

**Using the Collegiate Learning Assessment+ (CLA+) to Inform  
Campus Planning**

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## **Abstract**

In this quantitative study, we examined how students at a Western University performed on CLA+, including performance levels and value added estimates. Findings from the Performance Task and Selected Response Questions were presented. Findings showed that campus freshmen and seniors scored lower than the average students at all CLA-taking institutions, but outscored students at similar minority-serving institutions (MSI) and outscored students in colleges with high percentages of Pell grants. The percentage of students who scored at proficient or higher doubled from freshman to senior year (from 16 percent to 32 percent) but little change was seen in problem solving, writing effectiveness and writing mechanics. The overall effect size for seniors was .40, a medium effect size. Implications for colleges using CLA data to improve student gains and for accreditation purposes were discussed.

Keywords: assessment, value-added, student learning, college readiness

## **Using the Collegiate Learning Assessment+ (CLA+) to Inform Campus Planning California State University, Los Angeles 2016**

In 2002, the Council for Aid to Education (CAE) developed the Collegiate Learning Assessment (CLA) as a growth centered model to improve teaching and learning at the program or institutional level. In order to do this, it uses a series of proxies designed to measure an undergraduate's ability to think critically, reason analytically, solve problems, and communicate clearly. In 2013, CAE introduced the CLA+, an enhanced version of the assessment that includes sub-scores, criterion-referenced Mastery Levels, and what CAE considers reliable information about performance at the student and institutional levels. CLA+ enables schools to identify areas of strength and weakness so they can improve their teaching and learning processes, and ultimately graduate students who are prepared to succeed in the post-collegiate arena.

The most common model used by campuses nationally is a cross-sectional one in which a sample of at least 100 freshmen and 100 seniors are tested and compared as to their growth. Students' SAT scores are also collected, to enable comparison of students' "expected" CLA scores (based on a student SAT score) vs. the students' actual CLA scores. Because the samples of freshmen tested at a particular school may not accurately represent their respective class at each college, CAE makes an adjustment in that a school's actual CLA score is compared to its expected CLA score.

Differences between actual and expected score are reported in two ways: by points on the CLA scale and by standard errors in terms of five performance levels. The five performance levels are: scores well below expected (actual score greater than 2 standard errors lower than expected score), actual score below expected (actual score greater than 1 standard error but less than 2 standard errors lower than expected score), scores at expected (actual score between -1 s.e. and +1 s.e. from expected score), scores above expected (actual score from 1-2 s.e. above expected score), and scores well above expected (actual score as least 2 s.e. above expected score).

The assessment consists of a set of performance tasks, and a set of analytic writing tasks. The performance tasks presents students with problems, and provides them with related documentation associated with a particular problem so that they can attempt to solve the problem, or recommend course of action based on the documentation. The analytic writing task asks students to either take a position, build, and defend an argument for that position, or to critique an argument where they must evaluate the claims made in the argument, and either agree or disagree, wholly or in part, and provide evidence for the position taken.

The CLA is a summative instrument that focuses on outcomes rather than on the processes that give rise to those outcomes. Hence, summative accountability asks the question of how well, compared to other colleges or some standard, this college is performing. It sends a signal of where a campus is successful and where more work is needed to improve student outcomes. By

estimating value added or by benchmarking with peer institutions, it addresses the question, “how good is good enough?” Without these measures, institutions cannot answer that question.

## Theoretical Framework

The purpose of the CLA is to measure “value-added” by a college or university. “Value added” scores show “whether the growth in achievement between freshman and senior year at a given school is below, near, or above what is typically observed at schools with students of similar entering academic ability (Steedle, 2009, p. 1).”

Several studies have explored the role of holistic tests such as the CLA in assessing college effectiveness (Benjamin, Chun & Shavelson, 2007; Klein, Benjamin, Shavelson & Bolus, 2007; Klein, Kuh, Chun, Hamilton & Shavelson, 2005). Benjamin, Chun, and Shavelson (2007) argue higher order skills such as critical thinking, analytic reasoning, problem solving and written communication are intrinsically intertwined in a complex manner, both in the tasks and the responses to them. They claim that the CLA follows a holistic approach to assessing these higher-order skills, and that it contrasts significantly with typical standardized tests of college learning employing sub-score systems.

Klein, Kuh, Chun, Hamilton, and Shavelson (2005) and Klein, Kuh, Chun, Hamilton, and Shavelson (2003) discuss the validity and reliability of the test. Klein et al. (2005) report an intra-class correlation of .75 for the 90-minute performance task. They also report a correlation of .42 among different performance tasks. External criteria measures that have been used are the SAT (CLA correlates with SAT about .45-.50) and the GPA (correlation of .60 between SAT and GPA). Benjamin and Chun (2003) report a correlation coefficient of .90 between the CLA and the SAT at the institutional level, which is high.

However, Shermis (2008) pointed out that evidence on validity and reliability is scarce, and that a high correlation between the SAT and CLA suggests that since not much is gained by adding the CLA to the SAT score, it might be simply easier to administer the SAT.

The fact remains that individual colleges show different correlation values. At this state university, the correlation between CLA scale scores and the SAT ranged between .40-.60, which is moderate. This suggests that the CLA is measuring something other than the aptitude measured by the SAT.

The CLA shows construct validity supported by high correlations with other college-level tests, as well as high reliability. Klein, et al. (2009) examined the relationships among scores on 13 commonly used college-level tests of general educational outcomes, the effect sizes of the tests, and reliability. The tests included the Council for Aid to Education’s CLA, those in the ACT’s Collegiate Assessment of Academic Proficiency (CAAP), and the Educational Testing Service’s Measure of Academic Proficiency and Progress (MAPP). All 13 tests were administered at each of the study’s 13 schools and more than 1,100 freshmen and seniors participated in the study. Both student-level and school-level analyses were used. The school-level analysis showed very high correlations among all the tests, which proved their construct validity in that the tests intending to measure the same or similar constructs indeed measured those constructs. In

addition, the analysis demonstrated high score reliabilities and consistent effect sizes across the test constructs measured, response formats, and test publishers. The student-level analysis showed generally high correlations among measures and reliabilities but lower than they were in the school-level analysis. Based on the high correlation among the measures, the study suggested that the decision about which measures to use depend on their acceptance by students, faculty, administrators, and other policy makers.

Klein, Freedman, Shavelson, and Bolus (2008) rebutted several criticisms of the CLA method for computing value added. The main criticisms were that samples were not randomly selected, so selection bias could exist. The study analyzed data from 93 schools that participated in the National Center for Education Statistics Integrated Post-secondary Data Systems (IPEDS). Some of the findings are the following: 1) Participating seniors are very similar to participating freshmen except for being four years older and scoring much higher on the CLA; 2) Including different kinds of variables in a regression equation that has SAT scores does not enhance accuracy in predicting CLA scores; 3) Various kinds of possible selection biases are too small to matter; and 4) Longitudinal designs do not seem to be any better than the cross-sectional designs. Based on these findings, Klein, et al. (2008) argued that criticisms of CLA procedures were not supported.

Arum, Roksa, and Velez (2008) investigated factors associated with learning in higher education using the CLA in a longitudinal study. Over 2,300 students at 24 institutions over time were followed in the study. Students were tested at the beginning of their freshman year (Fall 2005) and then at the end of their sophomore year (Spring 2007). Supplementary data as well as the CLA measures of learning were collected from student surveys, college transcripts and secondary sources of institutional data. The findings of the study showed that several individual, social and institutional factors were associated with improvement in CLA performance. In particular, the findings showed that including high school preparation and individual level college experience explain much of the differential rates of growth in CLA performance by parental education. Institutional differences account for about one-third of the gaps in longitudinal CLA performance between African American and white students. Finally, regardless of inclusion of the additional individual, social and institutional measures examined, the gaps in longitudinal growth in CLA performance lasted for students who attended high schools with predominately non-white students or were from families where English was not the primary language.

The Council for Aid to Education (CAE) proposed a new value-added approach employing hierarchical linear modeling (HLM) and a different equation for computing expected mean CLA scores starting in the 2009-2010 assessment cycle (Steedle, 2009). The original CLA value-added approach most often uses a cross-sectional design using freshmen and seniors in the same academic year and the average differences between two groups are indicators of “value-added,” which means “the degree to which the observed freshman-senior difference is below, near, or above expectations” (Steedle, 2009, p. 2). The value-added score equals subtracting the school’s freshman residual score from its senior residual score. The new value-added estimation approach compares the CLA performance of seniors at one school to that of seniors at other schools including students with similar academic skills (critical thinking and writing skills as well as more general academic skills measured by the SAT or ACT). Employing hierarchical linear

modeling (HLM), the new approach includes two levels of analysis: a student level for modeling CLA scores within schools as estimated by individual students' SAT scores and a school level for modeling senior mean CLA scores as estimated by senior mean SAT and freshman mean CLA scores. This approach is more efficient than the previous approach since scores from this approach are more precise within a year and are more realistically stable across years. Moreover, it provides school-specific indicators of value-added score precision, which improve the interpretability of scores.

As the CLA does not provide a standard or benchmark to judge whether a given CLA score is "satisfactory" or not, Hardison and Vilamovska (2009) suggested a standard-setting methodology applied to the CLA that institutions can use on their own. The standard-setting study was conducted with nine panels consisted of 41 faculty from participating CLA institutions in the United States. The standard-setting method was composed of three steps.

First, each panel member reads students' papers arranged in order of scores from low to high. For freshmen and seniors separately, each panel member identified the range of scores that he or she felt represented writing at each of the four standards (*Unsatisfactory/Unacceptable, Adequate/Barely Acceptable, Proficient/Clearly Acceptable, or Exemplary/Outstanding*). Second, groups of four to five panel members reached consensus on the ranges of scores that exemplified the performance required at each standard. Third, panel members classified a set of randomly ordered, unscored essays into each of the four categories. The results showed that the three steps produced generally similar standards for performance even though there was variability across individuals, panels, and different CLA test prompts as well as high unreliability in the sorting process. Based on the results, the authors suggested that institutions using this method increase the number of panels, use multiple CLA test prompts, increase the number of responses used in the sorting step, and extend the time to complete the sorting step in order to improve the accuracy and reliability of the standard-setting results.

Ekman and Pelletier (2008) suggest that the most successful approach to administering the CLA is to integrate testing into the academic program. For example, the test can be given during new-student orientation or on a campus-wide assessment day, or it can be embedded in first-year seminar and senior capstone courses.

In general, research about the CLA shows that the test takes a holistic approach to assessing higher order skills in contrast with typical sub-score based standardized tests of college learning (Benjamin, Chun & Shavelson, 2007; Klein, Benjamin, Shavelson & Bolus, 2007; Klein, Kuh, Chun, Hamilton & Shavelson, 2005). Researchers who studied the test's validity and reliability found high validity and reliability (Klein, Kuh, Chun, Hamilton, & Shavelson, 2005; Klein, Kuh, Chun, Hamilton, & Shavelson, 2003; Klein, et al., 2009). The CLA showed high reliability as well as high correlations with other college-level tests, which proved its construct validity (Klein, et al., 2009). The CLA has been used as a measure to assess students' growth (value-added) in higher education (Arum, Roksa, & Velez, 2008). There have been some criticisms of the CLA method such as selection bias; however, they have not been proven valid (Klein, Freedman, Shavelson, & Bolus, 2008). A new CLA value-added approach employing hierarchical linear modeling (HLM) provides scores that are more precise within a year and more reliable across years (Steedle, 2009). By using a new standard-setting methodology, such as one



suggested by Hardison and Vilamoveska (2009), institutions can set some standards on their own to decide whether a given CLA score is satisfactory or not.

## Methodology

### Design

The CLA+'s conceptual underpinnings are embodied in what has been called a “criterion sampling” approach to measurement. Simply put, the approach: 1) defines a domain of real-world tasks that are holistic and drawn from life situations, 2) observes performance and constructed responses, and 3) infers competence and learning. In general, the approach assumes that the whole is greater than the sum of its parts and that complex tasks require an integration of abilities that cannot be captured when divided into and measured as individual components.

### Instruments

The CLA+ includes two major components: the Performance Task (PT) and a series of Selected-Response Questions (SRQs).

The Performance Task presents students with a real-world scenario that requires a purposeful written response. Students are asked to address an issue, propose the solution to a problem, or recommend a course of action to resolve a conflict. They are instructed to support their responses by using information provided in the Document Library. This repository contains a variety of reference materials, such as technical reports, data tables, newspaper articles, office memoranda, and emails. A full PT includes four to nine documents in its Document Library. Students have 60 minutes to complete this constructed-response task.

Student responses to the PT are scored in three skill areas: Analysis and Problem Solving, Writing Effectiveness, and Writing Mechanics. Students receive subscores based on the CLA+ rubric, ranging from one to six, for each skill category based on key characteristics of their written responses.

In the second part of the examination, students are asked to answer 25 Selected-Response Questions. Like the PT, the 25 SRQs require student to draw information from provided materials. Students have 30 minutes to complete this section of the assessment. SRQs are scored based on the number of correct responses that students provide. Each of three question sets represents a skill area: Scientific and Quantitative Reasoning (10 questions), Critical Reading and Evaluation (10 questions), and Critique an Argument (5 questions). Because some question sets may be more difficult than others, the subscores for each category are adjusted to account for these differences and reported on a common scale. Score values range from approximately 200 to 800 for each SRQ section (CAE, 2015).

According to CAE, students scoring at the Proficient Mastery Level have shown that they are able to extract the major relevant pieces of evidence provided in the Document Library and develop a cohesive argument and analysis of the Performance Task. Proficient Mastery Level

students are able to distinguish the quality of evidence in these documents and express the appropriate level of conviction in their conclusion given the provided evidence. Additionally, Proficient Mastery Level students are able to suggest additional research or consider counterarguments (CAE, 2015).

According to CAE, students at the Proficient Mastery Level and above can correctly identify logical fallacies, accurately interpret quantitative evidence, and distinguish the validity of evidence and its purpose. Likewise, they have the ability to determine the truth and validity of an argument.

## Participants and Sample

In fall of 2014 and the spring of 2015, California State University, Los Angeles administered the CLA to 217 freshmen (fall), and 132 seniors (spring). Approximately 198 freshmen, 3 juniors, and 93 seniors had complete data for CLA+ data analysis purposes. Test data were reported back to California State University, Los Angeles by CAE in February 2015. A data file was compiled that included the CLA subscores, scale scores, performance levels on subtests, and total test, SAT scores, sex, major field, primary language, HSGPA, English Placement Test (EPT) scores, and math placement test (ELM) score.

In addition, the CAE sent an “Interim Institutional Report” for CSULA that included an Executive Summary, background on the tests, information on scores, characteristics of participating institutions and students, tables, figures and appendices.

Generally, CSULA students are similarly representative of their peers nationally in terms of gender. In terms of Race/Ethnicity however, CSULA students differ substantially.

## Findings

### Descriptive Statistics

**Tables 1 and 2** display the sample demographic characteristics. The institution showed a high percent of female students, compared to the national sample. It also showed a high percent of Hispanic students, compared to the national sample.

**Table 1.**

**DEMOGRAPHIC CHARACTERISTICS**

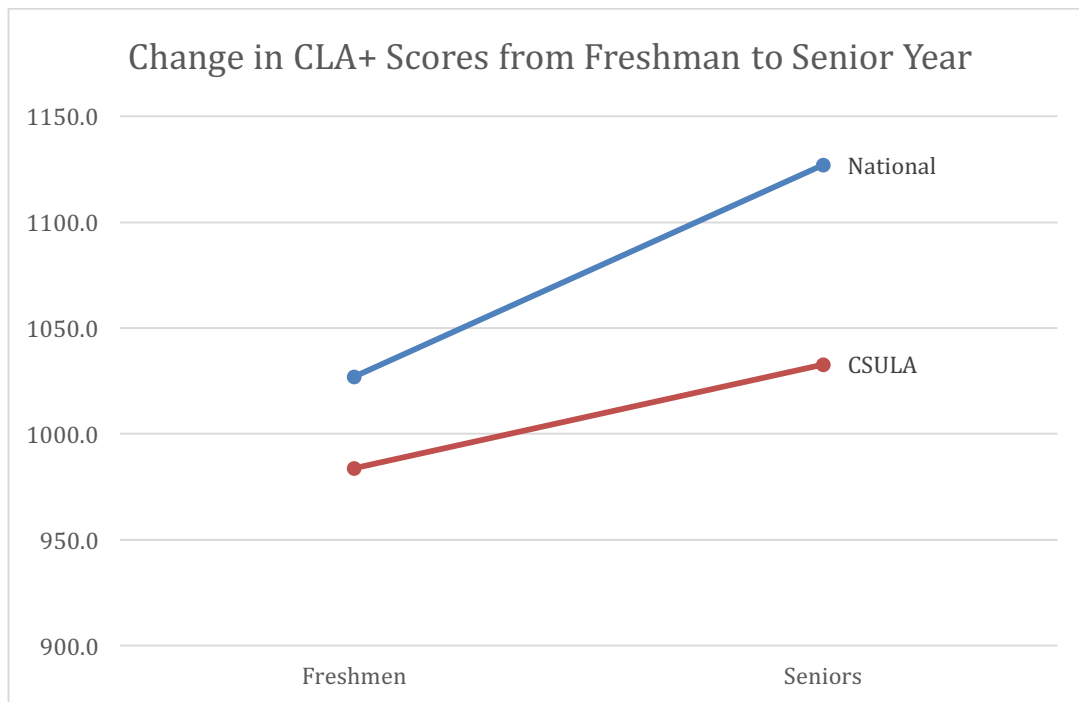
	<b>Freshmen</b>	<b>Seniors</b>	<b>Nationally</b>
<b>Gender</b>			
<b>Male</b>	34.90%	34.10%	44.00%
<b>Female</b>	62.70%	59.80%	56.00%
<b>Decline to State</b>	2.40%	6.10%	N/A

**Table 2.  
Race/Ethnicity**

<b>American Indian / Alaska Native / Indigenous</b>	0.50%	0.00%	1.00%
<b>Asian (Including Indian subcontinent and Philippines)</b>	16.30%	12.10%	6.00%
<b>Native Hawaiian or other Pacific Islander</b>	0.50%	0.00%	0.00%
<b>African-American / Black (including African and Caribbean), non-Hispanic</b>	1.40%	4.50%	14.00%
<b>Hispanic or Latino</b>	72.20%	62.10%	11.00%
<b>White (including Middle eastern), non-Hispanic</b>	1.40%	3.80%	60.00%
<b>Other / Decline to State</b>	7.70%	17.40%	8.00%

### Institution-Level CLA+ Scores

The average institutional CLA+ score for schools that tested their freshmen in the fall 2014 was 1027, indicating Basic Mastery of the skills measured by CLA+. Schools testing seniors scored, on average 100 points higher (1127), with exiting students largely proficient in critical-thinking and written communication skills. The average score for freshmen at California State University, Los Angeles was 984, and for seniors, 1029. **Figure 1** displays the institutional and national averages.



*Figure 1- CSULA Compared to National Average*

For minority serving institutions however, the average score for freshmen was 961, and the average for seniors was 1028. Hence, on average, while California State University, Los

Angeles freshmen enter with a score 23 points higher than other MSIs, California State University, Los Angeles seniors leave with a score only 1 point higher than other MSIs. **Figure 2** displays the CLA+ scores for California State University, Los Angeles and other MSI institutions.

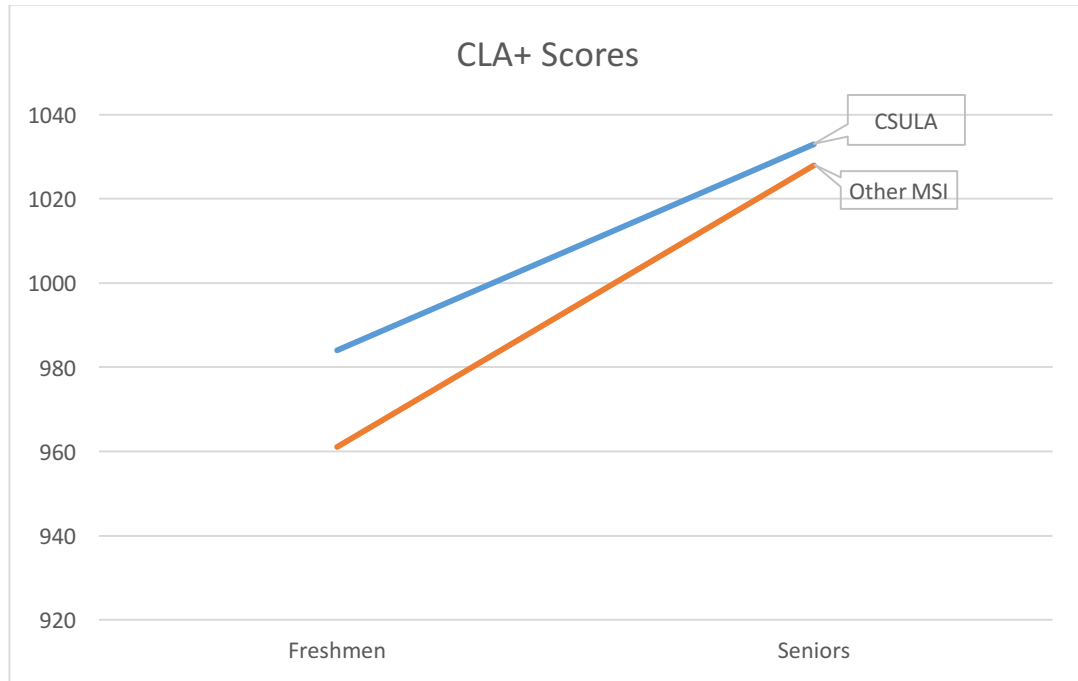


Figure 2: CSULA and Other Minority Serving Institutions

A similar disparity is seen when looking at institutions where half or more of the student population consists of Pell Grant recipients. The average institution with a high proportion of Pell Grant recipients has a freshman score of 783 and a senior score of 984 (a 201-point difference). California State University, Los Angeles freshmen scored higher than comparable Pell Grant institutions but California State University, Los Angeles seniors were only slightly higher than Pell Grant schools. With respect to similar Pell Grant institutions, California State University, Los Angeles is performing quite well.

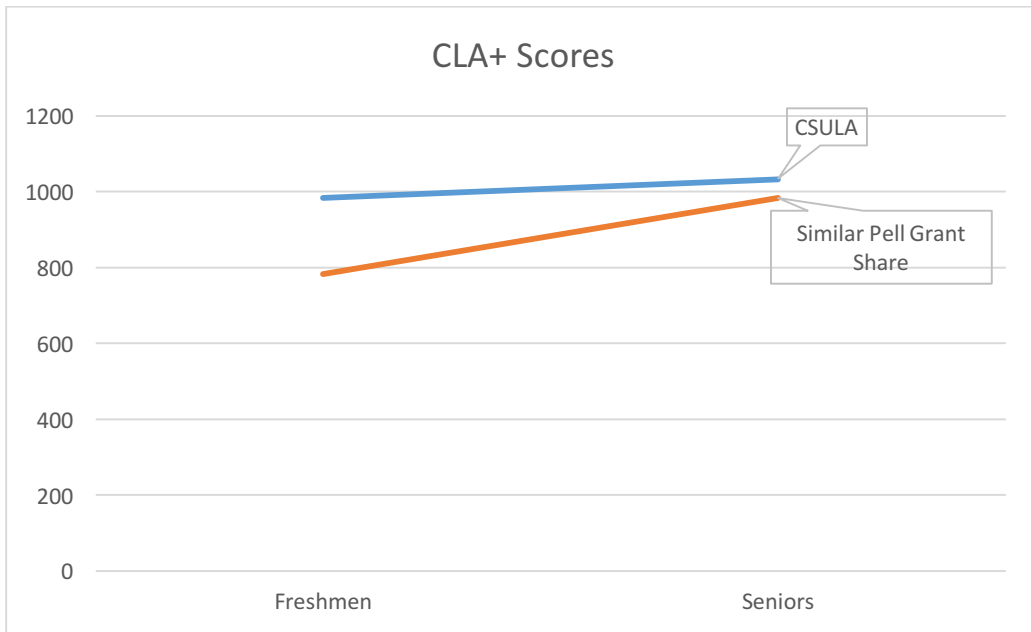


Figure 3: CSULA and Other Pell Grant Institutions

The results for how California State University, Los Angeles compares other schools in the West and other large institutions is illustrated **Figure 4**.

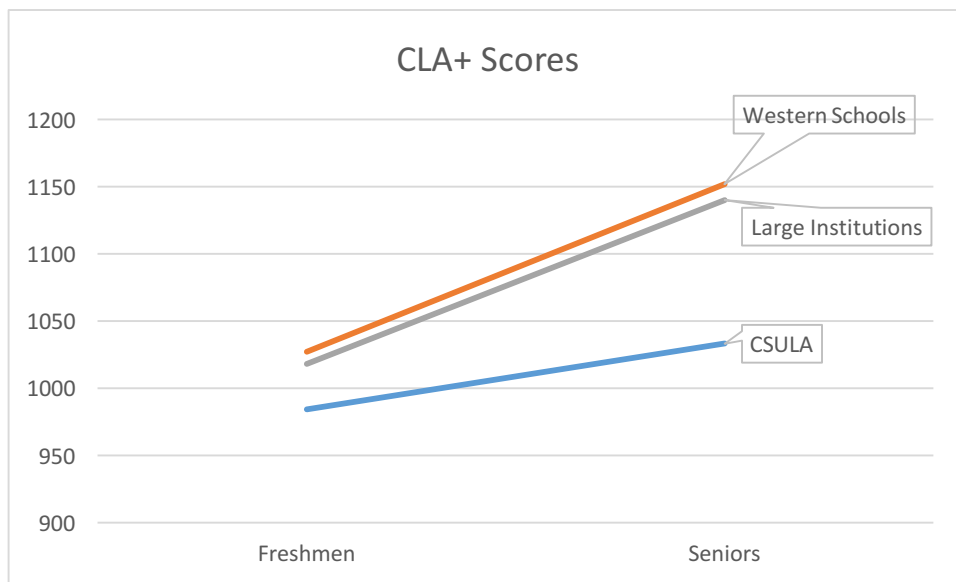


Figure 4: CSULA, Western Schools, and Large Institutions

With respect to other large institutions, and schools in the Western United States, California State University, Los Angeles does not fare too well. With that said, CAE notes there are some institutional categorizations (e.g., institution size) where differences are statistically non-significant during freshman year or are diminished by senior year. In this regard, CAE notes that geographically, schools in West appear to have slightly higher-performing seniors than in other

regions across the nation. They also note that CLA+ schools in the northeast have slightly higher-performing freshmen than in other regions. In both cases, though statistically significant, the differences in school mean scores are not large (no greater than 27 points on average). **Table 3** shows the comparative scores for freshmen and seniors.

	<b>Freshmen</b>	<b>Seniors</b>
<b>Nationally</b>	1027	1127
<b>Los Angeles</b>	984	1029
<b>MSI</b>	961	1028
<b>Western</b>	1027	1152
<b>Large</b>	1018	1140
<b>Pell Grant</b>	783	984

**Table 3. Comparative CLA+ Scores**

### Student-Level CLA+ Scores

Nationally, the average freshman who tested in fall 2014 had a CLA score of 1027, while the average senior scored almost 100 points higher (1127). The average CSULA freshman scored 984 while the average senior scored 1029.

As with the distribution of institutional scores, there is substantial variation in performance across students by certain demographic characteristics. While there is little overall difference in performance between males and females, there are disparities in performance across other demographic groups. Speakers whose primary language is English, for instance, score considerably higher as freshman, but that gap shortens within the sample of seniors taking CLA+. **Table 4** compares the scores for CSULA freshmen and seniors to the national scores. **Table 5** is shows the same information for CSULA only, but also gives the sample size and standard deviations.

<b>Demographic Characteristics</b>	<b>Freshmen</b>		<b>Seniors</b>	
	<b>CSULA</b>	<b>National</b>	<b>CSULA</b>	<b>National</b>
<b>All Students</b>	984	1057	1029	1114
<b>Transfer Students</b>				
<b>No</b>	983.85	1057	1026.63	1125
<b>Yes</b>	N/A	1039	1037.22	1078
<b>Gender</b>				
<b>Male</b>	994.36	1059	1058.26	1124
<b>Female</b>	978.44	1055	1018.18	1110
<b>Decline to State</b>	975.4	1053	1036	1083
<b>Primary Language</b>				
<b>Other</b>	964.46	1028	1016.42	1063
<b>English</b>	1010.78	1063	1054.76	1114
<b>Field of Study</b>				

<b>Sciences and Engineering</b>	982.65	1093	N/A	1151
<b>Social Sciences</b>	983.16	1060	1034.15	1126
<b>Humanities and Languages</b>	974.81	1070	1004.5	1119
<b>Business</b>	993.19	1037	1048.79	1108
<b>Helping / Services</b>	983.47	1027	1028.14	1089
<b>Undecided</b>	965.33	1033	1010	1066
<b>Ethnicity/Race</b>				
<b>Am. Indian/AN/I</b>	830	1023	N/A	1093
<b>Asian</b>	1037.79	1095	987.17	1114
<b>N. Hawaiian/PI</b>	1106	1042	N/A	1080
<b>AA/Black</b>	1021.67	966	1032.13	1025
<b>Latino</b>	973.66	1016	1107.5	1077
<b>White</b>	1013.67	1086	1019.57	1146
<b>Other</b>	925.83	1039	1027.4	1065
<b>Decline to State</b>	966	1049	0	1089
<b>Parent Education</b>				
<b>&lt; High School</b>	985.48	988	1028.83	1041
<b>High School</b>	967.32	1005	1019.58	1081
<b>Some College</b>	987.96	1038	1059.45	1096
<b>Bachelor's Degree</b>	1014.91	1081	1010.36	1132
<b>Graduate/Post Graduate Degree</b>	1016.9	1110	1113.29	1157
<b>Other</b>	N/A	N/A	N/A	N/A
<b>Not CSULA Freshman</b>	976.29	131.548	1023.38	129.074
<b>CSULA Freshman</b>	984.12	118.096	1058.47	152.171
<b>Not CSULA Sophomore</b>	985.7	117.94	1030.06	128.109
<b>CSULA Sophomore</b>	860.67	69.212	1039.57	154.936
<b>Not CSULA Junior</b>	984.83	118.945	982.63	107.094
<b>CSULA Junior</b>	945.2	85.257	1052.16	141.367
<b>Not CSULA Senior</b>	984.69	118.292	993.43	119.914
<b>CSULA Senior</b>	928.33	122.231	1040.73	138.121

**Table 4. CLA+ Scores by Demographic Characteristics National Comparison**

Demographic Characteristics	Freshmen			Seniors		
	N	Mean	SD	N	Mean	SD
<b>All Students</b>	203	984	118.235	126	1029	135.965
<b>Transfer Students</b>						
<b>No</b>	203	983.85	118.235	52	1026.63	141.730
<b>Yes</b>	N/A	N/A	N/A	74	1037.22	132.568

<b>Gender</b>						
<b>Male</b>	70	994.36	118.660	43	1058.26	142.533
<b>Female</b>	128	978.44	116.672	76	1018.18	132.950
<b>Decline to State</b>	5	975.40	167.128	7	1036.00	120.897
<b>Primary Language</b>						
<b>Other</b>	118	964.46	111.129	72	1016.42	139.383
<b>English</b>	85	1010.78	123.103	54	1054.76	129.300
<b>Field of Study</b>						
<b>Sciences and Engineering</b>	34	982.65	121.701	N/A	N/A	N/A
<b>Social Sciences</b>	32	983.16	123.941	46	1034.15	124.832
<b>Humanities and Languages</b>	21	974.81	146.109	14	1004.50	114.961
<b>Business</b>	53	993.19	120.787	34	1048.79	148.291
<b>Helping / Services</b>	51	983.47	102.229	29	1028.14	152.793
<b>Undecided</b>	12	965.33	112.904	3	1010.00	134.570
<b>Ethnicity/Race</b>						
<b>Am. Indian/AN/I</b>	1	830.00	N/A	N/A	N/A	N/A
<b>Asian</b>	34	1037.79	112.958	15	987.17	149.305
<b>N. Hawaiian/PI</b>	1	1106.00	N/A	N/A	N/A	N/A
<b>AA/Black</b>	3	1021.67	234.509	6	1032.13	229.341
<b>Latino</b>	145	973.66	112.500	79	1107.50	126.053
<b>White</b>	3	1013.67	84.347	4	1019.57	204.653
<b>Other</b>	6	925.83	154.064	7	1027.40	132.486
<b>Decline to State</b>	10	966.00	131.001	15	0.00	127.053
<b>Parent Education</b>						
<b>&lt; High School</b>	73	985.48	102.762	29	1028.83	117.715
<b>High School</b>	60	967.32	121.460	38	1019.58	142.557
<b>Some College</b>	49	987.96	132.061	29	1059.45	143.499
<b>Bachelor's Degree</b>	11	1014.91	56.470	14	1010.36	140.442
<b>Graduate/Post Graduate Degree</b>	10	1016.90	178.005	7	1113.29	127.249
<b>Other</b>	N/A	N/A	N/A	9	988.56	133.707
<b>Not CSULA Freshman</b>	7	976.29	131.548	92	1023.38	129.074
<b>CSULA Freshman</b>	196	984.12	118.096	34	1058.47	152.171
<b>Not CSULA Sophomore</b>	200	985.70	117.940	89	1030.06	128.109
<b>CSULA Sophomore</b>	3	860.67	69.212	37	1039.57	154.936
<b>Not CSULA Junior</b>	198	984.83	118.945	35	982.63	107.094
<b>CSULA Junior</b>	5	945.20	85.257	91	1052.16	141.367
<b>Not CSULA Senior</b>	200	984.69	118.292	21	993.43	119.914
<b>CSULA Senior</b>	3	928.33	122.231	105	1040.73	138.121

**Table 5. CSULA CLA+ Scores by Demographic Characteristics**

In general, speakers whose primary language is English typically score higher in all areas of the CLA+. Additionally, it appears that the higher a freshman's parental education level, the higher score they achieved. Interestingly enough however, while the same is true for seniors, at the parental education level of bachelor's degree, there is a substantial drop in scores. The sample size at the bachelors and higher degree categories was very small overall.



With respect to ethnicity, the scores varied tremendously at both the freshman and senior levels. By senior year however, the differences in scores appear to narrow, but the standard deviations among the individuals are more exaggerated. The sample sizes are small in some categories so this is difficult to compare.

Another interesting aspect of this breakdown comes when looking at the number of students who have attended CSULA for the longest periods of time. On average, it appears that students who have spent more time at CSULA appear to score higher. In essence, students who have spent their freshman, sophomore, junior and senior years at CSULA score better than students who have only spent their sophomore, junior, and senior years at CSULA (or any combination thereof).

### Mastery Levels

CLA+ Mastery Levels contextualize CLA+ scores by interpreting test results in relation to the qualities exhibited by examinees. Each Mastery Level corresponds to specific evidence of critical-thinking and written-communication skills. There were five Mastery Levels for the 2014-15 academic year: Below Basic, Basic, Proficient, Accomplished, and Advanced.

In order to score at the Basic mastery Level, a student must make a reasonable attempt to analyze the details of the Performance Task and demonstrate that they are able to communicate in a manner that is understandable to the reader. Students with Basic Mastery also show some judgment about the quality of evidence provided in the Document Library.

In addition, students scoring at the Basic mastery level know the difference between correlation and causality, and they can read and interpret a bar graph—but not necessarily a scatterplot or regression analysis.

Roughly 80% of California State University, Los Angeles freshmen tested in the Fall 2014 were non-proficient in CLA+ skills—scoring at or below the Basic Mastery Level. Of the sample, 14.7% scored at the Proficient or Higher Level, and of this number, only 2.3% scored at the Accomplished or Advanced Level. Nationally, 58% of college freshmen were non-proficient, another 39% scored at the Proficient Level, and only 2% exhibited Advanced Mastery of critical-thinking and written communications skills, as measured by CLA+. **Figure 5** displays the percentage of freshmen and seniors who scored at different proficiency levels. **Figure 6** displays the same numbers, but does a comparison across national scores.

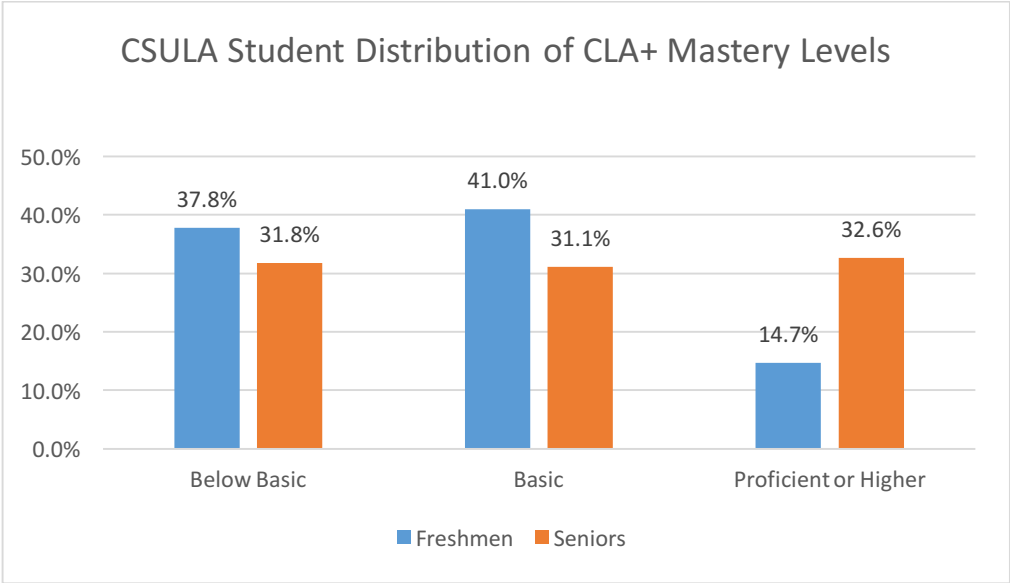


Figure 5: CSULA Student Distribution of CLA+ Mastery Levels

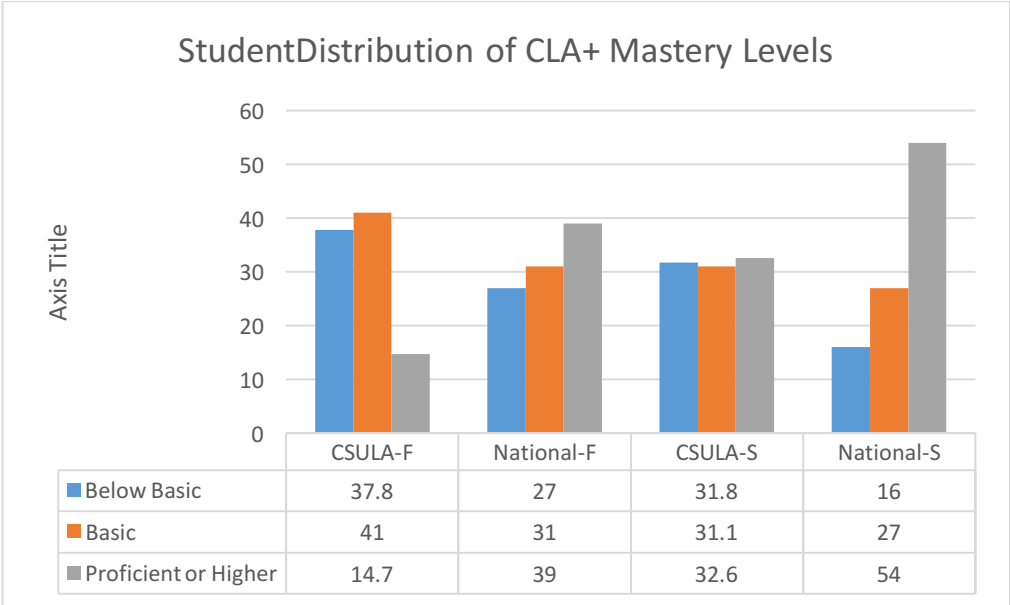


Figure 6: National Comparison of Student Distribution of CLA+ Mastery Levels

Across California State University, Los Angeles seniors testing in 2014-15, roughly 63% scored at or below the Basic Mastery Level. About 31% scored at the Proficient Level, and only 1 percent scored at the Advanced Mastery Level. Nationally, the numbers are 16% were unable to demonstrate even basic mastery of CLA+ skills, 27% scored at the Basic Mastery Level, and about 54% of seniors were proficient in CLA+ skills.

## Subscores

The first type of test is a *performance task* that asks students to use a set of critical thinking, analytical reasoning, problem solving and written communication skills to answer open-ended question about a task or situation. The task includes a document library with a range of sources (e.g. letters, memos, articles, photos, charts, etc.). Students are asked to use their materials in preparing and answering the performance task within 90 minutes. In the task, students are expected to present ideas clearly and to cite sources in the document library that support the points. According to CAE, no two performance tasks assess the same combination of abilities. Students may have to weigh different pieces of evidence, evaluate the validity of documents, spot biases, and identify questionable or critical assumptions. (Collegiate Learning Assessment Interim Institutional Report, CSULA, Fall 2015).

The other type of test is an *analytic writing task*. Two types of essay prompts are possible, “make an argument” or “critique an argument”. Both tasks measure a student’s ability to articulate ideas, examine claims, support ideas with reasons and examples, sustain a coherent discussion and use standard written English. Students are given 45 minutes to either address an issue in making an argument or critique an argument.

### Performance Task

Student responses to the Performance Task (PT) are scored in three skill areas: Analysis and Problem Solving, Writing Effectiveness, and Writing Mechanics. These subscores are assigned values ranging from one to six.

Subscores for the Selected-Response Questions (SRQs) represent three additional skill areas: Scientific and Quantitative Reasoning (10 questions), Critical Reading and Evaluation (10 questions), and Critique and Argument (5 questions). Because some question sets may more difficult than others, the subscores for each category are adjusted to account for these differences and reported on a common scale. Score values range from approximately 200 to 800 for each SRQ section.

For the PT, the average institution testing freshmen received a score of 3 for Analysis and Problem Solving, 3.1 for Writing Effectiveness, and 3.4 for Writing Mechanics. Seniors received scores of 3.3, 3.4, and 3.7 respectively. CSULA freshmen received a score of 2.85 for Analysis and Problem Solving, 3.01 for Writing Effectiveness, and 3.28 for Writing Mechanics. California State University, Los Angeles seniors scores 2.85, 3.09, and 3.35 respectively. **Figure 7** displays average scores for CSULA freshmen and seniors on the PT scales. Little change was seen in analysis and problem solving. Only small gains were seen in writing effectiveness and writing mechanics. **Figure 8** displays these same numbers with a national comparative reference.

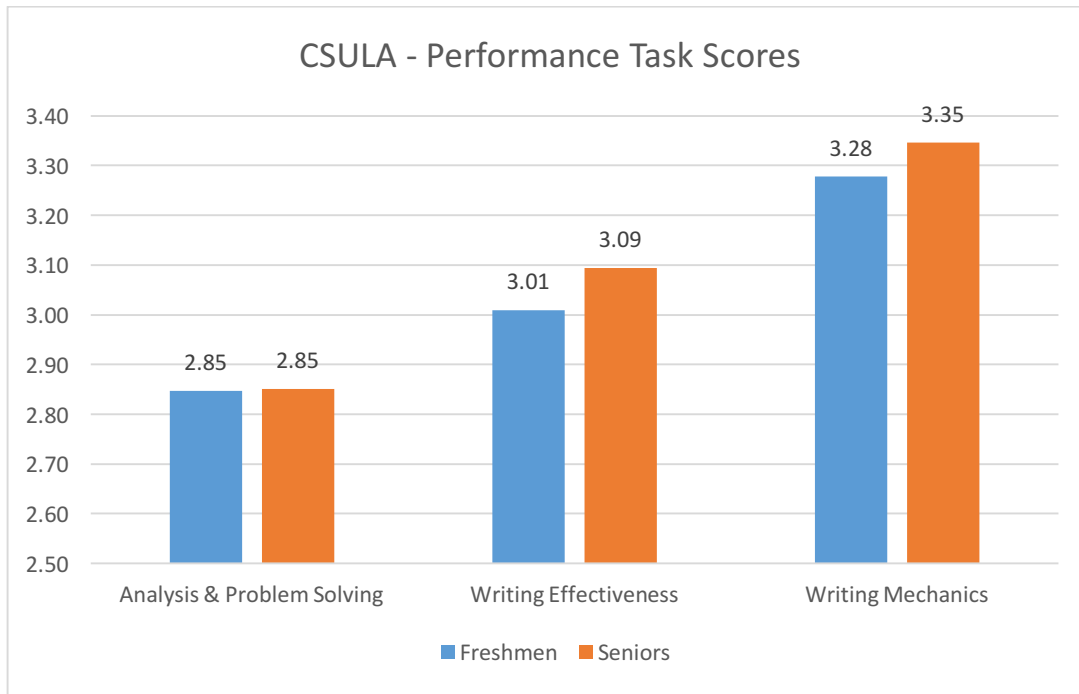


Figure 7: CSULA Performance Task

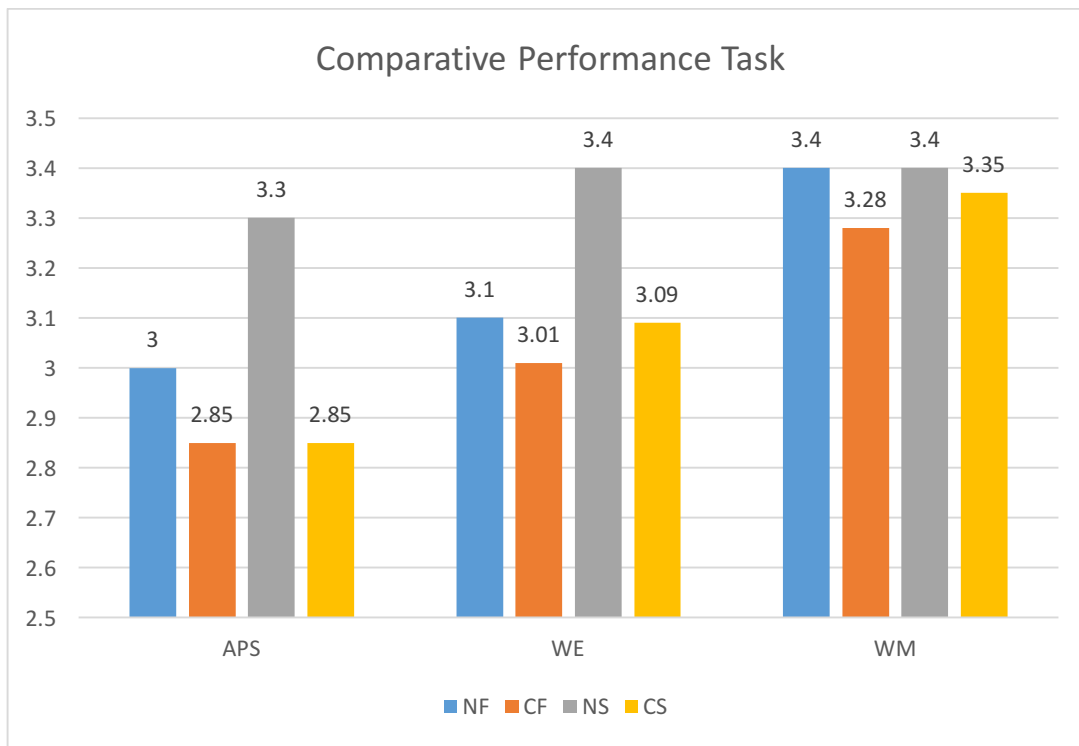


Figure 8: Comparative Performance Task

### Selected Response Questions

On the Selected Response Questions (SRQs), the institution's freshmen averaged scores of 517 across each of the three subscores categories, with scores improving to 543, 538, and 538

respectively for Scientific, and Quantitative Reasoning, Critical Reading and Evaluation, and Critique and Argument.

California State University, Los Angeles freshmen scored 470 for Scientific & Quantitative Reasoning, 455 for Critical Reasoning & Evaluation, and 474 for Critique and Argument. Seniors scored 503, 505, and 497 respectively. **Figure 9** displays average subscores for freshmen and seniors. The largest gain was seen in critical reasoning and evaluation, although some gains were seen in the other two areas. **Figure 10** shows the same numbers compared nationally.

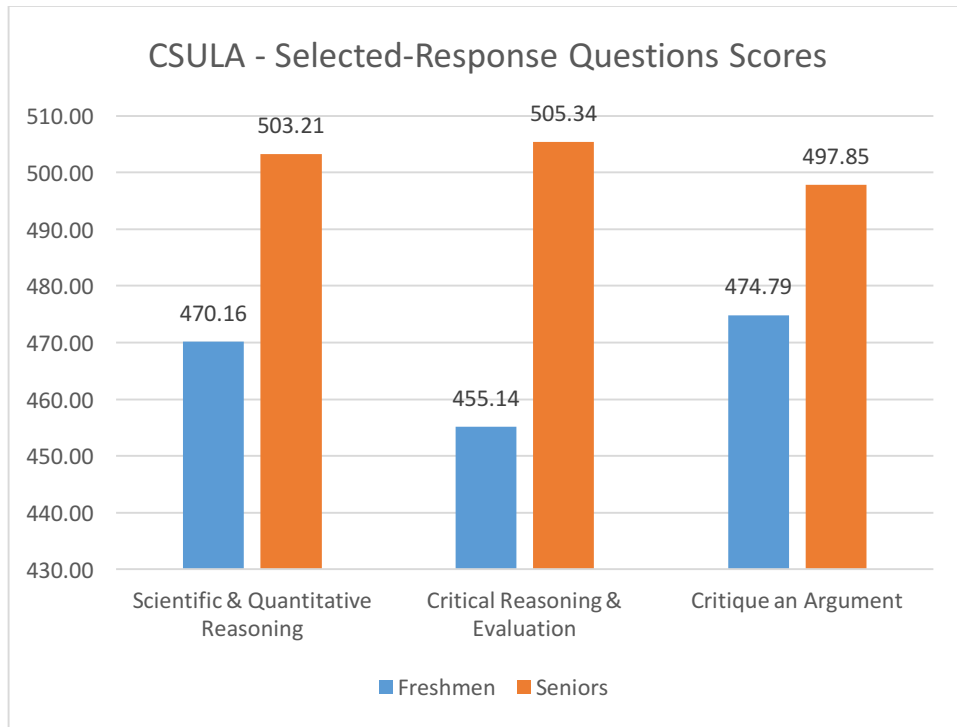


Figure 9: CSULA Selected Response Questions

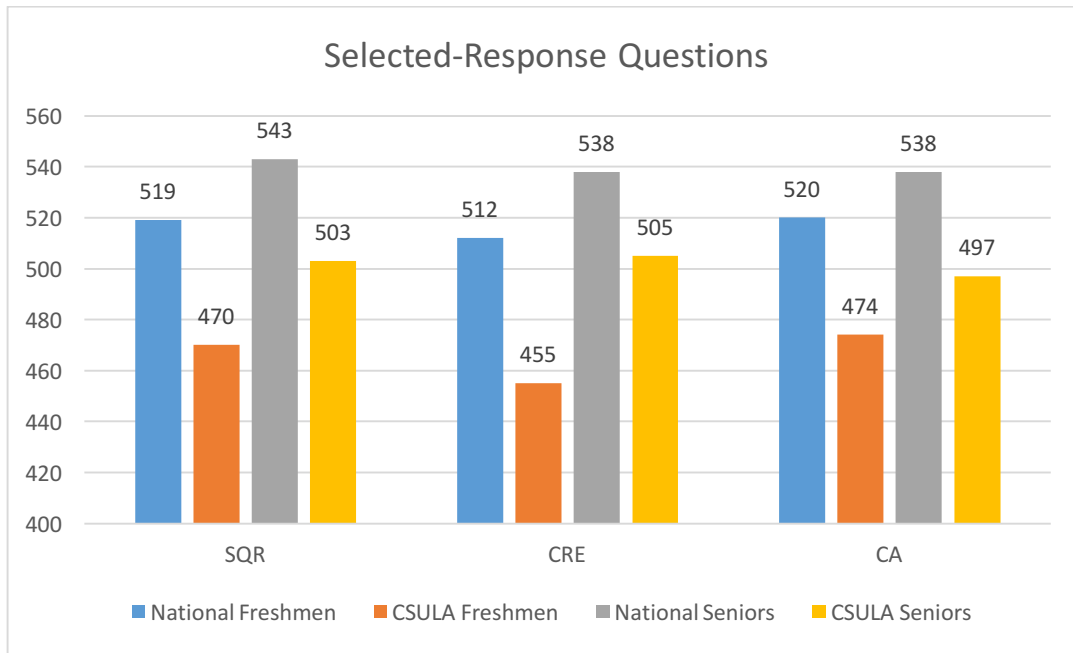


Figure 10: National Comparison of Selected Response Questions

### Value Added Growth Estimates

Effect sizes (ES) characterize the amount of growth in CLA+ scores that is evident across classes, in standard deviation units. The effect size for the average CLA+ institution in 2014-15 was 0.66, representing approximately 0.66 standard deviations of improvement from freshman to senior year. Effect sizes are normally distributed, but there are a few institutions with exceptionally high effect sizes. The typical institutional effect size was between 0.12 and 1.20, indicating a fairly wide variation in the amount of growth seen across the schools in 2014-15.

The overall effect size for California State University, Los Angeles seniors was just over 0.40, which is a medium effect size. This is because the effect size for juniors was calculated as 0.84, and these students (only 3) should be counted in the senior classification because in all other classifications in the results, they are considered seniors. In terms of specific assessments, the effect size for the Performance Task for juniors was 0.26, and for seniors, it was 0.00. As to the Selected Response Questions, the Effect Size for juniors was 1.00, and for seniors, it was 0.58.

### Institutional Report CLA

The Executive Summary reported that the major question to be answered was **“How did our freshmen score after taking into account their academic abilities?”**

The average SAT score of the freshmen sample was 872 (sd=119), with a low score of 640 and a high score of 1250. The entering academic ability was also 872. The average SAT score of the senior sample was 862 (sd=140), with a low score of 580 and a high score of 1210. The entering academic ability was 885. Based on the entering academic ability, CAE predicted a value added

estimate mean total score of 1036, a performance task score of 1045, and a selected response score of 1031.

For the Total CLA+ Score, the actual total was 1029, which is a difference of negative seven (-7) points. This difference yields a value-added standardized score of -0.16. For the performance test, the actual score was 1008, which is a difference of negative thirty-seven (-37) points. This difference yields a value-added score of -0.70. The selected response questions had a mean score of 1050, which was nineteen (19) points higher than expected. This difference yields a value-added standardized score of 0.43. All of these numbers place the university in the range of “near expected”.

Relative to other schools which had students taking the CLA, the percentile rank for CSULA in each of these areas are as follows:

- Total CLA+Score: 39<sup>th</sup> percentile
- Performance Task: 22<sup>nd</sup> percentile
- Selected Response Questions: 65<sup>th</sup> percentile

In terms of CSULA student performance on the different CLA tests, the overall results are shown in the table below. In all of the cases, CSULA students scored at the “Near Expected” level per CAE estimates.

	Deviation Score	Performance Level
Performance task	-0.70 below mean	Near Expected
Selected Response	0.43 above mean	Near Expected
Total CLA+	-0.16 below mean	Near Expected

**Table 6. Value-Added Estimates Deviation Scores and Performance Levels for seniors**

The CLA report also presented mean scores for freshmen at CSULA and at all CLA-participating schools. CSULA students scored lower than the mean for all schools on the performance task, on the analytic writing task, and on the make an argument task. This being the case, it should be noted that CAE does not recommend that such means from individual institutions be compared with all institutions in the population, “as colleges differ vastly in their makeup and characteristics.” The focus in using the CLA is to determine **value added** by a particular institution.

It is valid to compare campuses in terms of the value added from freshman year to senior year, as the scale is a standardized one that controls for students’ academic abilities (and by so doing, also controls for selectivity and SES).

### CSULA Data File Findings

Data analysis showed that 63% of the freshman sample identified as female, 35% as male, and 2% declined to state a gender identity. For the senior sample, 63% identified as female, 30% as male, and 6% declined to state a gender identity. For the freshman sample, about 41% had English as a first language; for the senior sample, the number was 43%. The university’s 2014-2015 Common Data Set reflects 41.5% male and 58.5% female.

The freshman sample's average SAT Critical Reading score was 429, the average SAT Math score was 443, and the average SAT Written score was 436. The seniors average SAT Critical Reading score was 429, the average SAT Math score was 438, and the average SAT Written score was 451.

In terms of broad fields of study, for the freshman sample, 17% were in science or engineering, 16% in social sciences, 10% in humanities, 25% in business, 25% in helping professions and 6% were undecided. For the senior sample, 0% were in science or engineering, 42% in social sciences, 8% in humanities, 22% in business, 25% in helping professions and 3% were undecided.

Although not every student took every subtest because of time constraints, each student's proficiency level on each subtest was included by CAE in the data file. Additionally, while CAE did not present a total proficiency level for each case, a total proficiency level was calculated by averaging the proficiency levels for all subtests. In terms of total performance levels, **Table 7** summarizes the percentage of students in the five different categories.

Level	Number	Percent
Well below	27	29%
Below	16	17%
At	12	13%
Above	20	22%
Well above	18	19%
Total	93	100%

**Table 7. Percentage of sample students at expected performance levels.**

To summarize, 46% were below or well below, 13% were at expected level, and 41% were above or well above expected performance level.

## Conclusions and Implications

In conclusion, although CSULA students scored lower than freshmen and seniors at the national level, in Western schools and at large institutions, they scored significantly higher than students at similar MSI institutions and higher than students at similar high-Pell grant institutions. Performance did however vary by demographic characteristics.

Additionally, although 80 percent of freshmen were not proficient in CLA+ skills, and only 16 percent of freshmen scored as proficient, with respect to seniors, the numbers are 63 percent were not proficient, and 32 percent scored at the proficient level or above. Thus, the percentage of proficient or higher doubled from freshman to senior year.



Little change was seen over time in analysis and problem solving, writing effectiveness and writing mechanics. Students showed relatively higher gains and effect sizes in selected response items, gaining 50 points in critical reading and evaluation, and 33 points in scientific and quantitative reasoning. The overall effect size for CSULA seniors was .40, a medium effect size.

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