






collegiate learning assessment

INSTITUTIONAL REPORT
2005–2006

University of Texas at Dallas

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Note to Readers

Sections I, III and V all present your institution's CLA results. As such, there is some duplication of content across these sections. However, to reach multiple audiences, each section frames this content differently. Section I is non-technical, Section III adds details and Section V is intended to provide comprehensive and technical information underpinning your results.

Sections II and IV are contextual. Section II helps readers understand CLA results. Section IV describes the CLA tests, scoring process and participants.

Section VI is designed to provide supplemental information for more technically-versed readers.

I. Institutional Executive Summary

This 2005–2006 Collegiate Learning Assessment (CLA) Institutional Report for University of Texas at Dallas provides information in several formats to assist you in conveying CLA results to a variety of campus constituents. As you know, the CLA assesses your institution's value added to key higher order skills of your students: critical thinking, analytic reasoning, problem solving, and written communication. The CLA also allows you to measure the impact of changes in your curricula and teaching as well as compare your school with our national sample of over 100 institutions. Three questions of interest to many CLA schools are:

1. How did our students score after taking into account their incoming academic abilities?

We used our national database of schools to examine whether the students at University of Texas at Dallas performed (as a group) better or worse than what would be expected. Their "expected" CLA score is based on two factors, namely: (a) their mean SAT score and (b) the typical relationship between a school's average SAT score and its average CLA score. We designate five performance levels for an institution: *well below expected*, *below expected*, *at expected*, *above expected*, and *well above expected*. We report scores for freshmen and seniors separately and then combine them to estimate your institution's value added (see pages 10-12 for details). The 2005-2006 results for University of Texas at Dallas were as follows:

University of Texas at Dallas	Performance Level
Freshmen	Above
Seniors	Below
Freshmen-to-Seniors (Value Added)	Well Below

2. How does my institution compare to similar institutions?

One way to do this is to segment our national database of schools into categories, such as "large private research institutions whose students have relatively high SAT scores." This approach leads to a very large number of categories and many of these categories do not have enough schools to support valid comparisons. This is especially so when there is a long list of potentially important characteristics that are used to form the categories.

An alternative approach uses a statistical technique (called "multiple regression") that considers several variables simultaneously. We examined the contribution of a standard set of institutional and student characteristics captured in IPEDS. We found that they did not account for the substantial variation of CLA scores among institutions thus suggesting the importance of curriculum, pedagogy and finer-grained actuarial indicators not available in IPEDS. See Appendix G for details.

In collaboration with all institutions using the CLA, we intend to focus our research efforts on establishing valid peer comparisons and explaining CLA results. We plan to conduct case studies at several schools and publish a monograph on this topic in the near term.

3. How does my institution perform on other outcomes after taking into account institutional and student characteristics?

We also examined whether other outcomes at your school—retention and graduation rates—were consistent with what would be expected given the characteristics of your students and institution. Using a regression modeling approach, we report your school's actual performance, what would be expected based on the models, and assign a performance level relative to all four-year institutions (see Table 10 on Page 15 for details):

Outcome	Your School	Expected Value	Performance Level
First-year retention rate	80.0	84.1	At
4-year graduation rate	37.9	35.7	At
6-year graduation rate	56.1	59.5	At

II. Understanding CLA Results

The Collegiate Learning Assessment (CLA) is a national effort that provides colleges and universities with information about their students' performance on tasks that require them to think critically, reason analytically, solve realistic problems, and write clearly. Almost all undergraduate institutions strive to improve their students' skills in these areas. The CLA provides colleges with information about their students' performance in these areas by examining how well a sample of their freshmen and seniors do on nationally administered tests.

For a number of reasons, we cannot measure improvement by simply examining differences in average CLA scores between freshmen and senior samples within a school or between schools. The samples of freshmen and seniors tested at a school may not perfectly represent their respective classes at that college. For example, participating freshmen may have higher SAT scores than their classmates while the reverse may be true for seniors. In addition, colleges also differ in the entering abilities of their students. To address these concerns, an adjustment is needed.

To make this adjustment, we compare a school's actual CLA score to its expected CLA score. Expected scores are derived from the typical relationship between a college's average SAT score (or average ACT score converted to the SAT scale) and its average CLA score. For example, college freshmen with an average SAT score of 1290 would be expected to have an average CLA score of 1235. If their actual average CLA score is substantially higher than that, then they would be classified as scoring higher than expected.

We report differences between actual and expected scores in two ways: (1) "points" on the CLA scale and (2) standard errors. We use the latter to facilitate comparisons and define the performance levels as follows. Colleges with actual scores between -1.00 to +1.00 standard errors from their expected scores are categorized as being At Expected. Institutions with actual scores greater than one standard error (but less than two standard errors) from their expected scores are in the Above Expected or Below Expected categories (depending on the direction of the deviation). The schools with actual scores greater than two standard errors from their expected scores are in the Well Above Expected or Well Below Expected categories. See pages 10-12 and page 18 for technical information on computing expected scores and the classification of scores into the five different performance levels.

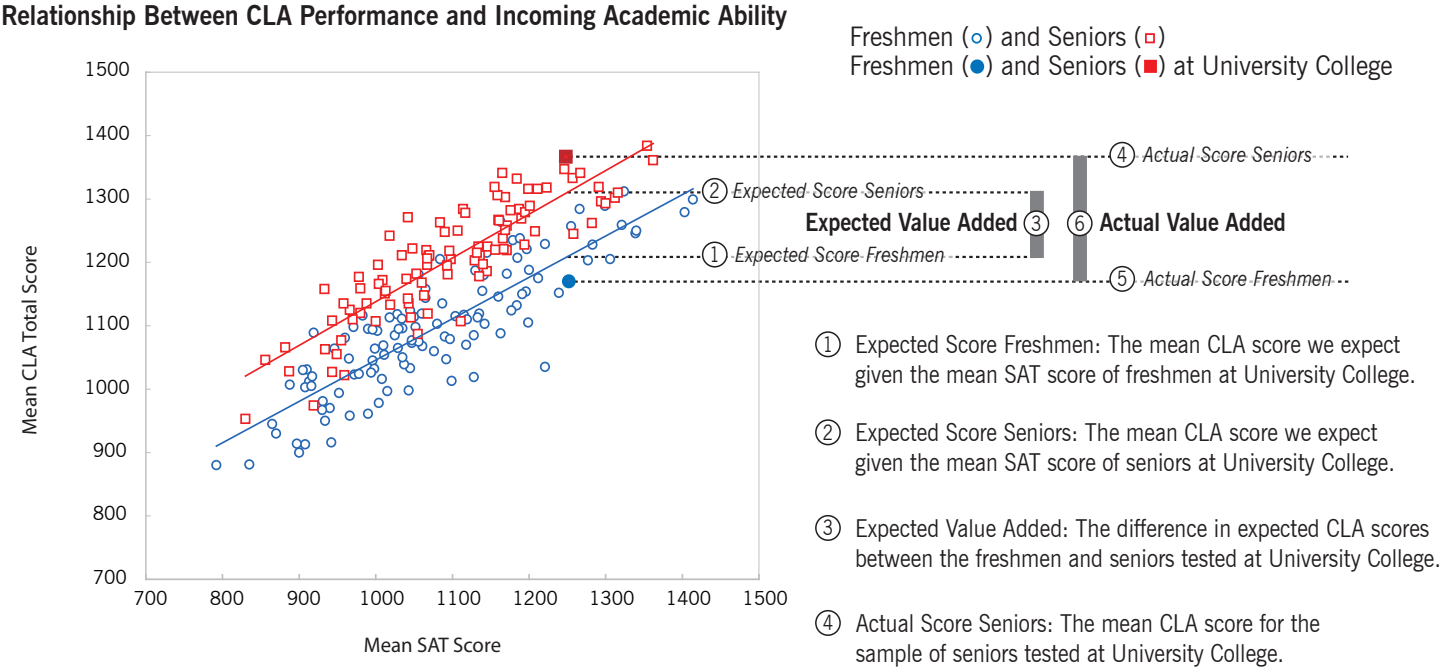
Differences between expected and actual scores for freshmen could stem from several factors, such as differences in college admissions' policies that result in students who perform at similar levels on standardized multiple choice tests (e.g., the SAT) but differently on constructed response tasks that require short answers and essays (e.g., the CLA). Differences between expected and actual scores for seniors could be due to admissions policies, but they also could stem from differences in the relative effectiveness of their institution's educational programs.

By comparing actual to expected scores, colleges can estimate[1] their value added by measuring performance differences between the freshmen and senior years at their school. They can also compare the size of this difference with colleges that serve similar students (i.e., students with the same mean SAT score).

On the next page we illustrate these ideas using a hypothetical example—University College—to help you understand CLA results.

[1] At this stage of the CLA we are not measuring gain in the usual longitudinal sense (gains over time in a cohort of the same students) but we are estimating value added using a cross-sectional design (comparing random samples of freshmen tested in the fall to random samples of seniors tested in the spring). We initiated a traditional longitudinal study at 45 schools in fall 2005 and will report results after these schools test their longitudinal cohorts of students as rising juniors and seniors.

Relationship Between CLA Performance and Incoming Academic Ability



Squares (for seniors) and circles (for freshmen) represent colleges or universities with a sufficient number of students with both CLA and SAT (or converted ACT) scores.

Diagonal lines (red for seniors and blue for freshmen) show the typical relationship between incoming academic ability (average ACT or SAT scores) and average CLA scores across all participating institutions. The lines represent expected CLA scores at different levels of incoming academic ability.

① Expected Score Freshmen: The mean CLA score we expect given the mean SAT score of freshmen at University College.

② Expected Score Seniors: The mean CLA score we expect given the mean SAT score of seniors at University College.

③ Expected Value Added: The difference in expected CLA scores between the freshmen and seniors tested at University College.

④ Actual Score Seniors: The mean CLA score for the sample of seniors tested at University College.

⑤ Actual Score Freshmen: The mean CLA score for the sample of freshmen tested at University College

⑥ Actual Value Added: This estimated value added is the difference in actual CLA scores between the freshmen and seniors tested at University College.

Freshmen: Based on the average SAT score (1252) of freshmen sampled at University College, we would expect their average CLA score to be 1210. Freshmen at University College scored 1170, which is At Expected (because the difference is less than one standard error).

Seniors: Based on the average SAT score (1250) of seniors sampled at University College, we would expect their average CLA score to be 1311. Seniors at University College scored 1383, which is Above Expected (because the difference is greater than one standard error but less than two standard errors).

Value Added: Based on the average SAT scores of freshmen and seniors sampled at University College, we would expect a difference of 101 points on the CLA. This difference is our estimate of the expected value added. The difference between how University College seniors scored (1383) and freshmen scored (1170) was 213 points, which is Well Above Expected (because the difference is greater than two standard errors).

University College	Freshmen	Seniors	Value Added
Mean SAT Score	1252	1250	
Expected CLA Score	1210	1311	101
Actual CLA Score	1170	1383	213
Difference (actual minus expected) *	-40	72	112
Difference (actual minus expected) **	-0.80	1.60	2.40
Performance Level ***	At	Above	Well Above

** In scale score points. ** In standard errors. *** Well Above, Above, At, Below, or Well Below Expected*

III. 2005–2006 Institutional Results for Your School

University of Texas at Dallas	Freshmen	Seniors	Value Added
Mean SAT Score	1324	1316	
Expected CLA Score	1257	1356	99
Actual CLA Score	1312	1310	-2
Difference (actual minus expected) *	55	-46	-101
Difference (actual minus expected) **	1.10	-1.00	-2.10
Performance Level ***	Above	Below	Well Below

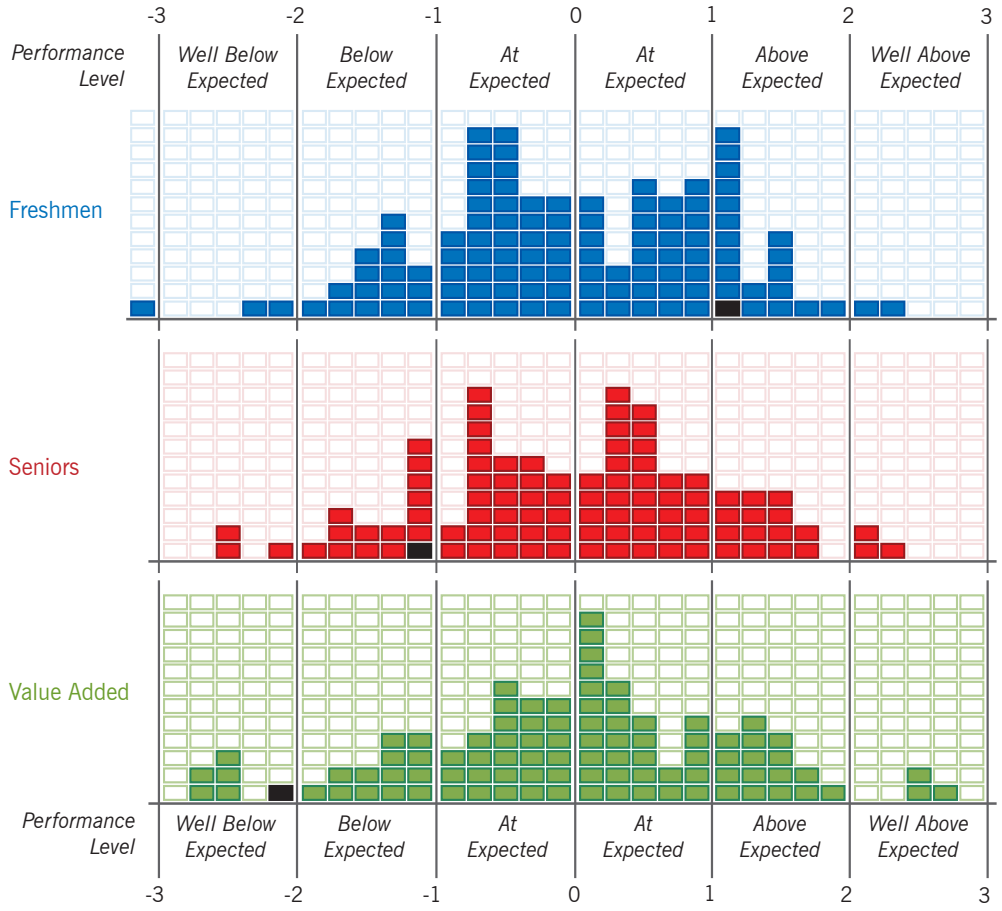
** In scale score points. ** In standard errors. *** Well Above, Above, At, Below, or Well Below Expected*

Freshmen: Based on the average SAT score (1324) of freshmen sampled at your institution, we would expect their average CLA score to be 1257. Your freshmen scored 1312, which is *Above Expected*.

Seniors: Based on the average SAT score (1316) of seniors sampled at your institution, we would expect their average CLA score to be 1356. Your seniors scored 1310, which is *Below Expected*.

Value Added: Based on the average SAT scores of freshmen and seniors sampled at your institution, we would expect a difference of 99 points on the CLA. This difference is our estimate of the expected value added at your school. The difference between how your seniors scored (1310) and freshmen scored (1312) was -2 points, which is *Well Below Expected*.

Distribution of schools by actual minus expected scores (in standard errors) and performance levels



Each solid rectangle represents one CLA school. Solid black rectangles (■) represent your school as applicable within the distribution of actual minus expected scores for freshmen (■) or seniors (■) or estimates of the actual value added (■) between freshmen and senior years.

IV. Background

The CLA Tests and Scores

The CLA uses various types of tasks, all of which require students to construct written responses to open-ended questions. There are no multiple-choice questions.

Performance Task

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

The first portion of each Performance Task contains general instructions and introductory material. The student is then presented with a split screen. On the right side of the screen is a list of the materials in the document library. The student selects a particular document to view by using a pull-down menu. On the left side of the screen are a question and a response box. There is no limit on how much a student can type. When a student completes a question, he or she then selects the next question in the queue. Some of these components are illustrated below:

> Introductory Material: You advise Pat Williams, the president of DynaTech, a company that makes precision electronic instruments and navigational equipment. Sally Evans, a member of DynaTech's sales force, recommended that DynaTech buy a small private plane (a SwiftAir 235) that she and other members of the sales force could use to visit customers. Pat was about to approve the purchase when there was an accident involving a SwiftAir 235. Your document library contains the following materials:
>
> 1. Newspaper article about the accident
> 2. Federal Accident Report on in-flight breakups in single-engine planes
> 3. Internal Correspondence (Pat's e-mail to you & Sally's e-mail to Pat)
> 4. Charts relating to SwiftAir's performance characteristics
> 5. Excerpt from magazine article comparing SwiftAir 235 to similar planes
> 6. Pictures and descriptions of SwiftAir Models 180 and 235
>
> Sample Questions: Do the available data tend to support or refute the claim that the type of wing on the SwiftAir 235 leads to more in-flight breakups? What is the basis for your conclusion? What other factors might have contributed to the accident and should be taken into account? What is your preliminary recommendation about whether or not DynaTech should buy the plane and what is the basis for this recommendation?

No two Performance Tasks assess the same combination of abilities. 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 also may ask students to suggest or select a course of action to resolve conflicting or competing strategies and then provide a rationale for that decision, including why it is likely to be better than one or more other approaches. For example, students may be asked to anticipate potential difficulties or hazards that are associated with different ways of dealing with a problem including the likely short- and long-term consequences and implications of these strategies. Students may then be asked to suggest and defend one or more of these approaches. Alternatively, students may be asked to review a collection of materials or a set of options, analyze and organize them on multiple dimensions, and then defend that organization.

Performance Tasks often require students to marshal evidence from different sources; distinguish rational from emotional arguments 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.

All of the Performance Tasks require students to present their ideas clearly, including justifying their points of view. For example, they might note the specific ideas or sections in the document library that support their position and describe the flaws or shortcomings in the arguments' underlying alternative approaches.

Analytic Writing Task

Students write answers to two types of essay prompts, namely: a "Make-an-Argument" question that asks them to support or reject a position on some issue; and a "Critique-an-Argument" question that asks them to evaluate the validity of an argument made by someone else. Both of these tasks measure a student's ability to articulate complex ideas, examine claims and evidence, support ideas with relevant reasons and examples, sustain a coherent discussion, and use standard written English.

A "Make-an-Argument" prompt typically presents an opinion on some issue and asks students to address this issue from any perspective they wish, so long as they provide relevant reasons and examples to explain and support their views. Students have 45 minutes to complete this essay. For example, they might be asked to explain why they agree or disagree with the following:

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

A "Critique-an-Argument" prompt asks students to critique an argument by discussing how well reasoned they find it to be (rather than simply agreeing or disagreeing with the position presented). For example, they might be asked to evaluate the following argument:

> A well-respected professional journal with a readership that includes elementary school principals recently published the results of a two-year study on childhood obesity. (Obese individuals are usually considered to be those who are 20 percent above their recommended weight for height and age.) This study sampled 50 schoolchildren, ages 5-11, from Smith Elementary School. A fast food restaurant opened near the school just before the study began. After two years, students who remained in the sample group were more likely to be overweight—relative to the national average. Based on this study, the principal of Jones Elementary School decided to confront her school's obesity problem by opposing any fast food restaurant openings near her school.

Scores

To facilitate reporting results across schools, ACT scores were converted (using the standard table in Appendix A) to the scale of measurement used to report SAT scores. These converted scores are hereinafter referred to simply as SAT scores.

Students receive a single score on a CLA task because each task assesses an integrated set of critical thinking, analytic reasoning, problem solving, and written communication skills.

Analytic Writing Task scoring is powered by e-rater ®, an automated scoring technology developed and patented by the Educational Testing Service and licensed to CAE. The Performance Task is scored by a team of professional graders trained and calibrated on the specific task type.

A student's "raw" score on a Performance Task is the total number of points assigned to it by the graders. However, a student can earn more raw score points on some tasks than on others. To adjust for these differences, the raw scores on each task were converted to "scale" scores using the procedures described in Appendix B. This step allows for combining scores across different versions of a given type of task as well as across tasks, such as for the purposes of computing total scores.

Characteristics of Participating Institutions and Students

In the fall 2005 and/or spring 2006 testing cycles, 113 four-year institutions ("CLA schools") tested enough freshmen and seniors to provide sufficiently reliable data for the school level analyses and results presented in this report. Table 1 groups CLA schools by Basic Carnegie Classification. The spread of schools corresponds fairly well with that of the 1,710 four-year institutions across the nation.

Table 1: 4-year institutions in the CLA and nation by Carnegie Classification

	Nation		CLA	
Carnegie Classification	Number	Percentage	Number	Percentage
Doctorate-granting Universities	283	17%	29	26%
Master's Colleges and Universities	690	40%	43	38%
Baccalaureate Colleges	737	43%	41	36%
	1710		113	

Source: Carnegie Foundation for the Advancement of Teaching, Carnegie Classifications Data File, July 7, 2006 edition.

Table 2 compares some important characteristics of the 113 four-year CLA schools with the characteristics of the colleges and universities across the nation. These data suggest that the CLA schools are fairly representative of institutions nationally with respect to key institutional variables.

Table 2: 4-year institutions in the CLA and nation by key school characteristics

School Characteristic	Nation	CLA
Percent public	36%	42%
Percent Historically Black College or University (HBCU)	6%	10%
Mean percentage of undergraduates receiving Pell grants	33%	32%
Mean four-year graduation rate	36%	38%
Mean six-year graduation rate	52%	55%
Mean first-year retention rate	75%	77%
Mean Barron's selectivity rating	3.5	3.5
Mean estimated median SAT score	1061	1079
Mean number of FTE undergraduate students (rounded)	4500	6160
Mean student-related expenditures per FTE student (rounded)	$12,230	$11,820

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

With respect to entering ability levels, students participating in the CLA at a school appeared to be generally representative of their classmates, at least with respect to SAT scores. Specifically, across institutions, the mean freshmen SAT score of the students who took the CLA tests (as verified by the school Registrar) was only 15 points higher than that of the entire freshmen class (as reported in IPEDS): 1094 versus 1079. The correlation on the mean SAT score between freshmen who took the CLA and their classmates was extremely high (r=0.96). Additionally, the mean senior SAT score of CLA participating students was only 10 points higher than that of freshmen at their school (1104 versus 1094), a result consistent with the general finding that more able students will tend to persist over the course of their college education. Across participating CLA schools, the correlation between the mean SAT score of freshmen and seniors who took the CLA at a school was also strong (r=0.95). These data suggest that as a group, (a) the students tested in the CLA were similar to those of their classmates and (b) the samples of freshmen and seniors who took the CLA were very similar as measured by their entering academic abilities. This correspondence increases the 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 freshmen and seniors at that institution.

V. Institutional Tables and Figures

Institutions participate in the CLA as either cross-sectional or longitudinal schools. Cross-sectional schools test samples of freshmen in the fall and seniors in the spring (of the same academic year). Longitudinal schools follow the same students as they progress at the college by testing them three times (as freshmen, rising juniors and seniors). Longitudinal schools in their first year follow the cross-sectional approach by testing a sample of seniors in the spring to gather comparative data.

Fall 2005 freshmen at longitudinal schools took **both** a Performance Task and Analytic Writing Task (i.e., Make-an-Argument and Critique-an-Argument). Fall 2005 freshmen at cross-sectional schools took **either** a Performance Task or Analytic Writing Task. Spring 2006 seniors at longitudinal schools and cross-sectional schools took **either** a Performance Task or Analytic Writing Task. A school's total scale score is the mean of its Performance Task and Analytic Writing Task scale scores.

Appendix A describes how ACT scores were converted to the same scale of measurement as used to report SAT scores. Appendix B describes how the reader-assigned "raw" scores on different tasks were converted to scale scores.

The analyses discussed in this section focus primarily on those schools where at least 25 students received a CLA score and also had an SAT score. This dual requirement was imposed to ensure that the results on a given measure were sufficiently reliable to be interpreted and that the analyses could adjust for differences among schools in the incoming abilities of the students participating in the CLA.

Table 3 shows the number of freshmen and seniors at your school who completed a CLA measure in fall 2005 and spring 2006 and also had an SAT score. The counts in this table were used to determine whether your school met the dual requirement described above.

Table 3: Number of your freshmen and seniors with CLA and SAT scores

	Number of Freshmen	Number of Seniors
Performance Task	48	41
Analytic Writing Task	33	35
Make-an-Argument	40	41
Critique-an-Argument	40	36
Total score	81	76

Figure 1 and Table 4 (next page) show whether your students did better, worse, or about the same as what would be expected given (1) their SAT scores and (2) the general relationship between CLA and SAT scores at other institutions. Specifically, Figure 1 shows the relationship between the mean SAT score of a college's freshmen and seniors (on the horizontal x-axis) and their mean CLA total score (on the vertical y-axis). Each data point is a college that had at least 25 fall 2005 freshmen (blue circles) or spring 2006 seniors (red squares) with both CLA and SAT scores.

The diagonal lines (blue for freshmen and red for seniors) running from lower left to upper right show the typical relationship between an institution's mean SAT score and its mean CLA score for both freshmen and seniors. The solid blue circle and solid red square correspond to your school. Schools above the line scored higher than expected whereas those below the line did not do as well as expected. Small deviations from the line in either direction could be due to chance. Thus, you should only pay close attention to relatively "large" deviations as defined below. The difference between a school's actual mean score and its expected mean score is called its "deviation" (or "residual") score. Results are reported in terms of deviation scores because the freshmen and seniors who participated at a school were not necessarily a representative sample of all the freshmen at their school. For example, they may have been generally more or less proficient in the areas tested than the typical student at that college. Deviation scores adjust for such disparities.

Figure 1: Relationship Between CLA Performance and Incoming Academic Ability

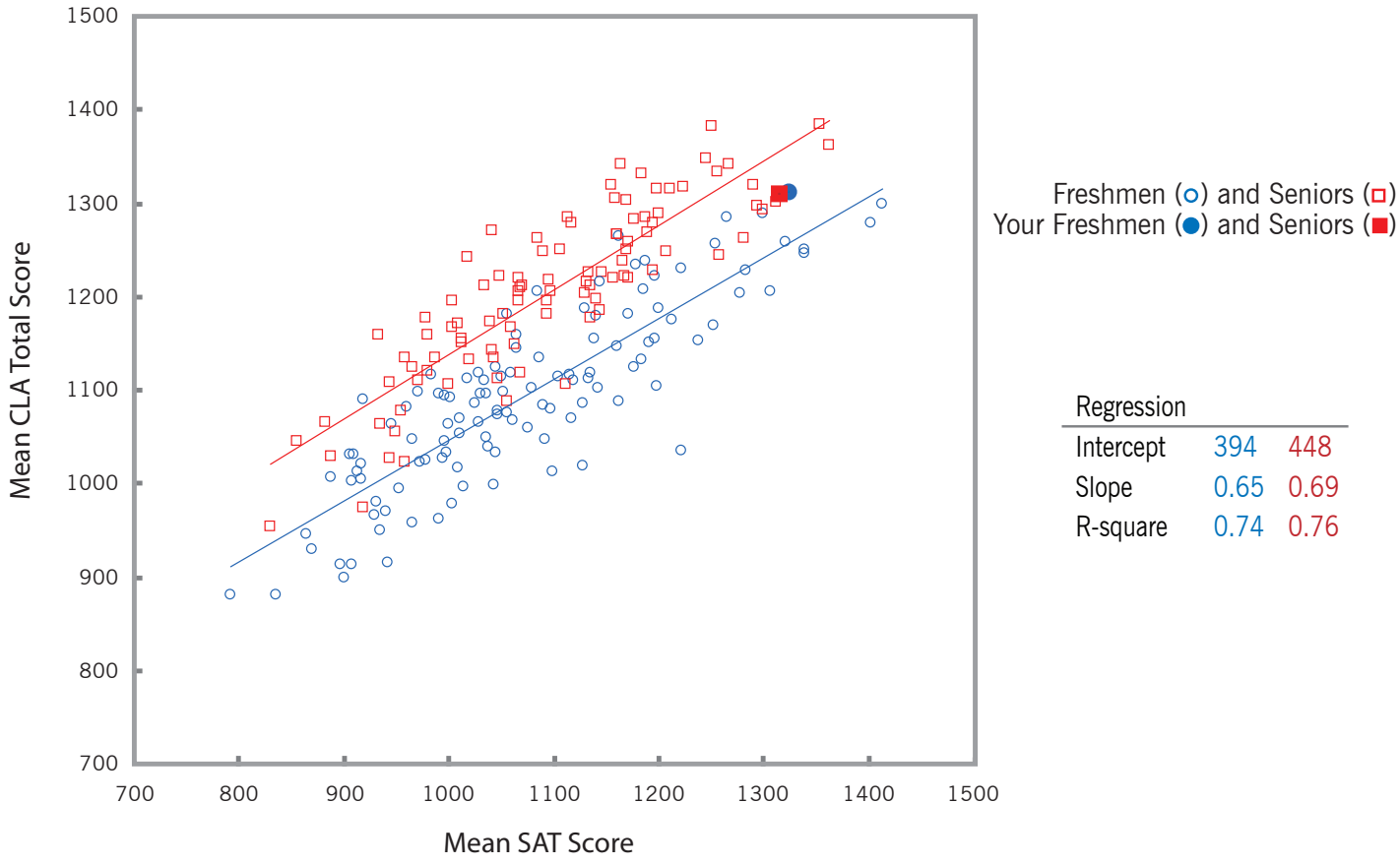


Table 4 (below) shows deviation scores for your freshmen and seniors and—given their SAT scores—whether those deviations were well above, above, at, below, or well below what would be expected.

Table 4: Deviation scores and associated performance levels for your freshmen and seniors

	Freshmen		Seniors	
	Deviation Score	Performance Level	Deviation Score	Performance Level
Performance Task	0.2	At	-0.3	At
Analytic Writing Task	1.6	Above	-1.4	Below
Make-an-Argument	1.3	Above	-1.4	Below
Critique-an-Argument	1.5	Above	-1.0	Below
Total score	1.1	Above	-1.0	Below

Deviation (residual) scores are reported in terms of the number of standard error units the school's actual mean deviates from its expected value.

Deviation scores are expressed in terms of standard errors to facilitate comparisons among measures. Colleges with actual scores between -1.00 to +1.00 standard errors from their expected scores are categorized as being *At Expected*. Institutions with actual scores greater than one standard error (but less than two standard errors) from their expected scores are in the *Above Expected* or *Below Expected* categories (depending on the direction of the deviation). The schools with actual scores greater than two standard errors from their expected scores are in the *Well Above Expected* or *Well Below Expected* categories.

Appendix C contains the equations that were used to estimate a school's CLA score on the basis of its students' mean SAT score. Appendix D contains the expected CLA score for a school's freshmen and seniors for various mean SAT scores. Appendix E presents average scores across schools within 10 groups of roughly equal size. As such, it provides a general sense of where your school stands relative to the performance of all participating schools.

A school's actual mean CLA score often deviated somewhat from its expected value (i.e., the actual value did not always fall right on the line). Differences between expected and actual scores for freshmen could stem from several factors, such as differences in college admissions' policies that result in students who perform at similar levels on standardized multiple choice tests (e.g., the SAT) but differently on constructed response tasks that require short answers and essays (e.g., the CLA). Differences between expected and actual scores for seniors could be due to admissions policies, but they also could stem from differences in the relative effectiveness of their institution's educational programs.

The most striking feature of Figure 1 is that the line for seniors is almost perfectly parallel to but much higher than the line for freshmen. It may be inferred from these data that the seniors within a school generally scored substantially (and statistically significantly) higher than comparable freshmen (in terms of SAT scores) at that school (the average difference was more than 1.6 standard deviation units).

It is instructive to examine whether the deviation score for a college's seniors is larger or smaller than what would be expected given the deviation score for its freshmen. The benchmark here is the size of the difference in deviation scores that is typically observed between freshmen and seniors at other schools after controlling on these students' SAT scores. Table 5 (below) makes this comparison for the subset of schools that tested at least 25 freshmen as well as at least 25 seniors (and where those tested also had SAT scores).

The first column shows the difference between the freshmen and senior deviation scores at your college. A large positive value means the seniors did especially well relative to the freshmen. In other words, after controlling for SAT scores, the difference between the freshmen and senior mean scores was substantially greater than it was at most other schools. A large negative value means the opposite occurred. The second column indicates whether the differences at your school were well above, above, at, below, or well below what would be expected. The difference scores reported in Table 5 are categorized in the same way as are deviation scores (using standard errors).

Keep in mind, however, that even at a school with a negative difference score, its seniors still usually scored higher on the CLA measures than its freshmen. This simply indicates that the degree of improvement between freshmen and seniors was not as great as it was at most other schools and does not mean the school's freshmen earned higher scores than its seniors. An "N/A" signifies that there were not enough freshmen and seniors at your school who had both an SAT and a CLA score to compute a reliable difference score for your institution.

Table 5: Difference scores and associated performance levels for your school

	Difference Score	Performance Level
Performance Task	-0.50	At
Analytic Writing Task	-3.00	Well Below
Make-an-Argument	-2.70	Well Below
Critique-an-Argument	-2.50	Well Below
Total score	-2.10	Well Below

Note: Difference Score = Senior Deviation Score - Freshman Deviation Score

The difference score is the estimate of the actual value added at your school

Table 6 (next page) shows the mean scores for all schools where at least 25 students had both CLA and SAT scores, as well as your school if applicable. Values in the "Your School" column represent only those students with both CLA and SAT scores and were used to calculate deviation scores. An "N/A" indicates that there were not enough students at your school with both CLA and SAT scores to compute a reliable mean CLA score for your institution.

Differences or similarities between the values in the "All Schools" and "Your School" columns of Table 6 are not directly interpretable because colleges varied in how their students were sampled to participate in the CLA. Consequently, you are encouraged to focus on the data in Tables 4 and 5.

Table 6: Mean scores for freshmen and seniors at all schools and your school

	Freshmen		Seniors	
	All Schools	Your School	All Schools	Your School
Performance Task	1069	1267	1170	1313
Analytic Writing Task	1116	1357	1263	1307
Make-an-Argument	1109	1356	1252	1291
Critique-an-Argument	1107	1344	1266	1346
Total score	1094	1312	1207	1310
SAT score	1074	1324	1100	1316

Limited to schools where at least 25 students had both CLA and SAT scores

Tables 7 (below), 8 and 9 (next page) provide greater detail on CLA performance, including the spread of scores, at your school and all schools. These tables present summary statistics, including counts, means, 25th and 75th percentiles, and standard deviations. Units of analysis are students for Tables 7 and 8 and schools for Table 9. These CLA scale scores represent students with and without SAT scores and thus may differ from those in Table 6.

Table 7: Summary statistics for freshmen and seniors tested at your school

	Freshmen (fall 2005)				
	Number of Students	25th Percentile	Mean Scale Score	75th Percentile	Standard Deviation
Performance Task	49	1167	1265	1374	192
Analytic Writing Task	34	1271	1354	1416	109
Make-an-Argument	41	1225	1353	1508	118
Critique-an-Argument	41	1316	1343	1465	167
SAT score	95	1200	1318	1420	149

	Seniors (spring 2006)				
	Number of Students	25th Percentile	Mean Scale Score	75th Percentile	Standard Deviation
Performance Task	41	1249	1313	1453	190
Analytic Writing Task	35	1267	1307	1416	159
Make-an-Argument	41	1225	1291	1367	155
Critique-an-Argument	36	1316	1346	1465	205
SAT score	84	1230	1314	1410	124

Table 8: Summary statistics for freshmen and seniors tested at all CLA schools

	Freshmen (fall 2005)				
	Number of Students	25th Percentile	Mean Scale Score	75th Percentile	Standard Deviation
Performance Task	14768	960	1080	1209	190
Analytic Writing Task	10693	980	1103	1200	162
Make-an-Argument	12118	942	1096	1225	188
Critique-an-Argument	11808	869	1097	1167	186
SAT score	17718	940	1074	1210	191

	Seniors (spring 2006)				
	Number of Students	25th Percentile	Mean Scale Score	75th Percentile	Standard Deviation
Performance Task	5231	1006	1158	1304	216
Analytic Writing Task	3993	1126	1250	1345	158
Make-an-Argument	4291	1084	1237	1367	180
Critique-an-Argument	4295	1167	1252	1316	186
SAT score	8895	990	1108	1240	181

Table 9: Summary statistics for schools that tested freshmen and seniors

	Freshmen (fall 2005)				
	Number of Schools	25th Percentile	Mean Scale Score	75th Percentile	Standard Deviation
Performance Task	114	1003	1067	1136	105
Analytic Writing Task	103	1044	1115	1186	98
Make-an-Argument	110	1035	1107	1182	107
Critique-an-Argument	113	1032	1106	1171	104
Total score	117	1028	1091	1157	100
SAT score	117	976	1065	1159	135

	Seniors (spring 2006)				
	Number of Schools	25th Percentile	Mean Scale Score	75th Percentile	Standard Deviation
Performance Task	97	1070	1156	1234	107
Analytic Writing Task	87	1192	1250	1314	87
Make-an-Argument	91	1189	1240	1306	88
Critique-an-Argument	92	1184	1256	1320	91
Total score	104	1118	1188	1269	103
SAT score	98	1007	1095	1173	117

Other Outcome Measures

We also examined whether certain other outcomes, such as retention and graduation rates, were consistent with what would be expected given student and institutional characteristics. The data used for these analyses were provided to CAE by the Education Trust and were initially derived from IPEDS and other sources. Data on Commuter Campus status was provided by The College Board (Source of Data: the Annual Survey of Colleges of the College Board and Data Base, 2005-06. Copyright © 2003 College Board. All rights reserved). Appendix F describes the factors that were considered and the procedures that were used to make these projections. We examined the following three outcomes:

- First-year retention rate. Percentage of first-time, full-time degree-seeking undergraduates in the fall of 2003 who were enrolled at the same institution in the fall of 2004.
- Four-year graduation rate. Percentage of students who began in 1998 as first-time, full-time degree-seeking students at the institution and graduated within four years.
- Six-year graduation rate. Percentage of students who began in 1998 as first-time, full-time degree-seeking students at the institution and graduated within six years.

Table 10 shows the actual and expected values at your school for each of the outcomes listed above, the deviation between these values (in standard error units to facilitate direct comparisons), and the associated performance level. Colleges with actual scores between -1.00 to +1.00 standard errors from their expected scores are categorized as being *At Expected*. Institutions with actual scores greater than one standard error (but less than two standard errors) from their expected scores are in the *Above Expected* or *Below Expected* categories (depending on the direction of the deviation). The schools with actual scores greater than two standard errors from their expected scores are in the *Well Above Expected* or *Well Below Expected* categories. We present deviation scores and associated performance levels for freshmen and seniors to facilitate comparisons.

Table 10: Comparison of observed and expected outcomes at your school

Outcome	Your School	Expected Value	Deviation Score	Performance Level
First-year retention rate	80.0	84.1	-0.6	At
4-year graduation rate	37.9	35.7	0.2	At
6-year graduation rate	56.1	59.5	-0.4	At
Freshmen CLA score	1312	1257	1.1	Above
Senior CLA score	1310	1356	-1.0	Below

Deviation (residual) scores are reported in terms of the number of standard error units the school's actual mean deviates from its expected value.

For a few schools, the equation resulted in a predicted 4-year graduation rate slightly less than zero. The predicted rates are reported as zero for these schools.

Appendix A
Standard ACT to SAT Conversion Table

To facilitate reporting results across schools, ACT scores were converted (using the standard table below) to the scale of measurement used to report SAT scores.

ACT	to	SAT
36		1600
35		1580
34		1520
33		1470
32		1420
31		1380
30		1340
29		1300
28		1260
27		1220
26		1180
25		1140
24		1110
23		1070
22		1030
21		990
20		950
19		910
18		870
17		830
16		780
15		740
14		680
13		620
12		560
11		500

Sources:

"Concordance Between ACT Assessment and Recentered SAT I Sum Scores" by N.J. Dorans, C.F. Lyu, M. Pommerich, and W.M. Houston (1997), College and University, 73, 24-31; "Concordance between SAT I and ACT Scores for Individual Students" by D. Schneider and N.J. Dorans, Research Notes (RN-07), College Entrance Examination Board: 1999; "Correspondences between ACT and SAT I Scores" by N.J. Dorans, College Board Research Report 99-1, College Entrance Examination Board: 1999; ETS Research Report 99-2, Educational Testing Service: 1999.

Appendix B

Procedures for Converting Raw Scores to Scale Scores

There is a separate scoring guide for each Performance Task and the maximum number of points a student can earn may differ across Performance Tasks. Consequently, it is easier to earn a given reader-assigned "raw" score on some Performance Tasks than it is on others. To adjust for these differences, reader-assigned "raw" scores on a Performance Task were converted to "scale" scores.

In technical terms, this process involved transforming the raw scores on a measure to a score distribution that had the same mean and standard deviation as the SAT scores of the students who took that measure. This process also was used with the Analytic Writing Tasks.

In non-technical terms, this type of scaling essentially involves assigning the highest raw score that was earned on a task by any freshman the same value as the highest SAT score of any freshman who took that task (i.e., not necessarily the same person). The second highest raw score is then assigned the same value as the second highest SAT score, and so on.

As a result of the scaling process, scores from different tasks could be combined to compute a school's mean Performance Task scale score. The same procedures also were used to compute scale scores for the Analytic Writing Task.

Appendix C

Equations Used to Estimate CLA Scores on the Basis of Mean SAT Scores

Some schools may be interested in predicting CLA scores for other SAT scores. The table below provides the necessary parameters from the regression equations that will allow you to carry out your own calculations. Also provided for each equation is the standard error and R-square values.

Fall 2005 Freshmen	Intercept	Slope	Standard Error	R-square
Performance Task	306	0.715	41.1	0.847
Analytic Writing Task	518	0.552	70.9	0.488
Make-an-Argument	485	0.581	76.4	0.503
Critique-an-Argument	469	0.594	69.9	0.547
Total Score	394	0.652	49.3	0.743

Spring 2006 Seniors	Intercept	Slope	Standard Error	R-square
Performance Task	291	0.797	47.6	0.780
Analytic Writing Task	646	0.551	48.7	0.634
Make-an-Argument	615	0.570	52.3	0.620
Critique-an-Argument	588	0.608	53.1	0.640
Total Score	448	0.690	45.6	0.760

Appendix D

Expected CLA Score for Any Given Mean SAT Score for Freshmen and Seniors

The tables below and on the next page present the expected CLA score for a school's freshmen and seniors for various mean SAT scores.

Mean SAT Score	Freshmen					Seniors				
	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	Total Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	Total Score
1600	1450	1401	1414	1420	1437	1566	1526	1524	1560	1552
1590	1443	1395	1409	1414	1430	1558	1521	1518	1554	1545
1580	1436	1390	1403	1408	1424	1550	1515	1512	1547	1538
1570	1429	1384	1397	1402	1417	1542	1510	1507	1541	1531
1560	1422	1379	1391	1396	1411	1534	1504	1501	1535	1525
1550	1414	1373	1385	1390	1404	1526	1499	1495	1529	1518
1540	1407	1368	1380	1384	1398	1518	1493	1490	1523	1511
1530	1400	1362	1374	1378	1391	1510	1488	1484	1517	1504
1520	1393	1357	1368	1372	1385	1502	1482	1478	1511	1497
1510	1386	1351	1362	1366	1378	1494	1477	1473	1505	1490
1500	1379	1346	1356	1360	1372	1486	1471	1467	1499	1483
1490	1372	1340	1351	1354	1365	1478	1466	1461	1493	1476
1480	1364	1334	1345	1348	1359	1470	1460	1456	1487	1469
1470	1357	1329	1339	1342	1352	1462	1455	1450	1481	1462
1460	1350	1323	1333	1336	1346	1454	1449	1444	1475	1456
1450	1343	1318	1327	1331	1339	1446	1444	1439	1469	1449
1440	1336	1312	1321	1325	1333	1438	1438	1433	1463	1442
1430	1329	1307	1316	1319	1326	1430	1433	1427	1456	1435
1420	1322	1301	1310	1313	1320	1422	1427	1421	1450	1428
1410	1314	1296	1304	1307	1313	1414	1422	1416	1444	1421
1400	1307	1290	1298	1301	1306	1406	1416	1410	1438	1414
1390	1300	1285	1292	1295	1300	1398	1411	1404	1432	1407
1380	1293	1279	1287	1289	1293	1390	1405	1399	1426	1400
1370	1286	1274	1281	1283	1287	1382	1400	1393	1420	1393
1360	1279	1268	1275	1277	1280	1374	1394	1387	1414	1387
1350	1271	1263	1269	1271	1274	1367	1389	1382	1408	1380
1340	1264	1257	1263	1265	1267	1359	1383	1376	1402	1373
1330	1257	1252	1258	1259	1261	1351	1378	1370	1396	1366
1320	1250	1246	1252	1253	1254	1343	1372	1365	1390	1359
1310	1243	1241	1246	1247	1248	1335	1367	1359	1384	1352
1300	1236	1235	1240	1241	1241	1327	1361	1353	1378	1345

Mean SAT Score	Freshmen					Seniors				
	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	Total Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	Total Score
1290	1229	1230	1234	1235	1235	1319	1356	1348	1371	1338
1280	1221	1224	1229	1230	1228	1311	1350	1342	1365	1331
1270	1214	1219	1223	1224	1222	1303	1345	1336	1359	1324
1260	1207	1213	1217	1218	1215	1295	1339	1331	1353	1318
1250	1200	1208	1211	1212	1209	1287	1334	1325	1347	1311
1240	1193	1202	1205	1206	1202	1279	1328	1319	1341	1304
1230	1186	1196	1199	1200	1196	1271	1323	1314	1335	1297
1220	1179	1191	1194	1194	1189	1263	1317	1308	1329	1290
1210	1171	1185	1188	1188	1183	1255	1312	1302	1323	1283
1200	1164	1180	1182	1182	1176	1247	1306	1297	1317	1276
1190	1157	1174	1176	1176	1170	1239	1301	1291	1311	1269
1180	1150	1169	1170	1170	1163	1231	1295	1285	1305	1262
1170	1143	1163	1165	1164	1157	1223	1290	1279	1299	1255
1160	1136	1158	1159	1158	1150	1215	1284	1274	1293	1249
1150	1128	1152	1153	1152	1143	1207	1279	1268	1286	1242
1140	1121	1147	1147	1146	1137	1199	1273	1262	1280	1235
1130	1114	1141	1141	1140	1130	1191	1268	1257	1274	1228
1120	1107	1136	1136	1134	1124	1183	1262	1251	1268	1221
1110	1100	1130	1130	1129	1117	1175	1257	1245	1262	1214
1100	1093	1125	1124	1123	1111	1168	1251	1240	1256	1207
1090	1086	1119	1118	1117	1104	1160	1246	1234	1250	1200
1080	1078	1114	1112	1111	1098	1152	1240	1228	1244	1193
1070	1071	1108	1107	1105	1091	1144	1235	1223	1238	1186
1060	1064	1103	1101	1099	1085	1136	1229	1217	1232	1180
1050	1057	1097	1095	1093	1078	1128	1224	1211	1226	1173
1040	1050	1092	1089	1087	1072	1120	1218	1206	1220	1166
1030	1043	1086	1083	1081	1065	1112	1213	1200	1214	1159
1020	1036	1081	1077	1075	1059	1104	1207	1194	1208	1152
1010	1028	1075	1072	1069	1052	1096	1202	1189	1201	1145
1000	1021	1070	1066	1063	1046	1088	1196	1183	1195	1138
990	1014	1064	1060	1057	1039	1080	1191	1177	1189	1131

Appendix D (Continued)

Mean SAT Score	Freshmen					Seniors				
	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	Total Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	Total Score
980	1007	1058	1054	1051	1033	1072	1185	1172	1183	1124
970	1000	1053	1048	1045	1026	1064	1180	1166	1177	1117
960	993	1047	1043	1039	1020	1056	1174	1160	1171	1111
950	985	1042	1037	1034	1013	1048	1169	1155	1165	1104
940	978	1036	1031	1028	1007	1040	1163	1149	1159	1097
930	971	1031	1025	1022	1000	1032	1158	1143	1153	1090
920	964	1025	1019	1016	994	1024	1152	1137	1147	1083
910	957	1020	1014	1010	987	1016	1147	1132	1141	1076
900	950	1014	1008	1004	980	1008	1141	1126	1135	1069
890	943	1009	1002	998	974	1000	1136	1120	1129	1062
880	935	1003	996	992	967	992	1130	1115	1123	1055
870	928	998	990	986	961	984	1125	1109	1117	1048
860	921	992	984	980	954	976	1119	1103	1110	1042
850	914	987	979	974	948	969	1114	1098	1104	1035
840	907	981	973	968	941	961	1108	1092	1098	1028
830	900	976	967	962	935	953	1103	1086	1092	1021
820	893	970	961	956	928	945	1097	1081	1086	1014
810	885	965	955	950	922	937	1092	1075	1080	1007
800	878	959	950	944	915	929	1086	1069	1074	1000
790	871	954	944	938	909	921	1081	1064	1068	993
780	864	948	938	933	902	913	1075	1058	1062	986
770	857	943	932	927	896	905	1070	1052	1056	979
760	850	937	926	921	889	897	1064	1047	1050	973
750	842	932	921	915	883	889	1059	1041	1044	966
740	835	926	915	909	876	881	1053	1035	1038	959
730	828	920	909	903	870	873	1048	1030	1032	952
720	821	915	903	897	863	865	1042	1024	1025	945
710	814	909	897	891	857	857	1037	1018	1019	938
700	807	904	892	885	850	849	1031	1013	1013	931
690	800	898	886	879	844	841	1026	1007	1007	924

Mean SAT Score	Freshmen					Seniors				
	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	Total Score	Performance Task	Analytic Writing Task	Make-an-Argument	Critique-an-Argument	Total Score
680	792	893	880	873	837	833	1020	1001	1001	917
670	785	887	874	867	831	825	1015	995	995	910
660	778	882	868	861	824	817	1009	990	989	904
650	771	876	862	855	817	809	1004	984	983	897
640	764	871	857	849	811	801	998	978	977	890
630	757	865	851	843	804	793	993	973	971	883
620	750	860	845	837	798	785	987	967	965	876
610	742	854	839	832	791	777	982	961	959	869
600	735	849	833	826	785	770	976	956	953	862
590	728	843	828	820	778	762	971	950	947	855
580	721	838	822	814	772	754	965	944	940	848
570	714	832	816	808	765	746	960	939	934	841
560	707	827	810	802	759	738	954	933	928	835
550	699	821	804	796	752	730	949	927	922	828
540	692	816	799	790	746	722	943	922	916	821
530	685	810	793	784	739	714	938	916	910	814
520	678	805	787	778	733	706	932	910	904	807
510	671	799	781	772	726	698	927	905	898	800
500	664	794	775	766	720	690	921	899	892	793
490	657	788	770	760	713	682	916	893	886	786
480	649	782	764	754	707	674	910	888	880	779
470	642	777	758	748	700	666	905	882	874	772
460	635	771	752	742	694	658	899	876	868	766
450	628	766	746	737	687	650	894	871	862	759
440	621	760	740	731	681	642	888	865	856	752
430	614	755	735	725	674	634	883	859	849	745
420	607	749	729	719	668	626	877	853	843	738
410	599	744	723	713	661	618	872	848	837	731
400	592	738	717	707	654	610	866	842	831	724

Appendix E

CLA Scale, Deviation and Difference Scores by Decile Group

The tables on the next page were prepared to help you gain further insight into your school's performance relative to other participating schools for freshmen and seniors as well as freshmen-to-senior differences. You are encouraged to compare the decile group scores in the tables to your deviation scores in Table 4, your difference scores in Table 5 and your mean (scale) scores in Table 6.

For each metric in the table, all schools were rank ordered and then divided into 10 groups of roughly equal size ("decile groups"). Only schools that successfully tested at least 25 students with ACT/SAT scores were included. For each metric, the average performance of the schools within each decile group was calculated. For example, a total scale score for freshmen of 1209 represents the average performance of schools in the 9th decile group (i.e., schools in the 81st to 90th percentile). If freshmen at your school achieved an average scale score of 1210, you could safely conclude that your school performed in the top 20 percent of participating schools on the CLA.

Freshmen (fall 2005)

Decile	Performance Task		Analytic Writing Task		Total Score	
Group	Scale Score	Deviation Score	Scale Score	Deviation Score	Scale Score	Deviation Score
10	1248	1.6	1293	1.7	1271	1.7
9	1191	1.1	1230	1.2	1209	1.1
8	1140	0.7	1184	0.8	1158	0.8
7	1109	0.4	1148	0.3	1119	0.5
6	1081	0.2	1132	0.0	1101	0.1
5	1057	-0.1	1099	-0.2	1081	-0.2
4	1032	-0.4	1073	-0.5	1058	-0.4
3	1001	-0.6	1046	-0.7	1027	-0.7
2	966	-1.0	1008	-1.0	994	-1.1
1	875	-2.0	956	-1.7	923	-1.8

Seniors (spring 2006)

Decile	Performance Task		Analytic Writing Task		Total Score	
Group	Scale Score	Deviation Score	Scale Score	Deviation Score	Scale Score	Deviation Score
10	1335	1.8	1387	1.8	1346	1.7
9	1277	1.0	1347	1.0	1307	1.1
8	1242	0.7	1322	0.6	1277	0.6
7	1219	0.5	1295	0.2	1251	0.4
6	1187	0.2	1277	0.1	1221	0.2
5	1160	-0.1	1265	-0.3	1205	-0.1
4	1140	-0.4	1249	-0.4	1178	-0.4
3	1100	-0.7	1224	-0.7	1145	-0.7
2	1059	-1.0	1169	-1.0	1107	-1.0
1	983	-1.7	1102	-1.7	1026	-1.8

Freshmen (fall 2005) and Seniors (spring 2006)

Decile	Performance Task	Analytic Writing Task	Total Score
Group	Difference Score	Difference Score	Difference Score
10	1.9	1.9	1.8
9	1.3	1.1	1.2
8	1.0	0.8	0.7
7	0.4	0.4	0.3
6	0.3	0.0	0.0
5	-0.1	-0.4	-0.1
4	-0.6	-0.5	-0.4
3	-1.0	-0.8	-0.7
2	-1.4	-1.1	-1.2
1	-2.2	-1.9	-2.2

Appendix F
Factors Considered and Procedures Used to Compare Observed and Expected Outcomes at Your School

The CLA staff used national data to develop equations to predict college graduation and retention rates. They then applied these models to the characteristics of the institutions that participated in the CLA 2005–2006 data collection cycle. The bottom table on page 3 and Table 10 on page 15 present the results of these analyses. The remainder of this appendix describes the data that were used for this purpose and the modeling procedures that were employed.

Data. The Education Trust provided most of the data that used for model building. The dataset included institutional variables from approximately 1,400 4-year institutions that submitted data to IPEDS for the 2004–2005 academic year. Additional variables were derived from other sources (e.g., Barron's Guide to American Colleges) or constructed using specified-calculation rules. Data on Commuter Campus status was provided by The College Board (Source of Data: the Annual Survey of Colleges of the College Board and Data Base, 2005-06. Copyright © 2003 College Board. All rights reserved).

Modeling Procedures. Three Ordinary Least Squares (OLS) regression models were conducted on all available schools in the dataset using the first-year retention rate, 4-year graduation rate, and 6-year graduation rate as the dependent variables. Potential predictors of these outcome variables were selected based on a review of literature and the previous work of the Education Trust. The following is the final list of the predictors that were used:

- Sector (public vs. private)
- Status as a Historically Black College or University (HBCU)
- Carnegie Classification (coded as 0/1 variables based on the revised basic classification for each school)
- Estimated median SAT or ACT equivalent of freshman class
- Admissions selectivity, per Barron's Guide to American Colleges
- Number of full-time equivalent (FTE) undergraduates (in 1000s)
- Percentage of undergraduates receiving Pell grants
- Student-related expenditures / FTE student
- Percentage of FTE undergraduate students age 25 and over
- Percentage of undergraduates who are enrolled part-time
- Status as a commuter campus

Please refer to (www.collegeresults.org/aboutthedata.aspx) for more detail on these variables. All the models used the same set of predictors. However, because of missing data, not all schools were used in each model. Schools that were missing any predictor or outcome data were designated "N/A." The table on the next page shows the number of schools used for model building, the resulting R-square value (R-square indicates the percentage of variance in the outcome variable that can be explained by the combination of predictors used), and the coefficients and significance of each intercept and predictor variable (* indicates p values less than .05 and ** indicates p values less than .01).

Number of Schools and R-square Values
Coefficients and Significance of Intercepts and Predictor Variables
for Each Outcome Model

	First-year Retention Rate	4-year Graduation Rate	6-year Graduation Rate
Number of Schools	1276	1247	1271
R-square	0.65	0.75	0.73
Intercept	27.982**	-28.787**	-10.616*
Sector (public vs. private)	-1.961**	-12.513**	-6.886**
Status as an Historically Black College or University (HBCU)	7.170**	5.845**	6.445**
Carnegie Classification [1]			
RU/VH: Research Universities (very high research activity)	-2.538*	-0.391	2.234
RU/H: Research Universities (high research activity)	-1.065	-3.364*	-0.554
DRU: Doctoral/Research Universities	0.725	1.010	1.121
Master's L: Master's Colleges and Universities (larger programs)	1.628*	1.534	2.449*
Master's S: Master's Colleges and Universities (smaller programs)	-0.360	2.256	1.856
Bac/A&S: Baccalaureate Colleges--Arts & Sciences	-0.500	2.951*	-0.165
Bac/Diverse: Baccalaureate Colleges--Diverse Fields	-2.496**	-0.352	-1.729
Bac/Assoc: Baccalaureate/Associate's Colleges	-3.214	5.362	-2.709
Other	-1.637	-3.758	-4.314*
Estimated median SAT or ACT equivalent of freshman class	0.042**	0.065**	0.062**
Admissions selectivity, per Barron's Guide to American Colleges	1.069**	1.652**	1.553**
Number of full-time equivalent (FTE) undergraduates (1000s)	0.426**	-0.158	0.255**
Percentage of undergraduates receiving Pell grants	-0.056**	-0.153**	-0.125**
Student-related expenditures / FTE student	0.115**	0.300**	0.137**
Percentage of FTE undergraduate students age 25 and over	-0.057**	-0.082**	-0.082**
Percentage of undergraduates who are enrolled part time	-0.023	-0.072*	-0.110**
Status as a commuter campus	-0.665	-4.735**	-4.081**

* $p<.05$ ** $p<.01$ [1] "Masters M" was the reference classification

The regression weights from the models were applied to the data from each participating CLA school to calculate its predicted or "expected" rate for each outcome. The predicted rate for a school was then subtracted from its actual rate to yield a deviation or "residual" score. To allow for relative comparisons across metrics, each distribution of residual scores was standardized using the standard error from the respective regression.

Appendix G

How Your Institution Compares to Similar Institutions on the CLA

One way to do this is to segment our national database of schools into categories, such as "large private research institutions whose students have relatively high SAT scores." This approach leads to a very large number of categories and many of these categories do not have enough schools to support valid comparisons. This is especially so when there is a long list of potentially important characteristics that are used to form the categories.

An alternative approach uses a statistical technique (called "multiple regression") that considers several variables simultaneously, such as: public versus private governance, basic Carnegie Classification, minority-serving status, admissions selectivity, size of undergraduate student body, proportion of undergraduates receiving Pell grants, student related expenditures per student, proportion of undergraduate students over 25 years old, proportion of undergraduates enrolled part-time, status as a commuter campus, student-faculty ratios, and proportion of undergraduates from underrepresented minority groups. We found that they did not account for the substantial variation of CLA scores among institutions thus suggesting the importance of curriculum and pedagogy and finer-grained actuarial indicators not available in IPEDS.

In collaboration with all institutions using the CLA, we intend to focus our research efforts on establishing valid peer comparisons and explaining CLA results. We plan to conduct case studies at several schools and publish a monograph on this topic in the near term.