

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.

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- 3 Your Results (p. 6-10)
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Appendices

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

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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, constructedresponse 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 higherorder 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. Valueadded 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 valueadded estimates. We will also continue developing ways to augment the value of CLA results for the improvement of teaching and learning.



	Performance Level	Value-Added Score	Value-Added Percentile Rank	Confidence Interval Lower Bound	Confidence Interval Upper Bound	Expected Mean CLA Score
Total CLA Score	Near	0.40	64	-0.12	0.92	1176
Performance Task	Near	0.46	68	-0.17	1.09	1177
Analytic Writing Task	Near	0.31	62	-0.30	0.92	1172
Make-an-Argument	Near	0.35	64	-0.32	1.02	1156
Critique-an-Argument	Near	0.24	60	-0.39	0.87	1188



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Seniors: Unadjusted Performance

	Number of Seniors	Mean Score	Mean Score Percentile Rank	25th Percentile Score	75th Percentile Score	Standard Deviation
Total CLA Score	102	1196	62	1126	1269	135
Performance Task	50	1204	63	1109	1289	151
Analytic Writing Task	52	1188	62	1141	1249	118
Make-an-Argument	52	1174	62	1132	1255	126
Critique-an-Argument	52	1202	61	1108	1293	146
EAA	102	1085	61	950	1220	152

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	75	1079	60	997	1169	147
Performance Task	37	1084	62	997	1199	161
Analytic Writing Task	38	1073	62	1003	1156	134
Make-an-Argument	38	1070	56	961	1181	157
Critique-an-Argument	39	1076	64	952	1154	162
EAA	76	1070	64	950	1190	187



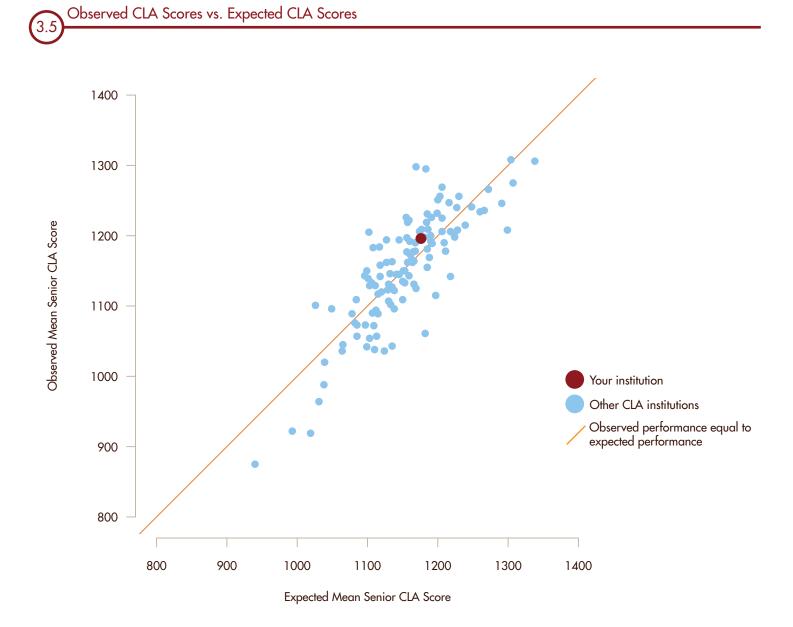
Transfer	Number of Freshmen	Freshman Percentage	Average Freshman Percentage Across Schools*	Number of Seniors	Senior Percentage	Average Senior Percentage Aross Schools
Transfer Students	0	0	N/A	30	29	17
Non-Transfer Students	75	100	N/A	72	71	83
Gender						
Male	22	29	38	39	38	36
Female	53	71	61	63	62	63
Decline to State	0	0	1	0	0	1
Primary Language						
English Primary Language	64	85	87	97	95	87
Other Primary Language	11	15	13	5	5	13
Field of Study						
Sciences and Engineering	18	24	22	12	12	21
Social Sciences	4	5	12	17	17	18
Humanities and Languages	10	13	11	26	25	17
Business	11	15	12	18	18	15
Helping / Services	19	25	26	24	24	22
Undecided / Other / N/A	13	17	17	5	5	7
Race / Ethnicity						
American Indian / Alaska Native	1	1	1	1	1	1
Asian / Pacific Islander	6	8	7	2	2	7
Black, Non-Hispanic	8	11	14	2	2	10
Hispanic	4	5	15	2	2	11
White, Non-Hispanic	50	67	59	90	88	63
Other	4	5	3	2	2	4
Decline to State	2	3	2	3	3	4
Parent Education						
Less than High School	3	4	6	1	1	5
High School	12	16	23	13	13	16
Some College	20	27	24	32	31	28
Bachelor's Degree	27	36	28	37	36	29
Graduate or Professional Degree	13	17	20	19	19	22

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

3.4

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.



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

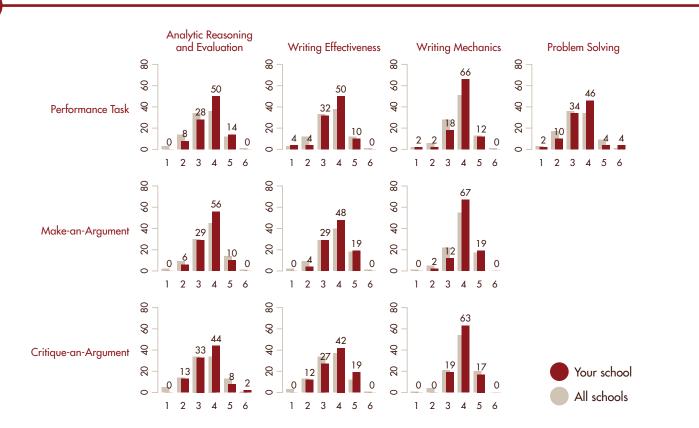
Subscore Distributions

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3.6

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.

Seniors: Distribution of Subscores



Seniors: Summary Subscore Statistics

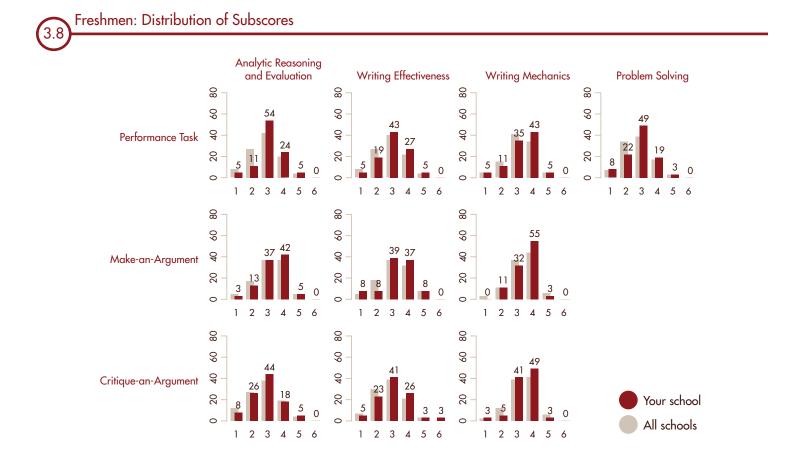
		Analytic Reasoning and Evaluation			
		Your School	All Schools		
Performance	Mean	3.7	3.4		
Task	Standard Deviation	0.8	0.9		
Make-an-	Mean	3.7	3.6		
Argument	Standard Deviation	0.7	0.8		
Critique-an-	Mean	3.5	3.4		
	Standard Deviation	0.9	0.9		

Writing Effectiveness							
Your School	All Schools						
3.6	3.5						
0.9	0.9						
3.8	3.7						
0.8	0.9						
3.7	3.5						
0.9	0.9						

Writing Mechanics						
Your School	All Schools					
3.8	3.7					
0.7	0.8					
4.0	3.8					
0.6	0.7					
4.0	3.9					
0.6	0.7					

Problem Solving							
Your School	All Schools						
3.5	3.3						
1.0	0.9						





Freshmen: Summary Subscore Statistics

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3.9

			asoning and ation	Writing Ef	fectiveness	Writing A	Nechanics	Problem	Solving
		Your School	All Schools	Your School	All Schools	Your School	All Schools	Your School	All Schools
Performance	Mean	3.1	2.9	3.1	2.9	3.3	3.2	2.9	2.7
Task	Standard Deviation	0.9	0.8	1.0	0.9	0.9	0.8	0.9	0.8
Make-an-	Mean	3.3	3.2	3.3	3.2	3.5	3.4		
Argument	Standard Deviation	0.9	0.8	1.0	0.9	0.7	0.8		
Critique-an-	Mean	2.9	2.8	3.1	2.8	3.4	3.4		
	Standard Deviation	1.0	0.9	1.0	0.8	0.8	0.8		

Performance Distributions

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

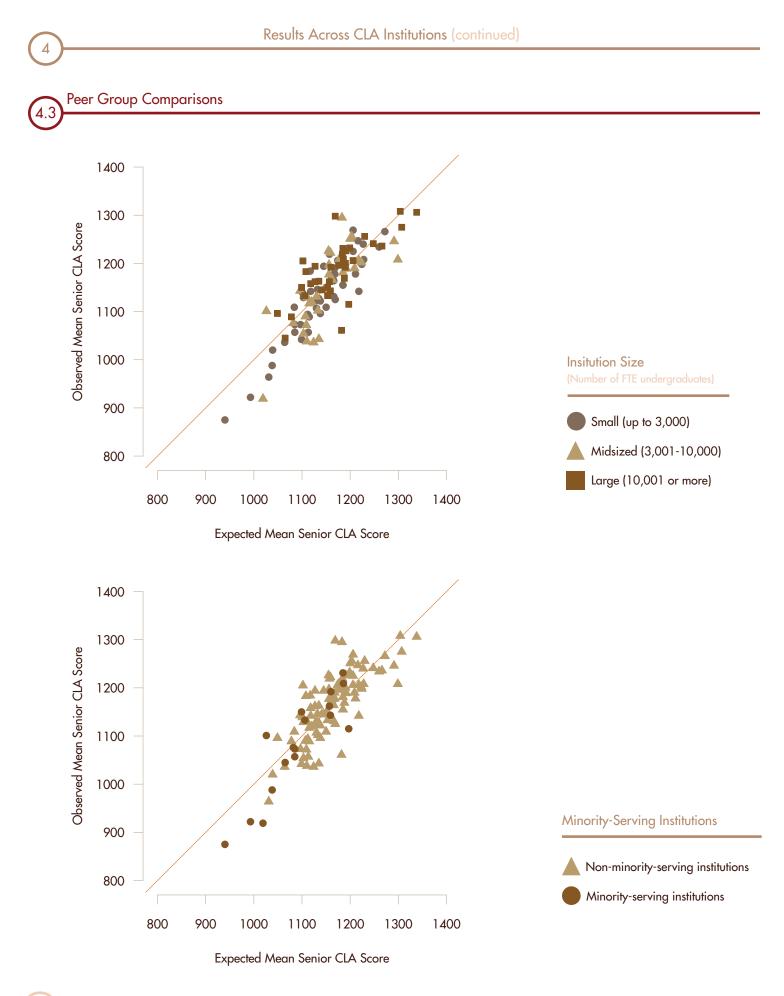
Figure 4.3, on the following page, shows various comparisons of different groups of institutions. Depending on which factors you consider to define your institution's peers, these comparisons may show you how your institution's value added compares to those of institutions similar to yours.

4.1 Seniors					
	Number of Schools*	Mean Score	25th Percentile Score	75th Percentile Score	Standard Deviation
Total CLA Score	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

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

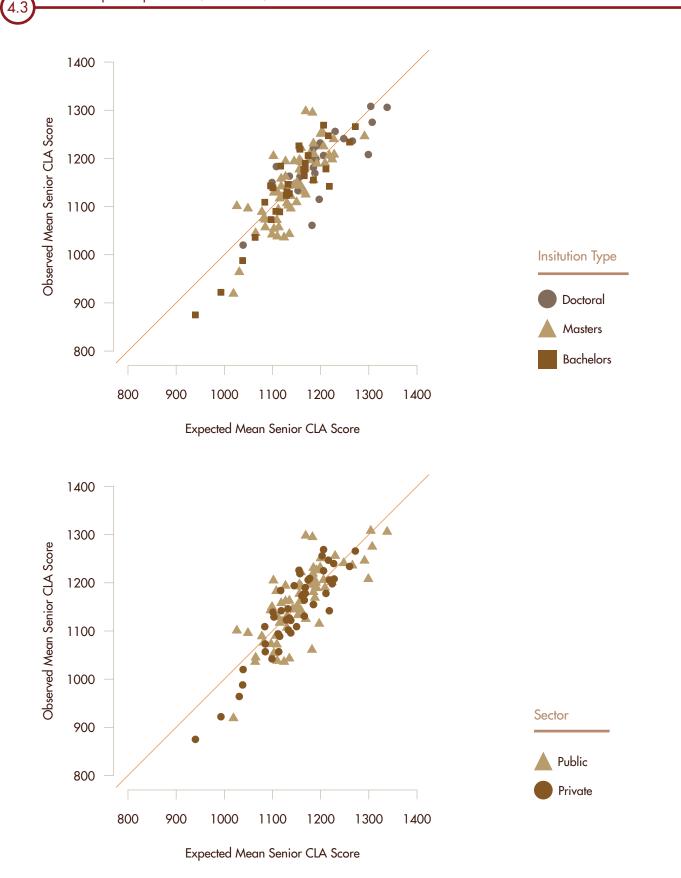
* 158 institutions tested both freshmen and seniors.



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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 fouryear, 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.

Carnegie Classification of Institutional Sample

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	Nation (n	i = 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.

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

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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 indepth 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!

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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.

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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, welldeveloped, 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 inflight 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.

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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 Critiquean-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 Critiquean-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 criterionreferenced 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 Pe	rformance 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 convinc- ing evidence).	Writing Mechanics Facility with the conventions of standard written English (agreement, tense, capi- talization, 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 understand- ing 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 re- search. 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 re- search. 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 qual- ity 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 logi- cally from the conclusion. May recognize the need for addition- al 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 qual- ity of evidence and bases response on unreliable information. 	 Does not develop convincing arguments. Writing may be disor- ganized 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 conclu- sion. Does not recognize the need for additional research or does not suggest research that would address unanswered questions.

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	Analytic Reasoning & Evaluation Stating a position, providing valid reasons to support the writer's position, and demonstrating an understand-	Writing Effectiveness Constructing an organized and logically cohesive argu- ment. Strengthening the writer's position by elaborat-	Writing Mechanics Facility with the conventions of standard written English (agreement, tense, capitalization, punctuation, and
	ing of the complexity of the issue by considering and possibly refuting alternative viewpoints.	ing on the reasons for that position (e.g., providing evidence, examples, and logical reasoning).	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 consider- ation 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 cred- ible, unreliable, or limited.	Writing Effectiveness Constructing organized and logically cohesive argu- ments. Strengthening the writer's position by elaborat- ing 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 deficien- cies. 	 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.

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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 t	o 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 $\overline{CLA}_{fr,j}$ 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 valueadded 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 valueadded 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 valueadded 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.

G

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

- $\overline{CLA}_{\mathrm{fr},j}$ 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):

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

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

(H.1)

Н

Freshman CLA Scores, 50th-99th Percentiles

99 1275 1288 1262 1259 1270 1304 98 1243 1244 1242 1234 1248 1266 97 1201 1213 1216 1221 1208 1233 95 1186 1202 1201 1202 1208 1233 95 1186 1197 1174 1176 1175 1206 93 1181 1181 1171 1172 1169 1200 92 1176 1166 1159 1155 1157 1159 90 1156 1163 1151 1151 1151 1154 88 1144 1157 1144 1136 1142 1136 813 1133 1140 1132 1132 1131 1133 84 1133 1130 1131 1133 1133 1133 83 1130 1132 1132 1131 1133	Percentile	Total CLA Score	Performance Task	Analytic Writing Task	Make-an- Argument	Critique-an- Argument	EAA
97 1201 1213 1216 1221 1247 1251 96 1196 1202 1201 1202 1208 1233 95 1186 1197 1174 1176 1175 1206 93 1181 1181 1171 1172 1169 1200 92 1176 1166 1159 1155 1157 1159 90 1156 1163 1151 1151 1151 1154 81 1144 1157 1146 1147 1139 1144 86 1136 1151 1134 1140 1136 1144 86 1135 1134 1130 1131 1133 1133 813 1130 1134 1130 1131 1132 1132 814 1133 1130 1131 1132 1132 1132 813 1130 1132 1132 1133 1133 1133	99	1275	1288	1262	1259	1270	1304
96 1196 1202 1201 1202 1208 1233 95 1188 1200 1193 1187 1176 1222 94 1186 1197 1174 1176 1175 1222 94 1186 1197 1174 1176 1126 1200 93 1181 1181 1181 1171 1175 1120 91 1170 1166 1159 1155 1157 1148 89 1150 1162 1149 1150 1144 1147 86 1134 1157 1144 1137 1144 86 1134 1133 1133 1135 1143 81 1133 1133 1133 1133 1133 83 1130 1131 1128 1129 1128 81 1123 1122 1124 1123 1125 1122 1109 77 1111	98	1243	1244	1242	1234	1248	1266
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92 1176 1168 1169 1170 1168 1176 91 1170 1166 1159 1155 1157 1159 90 1156 1163 1151 1151 1151 1154 89 1150 1142 1156 1149 1150 1144 88 1144 1157 1146 1147 1139 1147 87 1142 1156 1143 1142 1137 1144 86 1136 1131 1133 1133 1133 1133 1133 83 1130 1132 1132 1131 1133 1133 84 1133 1132 1132 1132 1123 1128 81 1123 1132 1124 1128 1112 1108 81 1121 1124 1115 1105 1102 1099 77 1111 1121 1118 1115 1105	94	1186	1197	1174	1176	1175	1206
91 1170 1166 1159 1155 1157 1159 90 1156 1163 1151 1151 1151 1151 89 1150 1162 1149 1150 1146 1147 87 1142 1156 1143 1142 1137 1144 86 1136 1151 1133 1133 1133 1133 85 1135 1144 1132 1131 1133 1133 84 1130 1134 1130 1131 1128 1129 82 1126 1133 1123 1121 1125 1122 1109 77 1116 1122 1114 1123 1125 1102 1108 78 1112 1121 1112 1113 1105 1008 74 1109 1101 1100 1009 1002 1099 1092 73 1107 1111 1104	93	1181	1181	1171	1172	1169	1200
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89 1150 1162 1149 1150 1146 1148 88 1144 1157 1146 1147 1139 1147 87 1142 1156 1143 1142 1137 1144 86 1135 1145 1133 1133 1133 1135 84 1133 1140 1132 1131 1133 1133 83 1130 1134 1130 1112 1123 1125 80 1121 1124 1128 1123 1125 1130 1125 80 1121 1124 1115 1125 1122 1109 77 1116 1122 1114 1120 1108 1114 1109 103 76 1110 1120 1107 1113 1105 1098 73 1100 1117 1106 1102 1099 1082 71 1102 1006 1101	91	1170	1166	1159	1155	1157	1159
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691100110210961098109110796810991097109510941090107867109810961094109310891076661096109110921091108510736510871088108710881084107164108610871081108510761070631085108610791084107010676210821084107310811066106461108010781072107510641060601079107710701075106310595910781073106910741061105658107410691067107310551050561065106210611070105410495510621060106010681053104854105710591057106210461046531055105810551059104910425210531056104710571047103851104810551044105310451032	71		1106	1101	1100	1094	1081
681099109710951094109010786710981096109410931089107666109610911092109110851073651087108810871088108410716410861087108110851076107063108510861079108410701067621082108410731081106610646110801078107210751064106060107910771070107510631059591078107310691074106110565810741069106710731057105557107010641065107210551050561065106210611070105410495510621060106810531048541057105810551059104910425210531056104710571047103851104810551044105310451032	70	1101	1103	1097	1099	1093	1080
67109810961094109310891076661096109110921091108510736510871088108710881084107164108610871081108510761070631085108610791084107010676210821084107310811066106461108010781072107510641060601079107710701075106310595910781073106910741061105658107410691067107310571055571070106410651072105510505610651062106110701054104955106210601068105310481045541057105810551059104910425210531056104710571047103851104810551044105310451032	69	1100	1102	1096	1098	1091	1079
6610961091109210911085107365108710881087108810841071641086108710811085107610706310851086107910841070106762108210841073108110661064611080107810721075106410606010791077107010751063105959107810731069107410611056581074106910671073105710555710701064106510721055105056106510621061107010541049551062106010681053104810455410571058105710621047103851104810551044105310451032	68	1099	1097	1095	1094	1090	1078
651087108810871088108410716410861087108110851076107063108510861079108410701067621082108410731081106610646110801078107210751064106060107910771070107510631059591078107310691074106110565810741069106710731057105557107010641065107210551050561065106210611070105410495510621060106810531048541057105810551059104910425210531056104710571047103851104810551044105310451032	67	1098	1096	1094	1093	1089	1076
64108610871081108510761070631085108610791084107010676210821084107310811066106461108010781072107510641060601079107710701075106310595910781073106910741061105658107410691067107310571055571070106410651072105510505610651062106110701054104955106210601060106810531048541057105910571062104010425310551058105510591047103851104810551044105310451032	66	1096	1091	1092	1091	1085	1073
64108610871081108510761070631085108610791084107010676210821084107310811066106461108010781072107510641060601079107710701075106310595910781073106910741061105658107410691067107310571055571070106410651072105510505610651062106110701054104955106210601060106810531048541057105910571062104010425310551058105510591047103851104810551044105310451032	65	1087	1088	1087	1088	1084	1071
631085108610791084107010676210821084107310811066106461108010781072107510641060601079107710701075106310595910781073106910741061105658107410691067107310571055571070106410651072105510505610651062106110701054104955106210601060106810531048541057105910571062104010425210531056104710571047103851104810551044105310451032	64	1086	1087	1081	1085	1076	1070
61108010781072107510641060601079107710701075106310595910781073106910741061105658107410691067107310571055571070106410651072105510505610651062106110701054104955106210601060106810531048541057105910571062105010465310551058105510591047103851104810551044105310451032		1085	1086	1079	1084	1070	1067
60107910771070107510631059591078107310691074106110565810741069106710731057105557107010641065107210551050561065106210611070105410495510621060106010681053104854105710591057106210501046531055105810551059104910425210531056104710571047103851104810551044105310451032	62	1082	1084	1073	1081	1066	1064
591078107310691074106110565810741069106710731057105557107010641065107210551050561065106210611070105410495510621060106010681053104854105710591057106210501046531055105810551059104910425210531056104710571047103851104810551044105310451032		1080					1060
591078107310691074106110565810741069106710731057105557107010641065107210551050561065106210611070105410495510621060106010681053104854105710591057106210501046531055105810551059104910425210531056104710571047103851104810551044105310451032	60	1079	1077	1070	1075	1063	1059
57107010641065107210551050561065106210611070105410495510621060106010681053104854105710591057106210501046531055105810551059104910425210531056104710571047103851104810551044105310451032	59	1078	1073	1069	1074	1061	1056
561065106210611070105410495510621060106010681053104854105710591057106210501046531055105810551059104910425210531056104710571047103851104810551044105310451032	58	1074	1069	1067	1073	1057	1055
561065106210611070105410495510621060106010681053104854105710591057106210501046531055105810551059104910425210531056104710571047103851104810551044105310451032							
5510621060106010681053104854105710591057106210501046531055105810551059104910425210531056104710571047103851104810551044105310451032							
54105710591057106210501046531055105810551059104910425210531056104710571047103851104810551044105310451032							
531055105810551059104910425210531056104710571047103851104810551044105310451032							
5210531056104710571047103851104810551044105310451032							
51 1048 1055 1044 1053 1045 1032							

Freshman CLA Scores, 1st-49th Percentiles

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(H.2

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
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Senior CLA Scores, 50th-99th Percentiles

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H.3

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	1253	1154
83	1236	1253	1232	1226	1252	1150
82	1234	1249	1231	1220	1243	1148
81	1234	1247	1231	1224	1245	1143
80	1232	1240	1225	1219	1235	1143
79	1228	1243	1223	1217	1233	1133
78	1226	1238	1223	1210	1233	1133
70	1225	1230	1218	1214	1232	1124
76	1223	1237	1210	1203	1230	1124
70 75	1223	1234	1217	1203	1229	1125
74	1219	1227	1214	1198	1220	1113
73	1217	1225	1213	1196	1218	1114
72	1217	1223	1206	1195	1210	1109
71	1215	1218	1205	11/5	1217	1107
70	1213	1215	1203	1188	1217	1104
69	1207	1210	1198	1187	1213	1099
68	1200	1210	1197	1185	1213	1097
67	120/	1210	1195	1182	1212	1095
66	1205	1207	1193	1180	1209	1073
65	1200	1200	1191	1179	1207	1090
64	1199	1205	1190	1178	1200	1070
63	1198	1203	1189	1175	1205	1089
62	1196	1204	1188	1174	1203	1086
61	1194	1204	1185	1174	1199	1085
60	1192	1203	1182	1173	1197	1083
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	1160	1187	1076
55	1181	1186	1170	1161	1186	1073
55 54	1178	1183	1172	1154	1184	1074
53	1170	1179	1170	1153	1181	10/3
53 52	1175	1178	1169	1152	1180	1068
51	1173	1175	1168	1151	1179	1063
50	11/5	1173	1166	1150	1177	1062
	1100	11/0	1100	1100	11/0	1002

Senior CLA Scores, 1st-49th Percentiles

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(H.4

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

Value-Added Scores, 50th-99th Percentiles

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(H.5

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	0.03	0.00	0.07	0.09	0.05
	0.01	0.00	0.04	0.07	0.00

Value-Added Scores, 1st-49th Percentiles

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(H.6

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
8 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	-1.82	-1.87	-1.99	-2.16	-1.70
4 3	-1.99	-1.89	-1.99	-2.16	-1.70
2	-2.42	-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.

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)

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.

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

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.

Registrar Data

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

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

Roger Benjamin President & Chief Executive Officer, Council for Aid to Education

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

> Katharine Lyall Board Chair, Council for Aid to Education President Emeritus, University of Wisconsin System

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Charles Reed Chancellor, California State University

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> Benno Schmidt Chairman, Leeds Global Partners, LLC

Farris W. Womack Executive Vice President and Chief Financial Officer, Emeritus Professor of Education, Emeritus, The University of Michigan

council for aid to education

215 lexington avenue floor 21 new york new york 10016-6023 p 212.217.0700 f 212.661.9766 e cla@cae.org w www.cae.org/cla