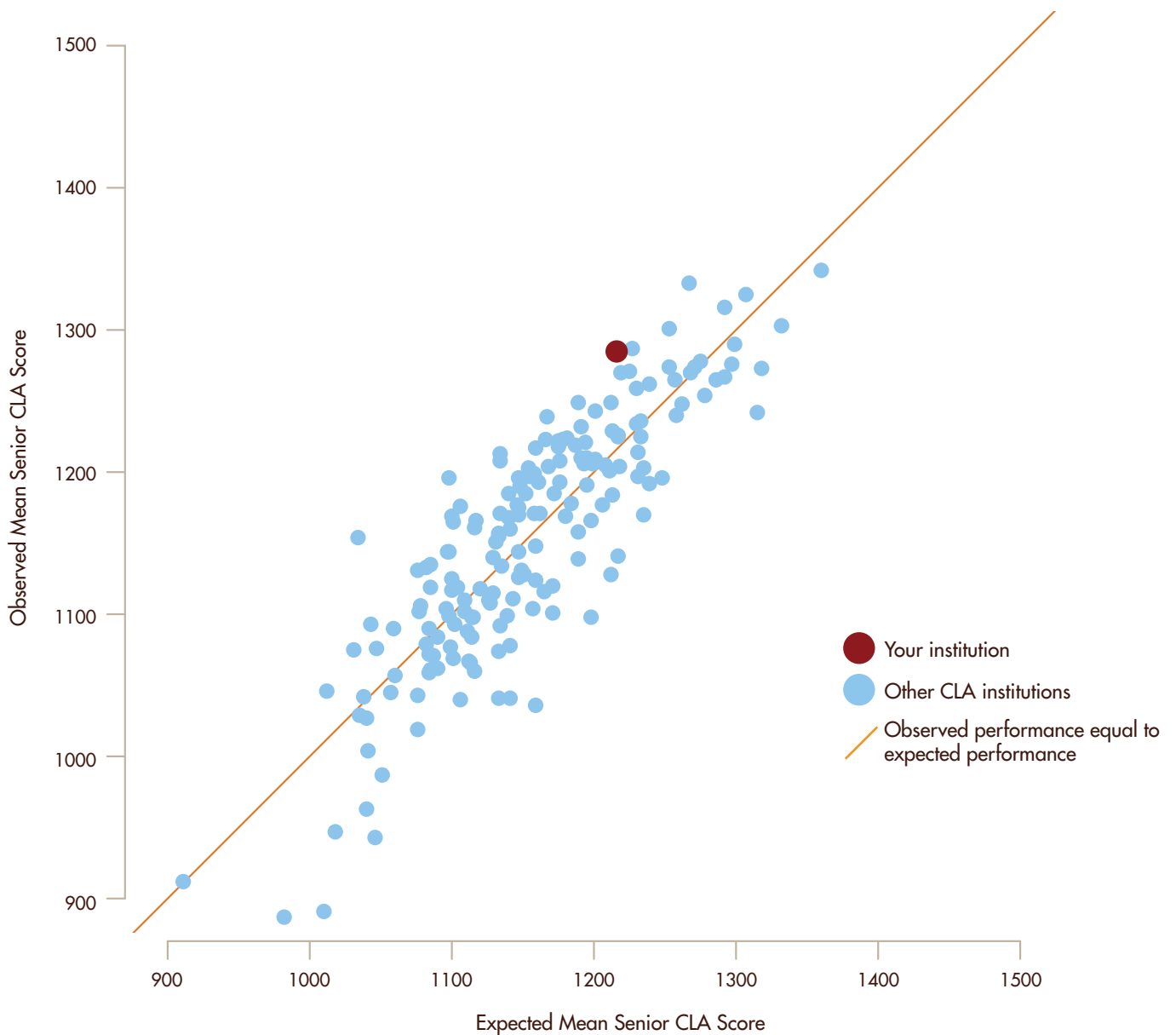
Subscore Distributions

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 subscores. 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.
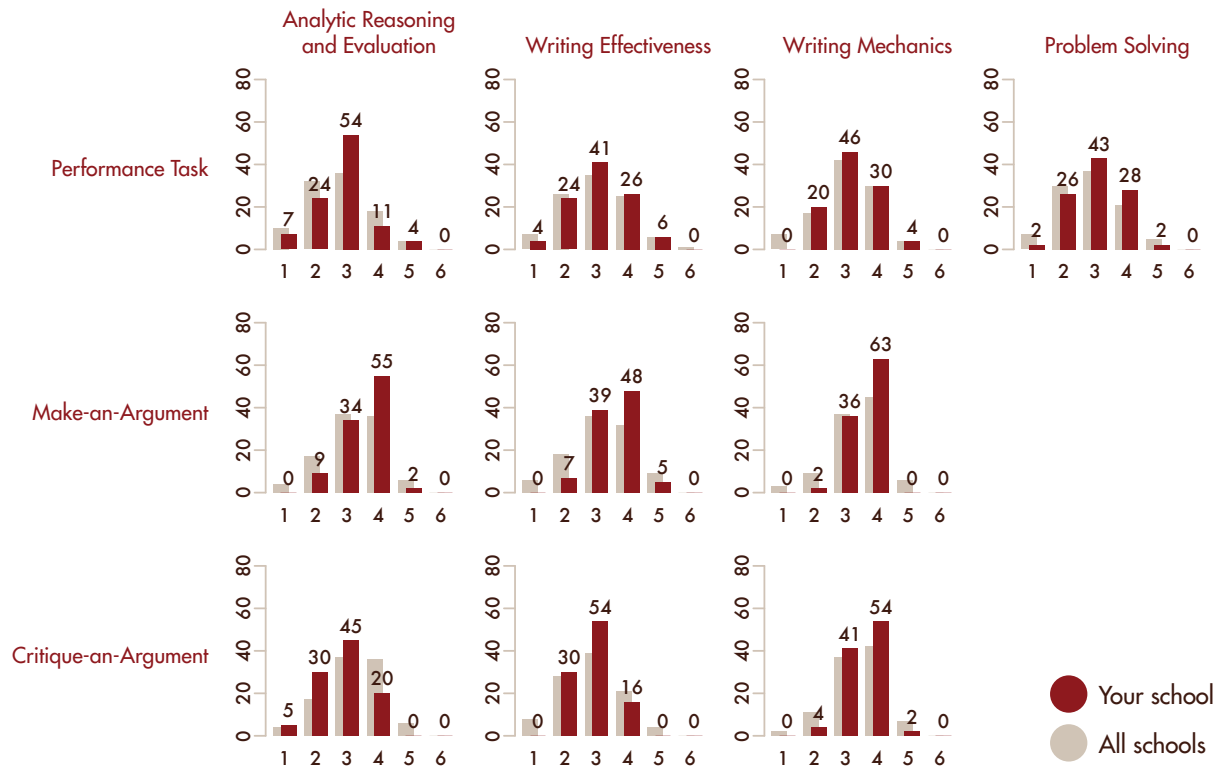
3.6 Seniors: Distribution of Subscores
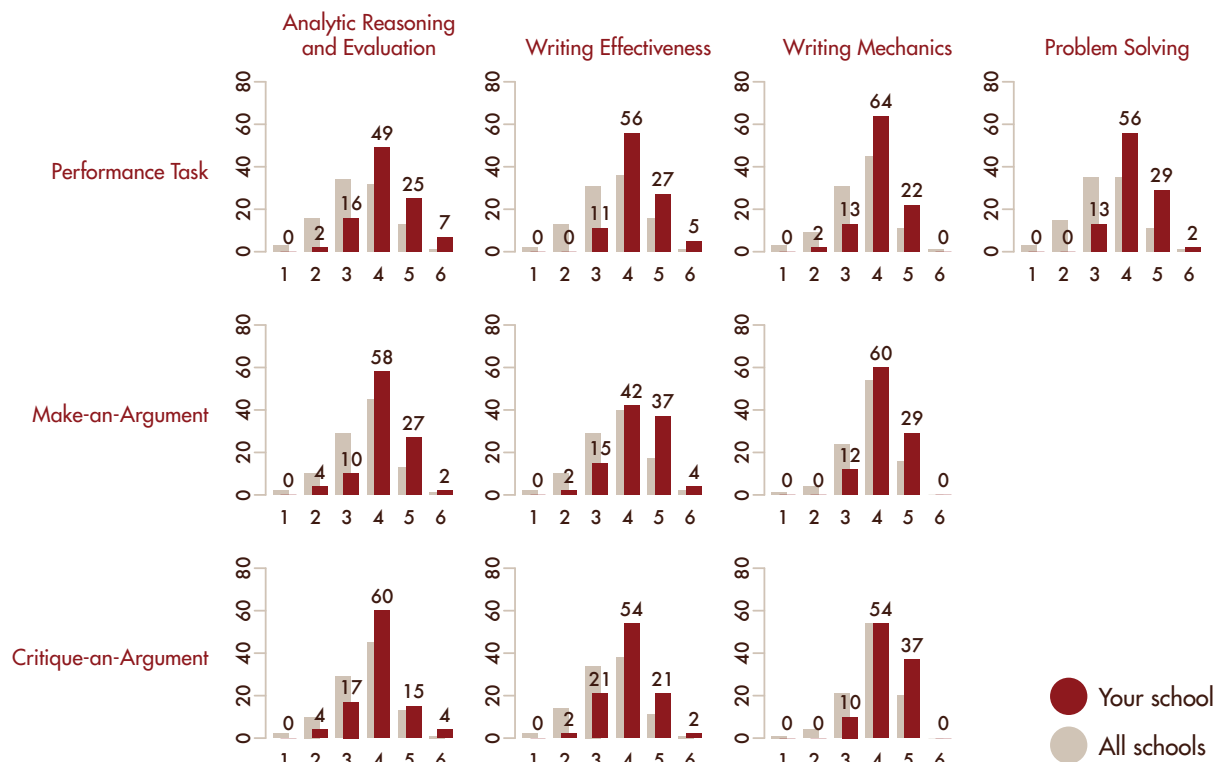
3.7 Seniors: Summary Subscore Statistics

		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	4.3	3.5	4.1	3.5	4.2	3.4
	Standard Deviation	0.9	0.9	0.7	0.9	0.7	0.8	0.7	0.9
Make-an-Argument	Mean	4.1	3.6	4.3	3.7	4.2	3.8		
	Standard Deviation	0.8	0.8	0.8	0.9	0.6	0.7		
Critique-an-Argument	Mean	4.0	3.3	4.0	3.4	4.3	3.9		
	Standard Deviation	0.8	0.9	0.8	0.9	0.6	0.7		

3.8 Freshmen: Distribution of Subscores

	Analytic Reasoning and Evaluation	Writing Effectiveness	Writing Mechanics	Problem Solving

Performance Task
- Analytic Reasoning and Evaluation: 7, 24, 54, 11, 4, 0
- Writing Effectiveness: 4, 24, 41, 26, 6, 0
- Writing Mechanics: 20, 46, 30, 4, 0
- Problem Solving: 26, 43, 28, 2, 0

Make-an-Argument
- Analytic Reasoning and Evaluation: 0, 9, 34, 55, 2, 0
- Writing Effectiveness: 7, 39, 48, 5, 0
- Writing Mechanics: 2, 36, 63, 0, 0

Critique-an-Argument
- Analytic Reasoning and Evaluation: 5, 30, 45, 20, 0, 0
- Writing Effectiveness: 30, 54, 16, 0, 0
- Writing Mechanics: 4, 41, 54, 2, 0

● Your school
● All schools

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	2.8	2.8	3.1	3.0	3.2	3.1	3.0	2.9
	Standard Deviation	0.9	0.9	0.9	0.9	0.8	0.9	0.8	0.9
Make-an-Argument	Mean	3.5	3.2	3.5	3.2	3.6	3.4		
	Standard Deviation	0.7	0.8	0.7	0.9	0.5	0.8		
Critique-an-Argument	Mean	2.8	2.8	2.9	2.9	3.5	3.4		
	Standard Deviation	0.8	0.9	0.7	0.8	0.6	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 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

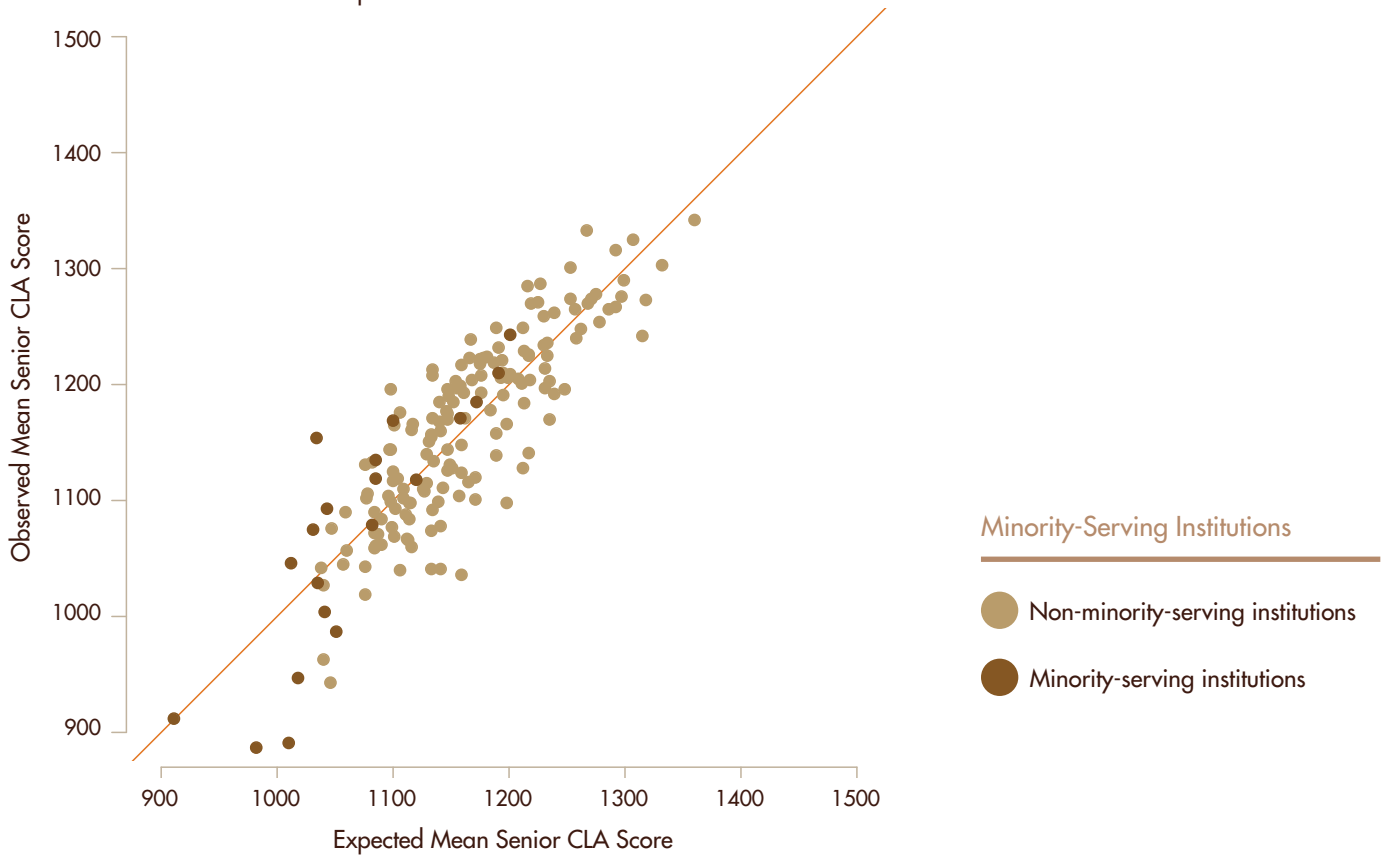|	Number of Schools *	Mean Score	25th Percentile Score	75th Percentile Score	Standard Deviation
Total CLA Score	186	1156	1098	1217	86
Performance Task	186	1157	1093	1217	91
Analytic Writing Task	186	1154	1098	1218	87
Make-an-Argument	186	1141	1087	1203	91
Critique-an-Argument	186	1165	1114	1231	90
EAA	186	1060	994	1128	105

4.2 Freshmen

	Number of Schools*	Mean Score	25th Percentile Score	75th Percentile Score	Standard Deviation
Total CLA Score	188	1050	987	1117	95
Performance Task	188	1048	982	1115	97
Analytic Writing Task	188	1052	986	1115	96
Make-an-Argument	188	1048	977	1118	100
Critique-an-Argument	188	1051	985	1121	99
EAA	188	1045	969	1117	114

* 144 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
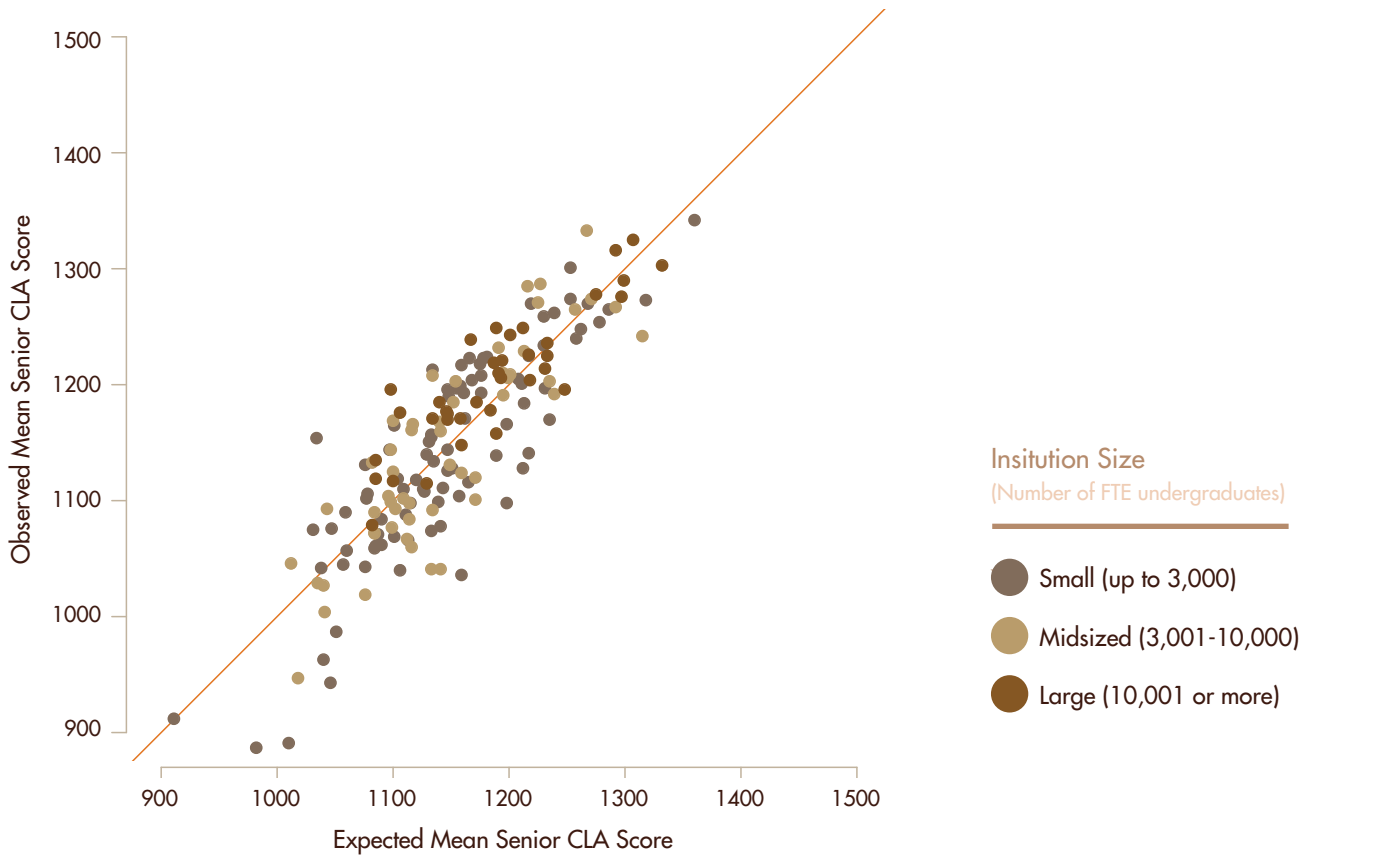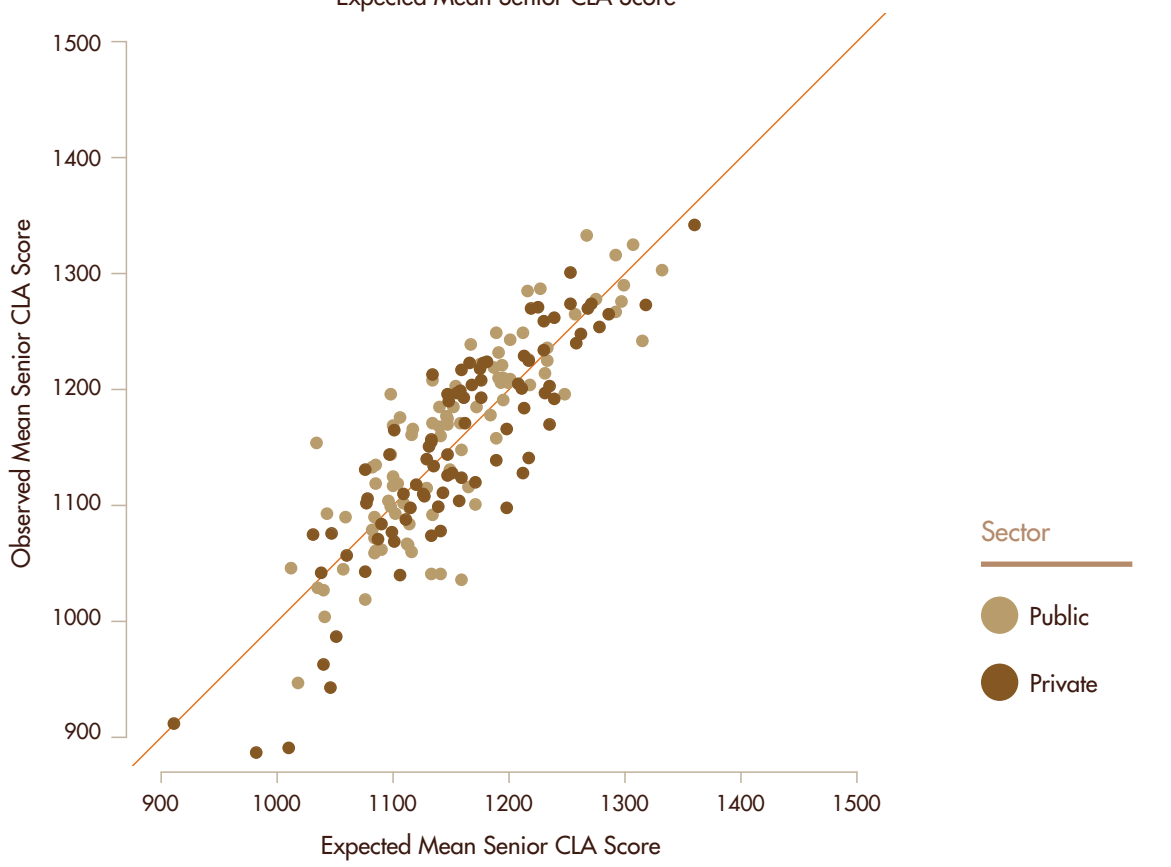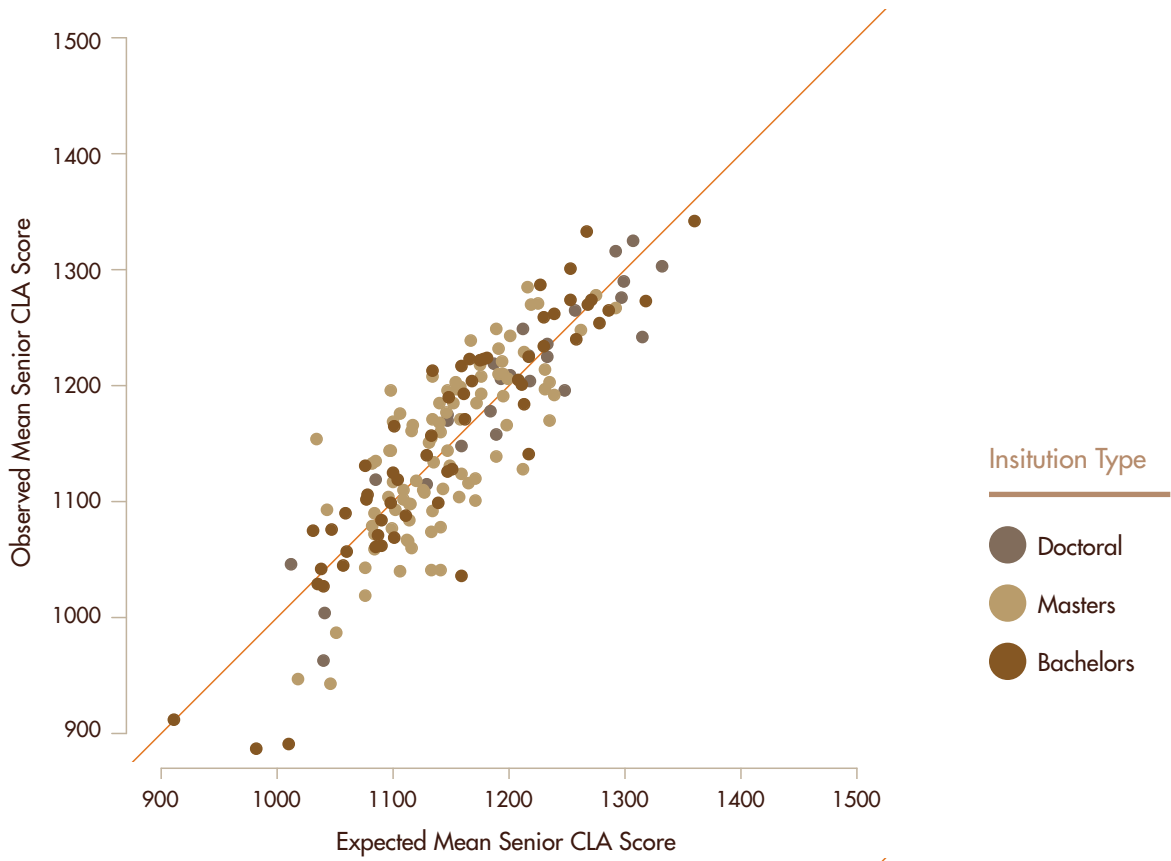
Sample Representativeness

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 13 points higher than that of the entire senior class*: 1061 versus 1048 (n = 181 institutions). Further, the correlation between the average EAA score of CLA seniors and their classmates was extremely high (r = 0.93, n = 181 institutions).

The pattern for freshmen was similar. The average EAA score of CLA freshmen was only 9 points higher than that of the entire freshman class (1045 versus 1036, over n = 175 institutions), and the correlation between the average EAA score of CLA freshmen and their classmates was similarly high (r = 0.93, n = 175 institutions).

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

* As reported by school registrars.

Carnegie Classification

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

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

5.1 Carnegie Classification of Institutional Sample

Carnegie Classification	Nation (n = 1,587)		CLA (n = 184)	
	Number	Percentage	Number	Percentage
Doctorate-granting Universities	275	17	26	14
Master's Colleges and Universities	619	39	95	52
Baccalaureate Colleges	693	44	61	33

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

School Characteristics

Table 5.2 provides comparative statistics on
some important characteristics of colleges and
universities across the nation with those of the
CLA schools, and suggests that these 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	51
Percentage Historically Black College or University (HBCU)	5	5
Mean percentage of undergraduates receiving Pell grants	31	33
Mean six-year graduation rate	51	51
Mean Barron's selectivity rating	3.6	3.3
Mean estimated median SAT score	1058	1038
Mean number of FTE undergraduate students (rounded)	3,869	6,054
Mean student-related expenditures per FTE student (rounded)	$12,330	$11,120

*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.*

School List

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
Allegheny College
Appalachian State University
Asbury University
Auburn University
Augsburg College
Aurora University
Averett University
Barton College
Bellarmine College
Beloit College
Benedictine University
Bethel University
Bluefield State 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
Cedar Crest College
Central Connecticut State University
Champlain College
Charleston Southern University
Chatham University
Claflin University

Clarke University
College of Notre Dame of Maryland
College of Saint Benedict / St. John's University
Colorado State University
Concord University
Concordia College
Delaware State University
Dillard University
Dominican University
Drake University
Eckerd College
Emory & Henry College
Emporia State University
Fairmont State University
Florida State University
Fort Hays State University
Franklin Pierce University
Georgia College & State University
Georgia State University
Glenville State College
Gordon College
Hardin-Simmons University
Hastings College
Hilbert College
Hiram College
Hope College
Humboldt State University
Illinois College
Indiana University of Pennsylvania
Indiana Wesleyan University
Jackson State University
Jacksonville State University
Jamestown College
Juniata College
Keene State College
Kent State University
LaGrange College
Lane College
Lewis University
Louisiana State University
Loyola University New Orleans
Lynchburg College
Lynn University
Macalester College
Marian University
Marshall University
McMurry University

Messiah College
Miami University - Oxford
Minneapolis College of Art and Design
Minot State University
Misericordia University
Montclair State University
Morgan State University
Morningside College
Mount Saint Mary College
Mount St. Mary's College
Nebraska Wesleyan University
Nicholls State University
North Dakota State University
Northwestern State University
Nyack College
Our Lady of the Lake University
Peace College
Pittsburg State University
Presbyterian College
Randolph-Macon College
Richard Stockton College of New Jersey
Robert Morris University
Rockford College
Rollins College
Rutgers University-New Brunswick
Saginaw Valley State University
Saint Anselm College
Saint Paul's College
Saint Xavier University
San Diego State University
San Francisco State University
San Jose State University
Seton Hill University
Shepherd University
Slippery Rock University
Sonoma State University
Southern Connecticut State University
Southern Cross University
Southern Oregon University
Southern Virginia University
Southwestern University
Springfield College
Stephens College
Stonehill College
SUNY College at Brockport
SUNY College at Buffalo
SUNY College at Cortland
SUNY College at Purchase

CLA Schools (continued)

Tarleton State University
Texas A&M International University
Texas Lutheran University
Texas Southern University
Texas State University San Marcos
The Citadel
The College of Idaho
The College of St. Scholastica
The University of Kansas
The University of Toledo
Towson University
Trinity Christian College
Truman State University
University of Alabama
University of Arkansas, Fayetteville
University of Bridgeport
University of Charleston
University of Colorado, Boulder
University of Evansville
University of Findlay
University of Georgia
University of Great Falls
University of Kentucky
University of Mary Hardin-Baylor
University of Missouri - St. Louis
University of Nebraska at Omaha
University of New Mexico
University of North Carolina at Asheville
University of North Carolina Pembroke
University of North Carolina,
   Wilmington
University of Pittsburgh
University of Southern California
University of St. Thomas (MN)
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 West Georgia
University of Wisconsin La Crosse
Upper Iowa University
Ursinus College
Ursuline College
Wagner College
Walsh College
Warner University
Washington and Jefferson College
Wesley College

West Chester University
West Liberty University
West Virginia State University
West Virginia University
West Virginia University Institute of
   Technology
Western Michigan University
Western New Mexico University
Westminster College (MO)
Westminster College (UT)
Westmont College
Wheaton College
Wichita State University
Willamette University
William Paterson University
William Woods University
Winston-Salem State University
Wisconsin Lutheran College
Wofford College
Wyoming Catholic College
Xavier University

CCLA Schools

Arizona Western College
Cecil College
Collin College
Colorado Mountain College
Dutchess Community College
Middlesex County College
Monroe Community College
Northern Marianas College
Palo Alto College
Yakima Valley Community College

CWRA Schools

A&M Consolidated High School
Akins High School
American Canyon High School
Anson New Tech High School
Asheville School
Bayside High School
Brimmer & May School
Casady School
Catalina Foothills High School
Collegiate School
Colorado Academy
Crystal Springs Uplands School
Currey Ingram Academy
Eagle Rock School
Eastern University Academy Charter School
First Colonial High School
Floyd Kellam High School
Frank W. Cox High School
Friends School of Baltimore

Gilmour Academy
Green Run High School
Heritage Hall
Hillside New Tech High School
James B. Castle High School
Kahuku High & Intermediate School
Ke Kula O Samuel M Kamakau
Kempsville High School
Kimball Union Academy
Lake Forest Academy
Landstown High School
Le Jardin Academy
Maryknoll School
Metairie Park Country Day School
Mid-Pacific Institute
Moses Brown School
Mount Vernon Presbyterian School
Nanakuli High and Intermediate School
Napa High School
Napa New Tech High School
Ocean Lakes High School
Parish Episcopal School
Princess Anne High School
Ramsey High School
Randolph-Henry High School
Renaissance Academy
Riverdale Country School
Sacramento New Tech High School
Salem High School
School of IDEAS
Severn School
Sonoma Academy
St. Andrew's School
St. George's Independent School
St. Gregory College Prep
St. Luke's School
Stevenson School
Tallwood High School
Tech Valley High School
The Bronxville School
The Hotchkiss School
The Lawrenceville School
The Lovett School
Tilton School
Traverse Bay Area Intermediate School
   District
Trinity School of Midland
Upper Arlington School District
Vintage High School
Waianae High School
Wardlaw-Hartridge School
Warren New Tech High School
Warwick Valley High School
Watershed School
Wildwood School

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 power tool in helping you and your institution target specific areas of improvement, and effectively and authentically align 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 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 better 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!

Introduction

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. On the left side of the screen are a question

and a response box. 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, analyze and organize them on multiple dimensions, and then 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 prompts: a Make-an-Argument question that asks them to support or reject a position on some issue; and a Critique-an-Argument question 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); employing varied sentence structure and advanced vocabulary.

Critique-an-Argument

A Critique-an-Argument prompt asks students, in 30 minutes, to evaluate 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. Your document library contains the following materials:

Example Document Library

- Newspaper article about the accident

- Federal Accident Report on in-flight breakups in single-engine planes

- Internal Correspondence (Pat's e-mail to you and Sally's e-mail to Pat)

- Charts relating to SwiftAir's performance characteristics

- Excerpt from 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 the 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 percent above their recommended weight for height and age.) This study sampled 50 schoolchildren, ages 5-11, 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.

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.

Still, 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 generate ideas for Make-an-Argument and Critique-an-Argument prompts and Performance Task storylines, and then contribute 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 the student to read and attend to multiple sources of information in the documents, and later questions require the student to evaluate the documents and then use their analysis 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, what pieces of information in the documents should be removed, etc. 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.

Performance Task Scoring Criteria

	Analytic Reasoning & Evaluation	Writing Effectiveness	Writing Mechanics	Problem Solving
	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.	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).	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).	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 reasoning.	• 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.

Make-an-Argument Scoring Criteria

	Analytic Reasoning & Evaluation	Writing Effectiveness	Writing Mechanics
	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.	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).	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 4) 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 3) 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 (2-3) 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 (1-2) 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.

Critique-an-Argument Scoring Criteria

	Analytic Reasoning & Evaluation	Writing Effectiveness	Writing Mechanics
	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.	Constructing organized and logically cohesive arguments. Strengthening the writer's position by elaborating on deficiences in the argument (e.g., providing explanations and examples).	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 5) 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 4) 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 3) 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 (2-3) 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 (1-2) 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.

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. After participating in training, scorers complete a reliability check where they score the same set of student responses. Scorers with low agreement or reliability (determined by comparisons of raw score means, standard deviations and correlations among the 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.

To facilitate reporting results across schools, ACT scores were 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 were 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

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 scores 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 + Verbal) 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

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

where $\overline{CLA}_{\text{fr},j}$ 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 the new 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. Second, 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 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 we repeated testing 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}
Total Score	291.98	0.41	0.40	0.42
Performance Task	309.78	0.45	0.48	0.33
Analytic Writing Task	297.26	0.37	0.38	0.43
Make-an-Argument	271.47	0.37	0.36	0.46
Critique-an-Argument	323.97	0.36	0.40	0.40

The table above shows the estimated parameters for the value-added model. Using these estimated parameters and 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 a subgroup analysis.

Freshman CLA Scores, 50th-99th Percentiles

H.1

Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	EAA
99	1276	1277	1278	1264	1292	1354
98	1244	1241	1246	1240	1274	1268
97	1221	1233	1229	1232	1225	1255
96	1215	1213	1225	1223	1219	1236
95	1205	1207	1208	1211	1216	1229
94	1202	1204	1200	1210	1210	1227
93	1191	1197	1197	1194	1193	1218
92	1180	1178	1191	1188	1183	1215
91	1179	1176	1186	1184	1181	1213
90	1175	1175	1177	1176	1171	1190
89	1166	1168	1172	1172	1164	1184
88	1160	1167	1162	1169	1162	1182
87	1153	1155	1157	1166	1160	1180
86	1150	1152	1150	1161	1155	1175
85	1137	1150	1146	1154	1150	1174
84	1134	1140	1142	1145	1144	1168
83	1132	1135	1140	1137	1138	1161
82	1131	1133	1137	1134	1130	1153
81	1130	1131	1132	1128	1128	1148
80	1128	1128	1123	1123	1126	1139
79	1124	1127	1122	1121	1125	1138
78	1122	1121	1120	1120	1124	1134
77	1121	1120	1118	1119	1123	1128
76	1117	1119	1115	1118	1122	1125
75	1116	1114	1114	1115	1119	1115
74	1115	1112	1114	1113	1115	1108
73	1112	1110	1113	1108	1114	1107
72	1110	1108	1111	1106	1110	1103
71	1107	1103	1108	1104	1108	1102
70	1105	1101	1107	1103	1106	1101
69	1100	1098	1106	1101	1104	1097
68	1097	1092	1103	1100	1101	1084
67	1094	1091	1101	1096	1097	1082
66	1092	1082	1100	1094	1092	1078
65	1089	1081	1095	1092	1090	1078
64	1083	1078	1089	1089	1086	1077
63	1079	1076	1084	1088	1084	1076
62	1077	1073	1082	1084	1081	1074
61	1076	1072	1081	1078	1080	1072
60	1074	1070	1079	1075	1075	1070
59	1073	1069	1075	1072	1073	1069
58	1072	1068	1074	1066	1071	1068
57	1069	1066	1072	1062	1070	1067
56	1068	1061	1069	1061	1063	1063
55	1060	1059	1061	1060	1059	1060
54	1056	1057	1052	1055	1054	1056
53	1056	1056	1051	1054	1052	1054
52	1055	1054	1050	1051	1048	1051
51	1053	1051	1048	1048	1046	1044
50	1051	1044	1046	1047	1043	1038

Freshman CLA Scores, 1st-49th Percentiles

Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	EAA
49	1046	1042	1041	1045	1042	1036
48	1043	1040	1039	1044	1038	1035
47	1042	1039	1038	1043	1035	1033
46	1039	1037	1035	1042	1034	1032
45	1037	1034	1033	1041	1028	1030
44	1031	1033	1029	1037	1025	1026
43	1029	1030	1027	1035	1019	1022
42	1028	1027	1026	1032	1016	1021
41	1027	1024	1025	1029	1015	1020
40	1025	1020	1024	1027	1013	1017
39	1023	1014	1023	1026	1010	1015
38	1017	1012	1021	1015	1010	1012
37	1016	1011	1016	1012	1009	1010
36	1010	1008	1013	1010	1008	1005
35	1007	1006	1009	1008	1007	997
34	1005	999	1008	1006	1001	993
33	998	997	1004	1005	999	988
32	996	996	1003	1003	998	983
31	995	995	1001	1000	996	982
30	994	994	1000	998	995	981
29	993	993	999	994	993	979
28	992	992	995	990	990	975
27	990	991	989	985	989	973
26	987	983	988	978	985	971
25	986	982	983	973	983	968
24	985	978	979	972	981	962
23	981	976	976	969	980	957
22	977	972	974	965	976	956
21	975	968	972	963	974	955
20	970	966	970	959	971	951
19	963	959	961	950	969	950
18	960	957	960	949	968	946
17	954	951	952	948	960	941
16	947	948	948	944	957	939
15	944	946	945	939	953	931
14	940	939	944	928	948	917
13	937	932	940	926	941	908
12	936	931	939	925	939	905
11	933	929	935	922	930	896
10	926	924	931	915	925	894
9	917	908	927	913	922	887
8	913	899	924	905	919	877
7	899	893	917	898	917	874
6	898	889	904	896	915	867
5	887	879	898	878	898	860
4	883	873	884	876	879	854
3	872	862	881	863	860	840
2	847	841	843	849	824	745
1	756	759	753	728	777	735

Senior CLA Scores, 50th-99th Percentiles

Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	EAA
99	1342	1352	1346	1356	1362	1336
98	1325	1329	1321	1328	1350	1283
97	1303	1318	1312	1308	1319	1270
96	1291	1306	1303	1302	1306	1263
95	1287	1302	1290	1291	1289	1255
94	1278	1298	1286	1288	1288	1236
93	1276	1286	1281	1276	1285	1223
92	1273	1279	1267	1261	1283	1214
91	1271	1275	1263	1254	1281	1202
90	1270	1269	1255	1252	1280	1198
89	1265	1267	1254	1248	1279	1190
88	1262	1264	1250	1241	1269	1188
87	1254	1260	1245	1233	1261	1187
86	1249	1254	1243	1229	1259	1186
85	1244	1250	1242	1227	1256	1181
84	1242	1246	1241	1225	1254	1175
83	1239	1239	1234	1224	1253	1169
82	1234	1236	1232	1220	1249	1166
81	1232	1235	1230	1219	1248	1165
80	1226	1232	1229	1218	1246	1164
79	1225	1230	1228	1215	1244	1154
78	1223	1225	1227	1212	1240	1152
77	1222	1222	1225	1210	1238	1136
76	1219	1220	1221	1207	1235	1132
75	1217	1217	1220	1205	1233	1128
74	1213	1216	1216	1203	1229	1124
73	1210	1213	1215	1199	1226	1118
72	1209	1212	1214	1198	1225	1117
71	1208	1211	1211	1196	1221	1112
70	1206	1210	1206	1195	1217	1106
69	1204	1209	1202	1191	1213	1104
68	1203	1207	1200	1184	1211	1103
67	1201	1204	1199	1181	1209	1099
66	1199	1203	1197	1180	1207	1098
65	1197	1202	1195	1179	1205	1097
64	1196	1200	1192	1178	1202	1093
63	1193	1198	1189	1175	1201	1090
62	1192	1193	1184	1174	1200	1087
61	1190	1191	1183	1171	1196	1085
60	1189	1190	1180	1166	1195	1081
59	1185	1188	1179	1165	1194	1079
58	1178	1186	1175	1164	1191	1078
57	1177	1183	1174	1162	1190	1076
56	1175	1182	1171	1160	1183	1072
55	1172	1180	1170	1159	1179	1067
54	1171	1179	1169	1158	1177	1065
53	1170	1178	1166	1156	1175	1063
52	1169	1176	1165	1154	1175	1056
51	1168	1175	1164	1154	1174	1054
50	1166	1171	1162	1153	1173	1052

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	1161	1167	1160	1150	1172	1050
48	1158	1166	1158	1148	1167	1048
47	1155	1162	1155	1143	1164	1041
46	1151	1160	1152	1139	1161	1037
45	1148	1158	1151	1138	1160	1036
44	1144	1156	1148	1135	1158	1034
43	1142	1149	1143	1132	1153	1033
42	1140	1142	1142	1125	1150	1031
41	1135	1141	1139	1123	1149	1029
40	1133	1139	1138	1122	1143	1027
39	1131	1136	1135	1120	1141	1024
38	1128	1130	1131	1117	1137	1023
37	1125	1126	1123	1113	1134	1020
36	1124	1125	1122	1112	1134	1020
35	1119	1122	1120	1110	1133	1019
34	1118	1116	1113	1102	1128	1015
33	1116	1112	1111	1100	1127	1013
32	1111	1111	1110	1098	1126	1011
31	1110	1109	1109	1096	1125	1009
30	1106	1108	1105	1094	1122	1007
29	1104	1101	1101	1093	1119	1003
28	1102	1098	1100	1090	1118	1001
27	1101	1097	1099	1088	1115	999
26	1099	1095	1099	1087	1114	997
25	1098	1093	1098	1085	1113	994
24	1093	1087	1097	1082	1108	988
23	1092	1084	1096	1081	1107	985
22	1090	1078	1095	1077	1098	983
21	1088	1072	1091	1075	1097	980
20	1079	1071	1089	1068	1093	979
19	1077	1069	1084	1065	1092	975
18	1076	1067	1082	1061	1089	971
17	1074	1064	1076	1058	1083	963
16	1071	1061	1075	1056	1079	958
15	1067	1060	1068	1054	1072	950
14	1062	1056	1064	1045	1070	940
13	1060	1052	1061	1039	1060	938
12	1057	1046	1057	1037	1057	935
11	1046	1044	1046	1027	1052	933
10	1043	1041	1033	1025	1049	929
9	1042	1038	1032	1014	1042	923
8	1041	1033	1029	1005	1034	913
7	1036	1029	1024	999	1021	908
6	1027	1027	1021	982	1007	892
5	1004	1000	990	965	996	873
4	963	956	963	942	987	860
3	943	903	934	908	937	835
2	891	890	892	868	879	825
1	887	889	866	846	856	758

Value-Added Scores, 50th-99th Percentiles

Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument
99	2.74	2.92	2.33	3.15	2.28
98	1.81	1.97	1.94	2.33	1.98
97	1.64	1.81	1.79	1.94	1.73
96	1.59	1.70	1.62	1.67	1.51
95	1.52	1.52	1.60	1.57	1.40
94	1.47	1.50	1.58	1.55	1.38
93	1.38	1.46	1.47	1.43	1.30
92	1.30	1.38	1.40	1.34	1.28
91	1.18	1.32	1.32	1.25	1.19
90	1.15	1.28	1.18	1.18	1.17
89	1.12	1.17	1.12	1.11	1.14
88	1.12	1.09	1.09	1.07	1.14
87	1.10	1.03	1.08	1.02	1.12
86	1.07	1.02	1.06	1.02	1.07
85	1.04	0.97	0.99	0.99	1.04
84	1.02	0.91	0.97	0.98	0.97
83	1.02	0.89	0.95	0.95	0.90
82	0.99	0.88	0.92	0.90	0.84
81	0.97	0.85	0.91	0.88	0.83
80	0.96	0.84	0.88	0.87	0.76
79	0.93	0.82	0.86	0.83	0.72
78	0.84	0.78	0.81	0.78	0.71
77	0.78	0.75	0.77	0.75	0.70
76	0.78	0.75	0.74	0.72	0.69
75	0.74	0.73	0.66	0.69	0.68
74	0.74	0.70	0.64	0.69	0.64
73	0.70	0.68	0.60	0.63	0.62
72	0.66	0.62	0.58	0.61	0.58
71	0.64	0.59	0.57	0.58	0.53
70	0.64	0.57	0.56	0.57	0.53
69	0.58	0.55	0.53	0.55	0.53
68	0.54	0.45	0.51	0.50	0.48
67	0.54	0.44	0.47	0.44	0.47
66	0.51	0.39	0.43	0.42	0.44
65	0.47	0.38	0.42	0.41	0.44
64	0.44	0.35	0.40	0.38	0.43
63	0.40	0.35	0.39	0.38	0.40
62	0.38	0.32	0.31	0.36	0.38
61	0.35	0.29	0.29	0.35	0.34
60	0.31	0.27	0.29	0.34	0.31
59	0.30	0.26	0.28	0.34	0.30
58	0.25	0.22	0.25	0.33	0.27
57	0.21	0.21	0.23	0.33	0.24
56	0.18	0.20	0.22	0.28	0.23
55	0.17	0.16	0.21	0.25	0.21
54	0.13	0.12	0.18	0.21	0.20
53	0.09	0.09	0.17	0.21	0.19
52	0.07	0.08	0.15	0.17	0.19
51	0.06	0.01	0.15	0.15	0.16
50	0.02	-0.02	0.13	0.08	0.14

Value-Added Scores, 1st-49th Percentiles

H.6

Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument
49	0.01	-0.04	0.10	0.05	0.12
48	-0.05	-0.06	0.10	0.03	0.10
47	-0.06	-0.08	0.06	-0.01	0.08
46	-0.07	-0.11	0.01	-0.02	0.03
45	-0.09	-0.14	-0.02	-0.07	0.00
44	-0.14	-0.19	-0.05	-0.10	-0.02
43	-0.16	-0.21	-0.05	-0.10	-0.03
42	-0.20	-0.24	-0.08	-0.14	-0.03
41	-0.21	-0.25	-0.11	-0.17	-0.06
40	-0.25	-0.29	-0.14	-0.19	-0.11
39	-0.28	-0.32	-0.17	-0.26	-0.12
38	-0.30	-0.34	-0.19	-0.27	-0.13
37	-0.33	-0.36	-0.24	-0.28	-0.19
36	-0.37	-0.41	-0.25	-0.30	-0.21
35	-0.37	-0.42	-0.26	-0.31	-0.34
34	-0.38	-0.43	-0.31	-0.33	-0.37
33	-0.41	-0.45	-0.37	-0.37	-0.39
32	-0.42	-0.47	-0.39	-0.43	-0.40
31	-0.48	-0.49	-0.46	-0.45	-0.47
30	-0.48	-0.50	-0.48	-0.46	-0.48
29	-0.50	-0.52	-0.49	-0.49	-0.50
28	-0.52	-0.53	-0.50	-0.51	-0.58
27	-0.55	-0.57	-0.57	-0.52	-0.61
26	-0.57	-0.61	-0.60	-0.56	-0.63
25	-0.66	-0.63	-0.61	-0.61	-0.66
24	-0.66	-0.64	-0.65	-0.65	-0.66
23	-0.69	-0.68	-0.68	-0.68	-0.68
22	-0.72	-0.76	-0.70	-0.72	-0.75
21	-0.73	-0.82	-0.71	-0.73	-0.79
20	-0.77	-0.85	-0.72	-0.76	-0.81
19	-0.80	-0.88	-0.79	-0.78	-0.85
18	-0.84	-0.88	-0.81	-0.81	-0.88
17	-0.96	-0.91	-0.85	-0.84	-0.94
16	-1.03	-0.95	-0.90	-0.89	-0.95
15	-1.07	-1.09	-0.95	-0.92	-1.02
14	-1.14	-1.15	-0.96	-0.96	-1.04
13	-1.19	-1.17	-1.02	-1.01	-1.18
12	-1.22	-1.20	-1.08	-1.01	-1.21
11	-1.30	-1.23	-1.23	-1.11	-1.30
10	-1.45	-1.38	-1.46	-1.21	-1.46
9	-1.49	-1.48	-1.60	-1.38	-1.48
8	-1.59	-1.52	-1.64	-1.61	-1.60
7	-1.66	-1.58	-1.70	-1.69	-1.86
6	-1.75	-1.60	-1.93	-1.94	-1.89
5	-1.93	-1.68	-2.02	-1.98	-1.94
4	-2.18	-1.84	-2.32	-2.13	-2.14
3	-2.29	-2.27	-2.37	-2.26	-2.27
2	-2.72	-2.97	-2.81	-2.63	-2.76
1	-2.81	-3.00	-2.93	-2.91	-3.88

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
- E-mail address
- Date of birth
- Gender
- Race/Ethnicity
- Parent Education
- Primary and Secondary Academic Major (36 categories)
- Field of Study (6 categories; based on primary academic major)
- English as primary language
- Attended school as freshman, sophomore, junior, senior
- Local survey responses

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 + Verbal)
- SAT I Math
- SAT I Verbal / Critical Reading
- 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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