

## **CU-Boulder and the Collegiate Learning Assessment (CLA) Highlights with 2009-10 Results**

October 2010, CU-Boulder Planning, Budget, and Analysis

Both highlights and the full report from CLA are posted at  
<http://www.colorado.edu/pba/perfmeas/>

### **Background**

CU-Boulder has selected the Collegiate Learning Assessment (CLA, <http://www.collegiatelearningassessment.org/>) for accountability testing and publication in the College Portrait of the Voluntary System of Accountability.

The CLA, which was developed with the support of the nonprofit Council for Aid to Education (CAE), measures holistically integrated ability to think critically, reason analytically, solve problems, and communicate clearly. Its method involves measuring these skills through demanding simulated real-world tasks, using open-ended prompts requiring written responses, rather than through multiple-choice testing. The test has two parts: A Performance task, and an Analytic Writing task. An individual student is assigned to do one or the other, but not both. Testing time is 90 minutes.

As an example of the Performance task, test-takers might be assigned something like the following (taken from CAE's website at [http://www.cae.org/content/pro\\_collegiate\\_sample\\_measures.htm](http://www.cae.org/content/pro_collegiate_sample_measures.htm)):

You are the assistant to 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. You are provided with the following documentation:

- 1: Newspaper articles about the accident
- 2: Federal Accident Report on in-flight breakups in single engine planes
- 3: Pat's e-mail to you & Sally's e-mail to Pat
- 4: Charts on SwiftAir's performance characteristics
- 5: Amateur Pilot article comparing SwiftAir 235 to similar planes
- 6: Pictures and description of SwiftAir Models 180 and 235

Please prepare a memo that addresses several questions, including what data support or refute the claim that the type of wing on the SwiftAir 235 leads to more in-flight breakups, what other factors might have contributed to the accident and should be taken into account, and your overall recommendation about whether or not DynaTech should purchase the plane.

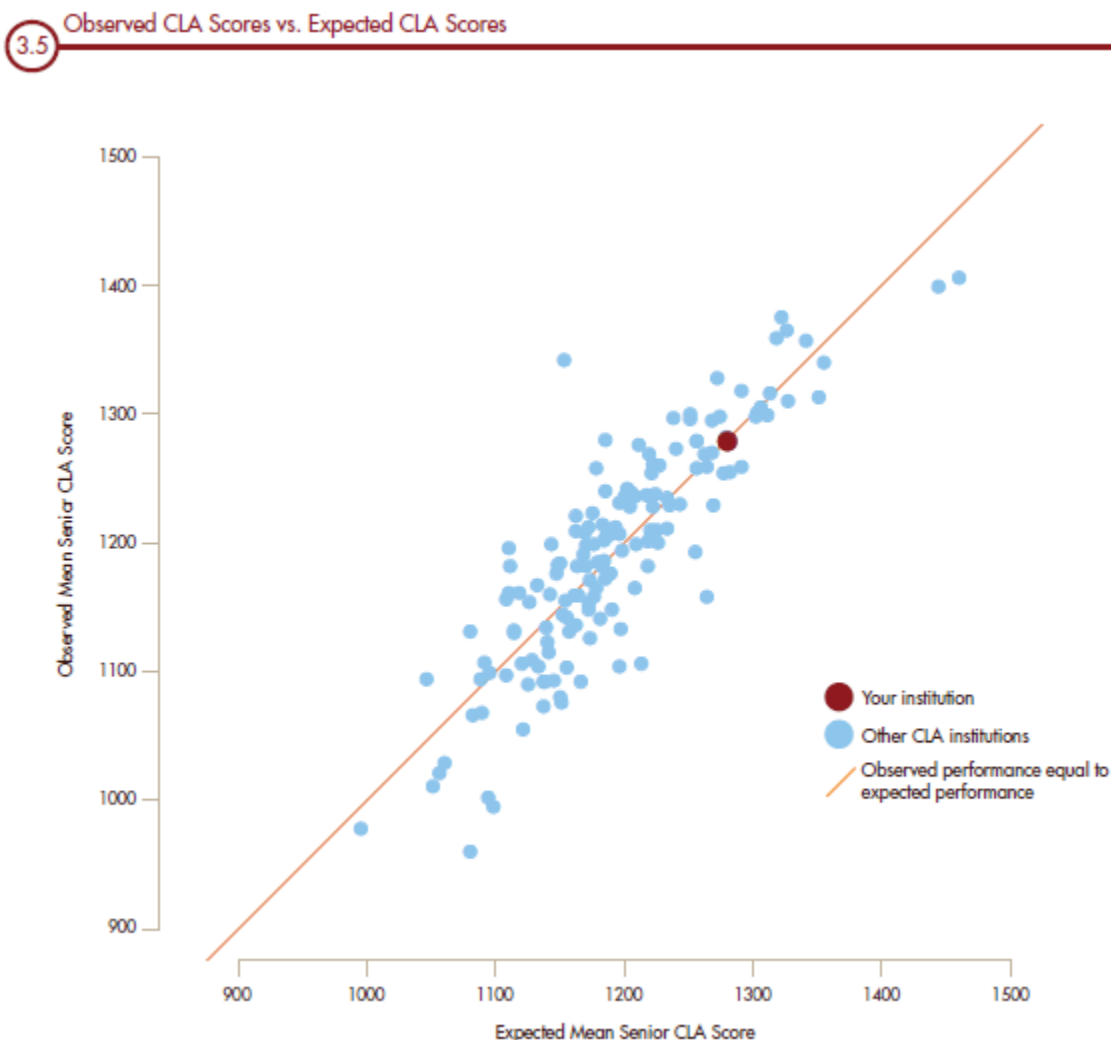
The Analytic Writing task is divided into two parts, one which requires making an argument concerning a prompted issue, the other critiquing an argument on a separate issue. Students may take any position they wish as long as they make relevant arguments using sound logic and clear communication.

All tests are scored by CLA. The Performance task uses human scorers, while the Analytic Writing task uses automated scoring, with human scorers used in cases where the automatic scoring program does not work, either because the writing is off-topic or is extremely long or short.

## 2009-10 at CU-Boulder

Per CLA requirements, 105 new freshmen were tested in October 2009, and 102 seniors were tested in March 2010. In both cases, the students tested were the first to respond to invitations sent to all 729 freshmen living in two residence halls, and all 3,289 graduating seniors. Students were offered a \$50 cash reward for participating. CLA reported results in August 2010. These will be included in the Voluntary System of Accountability College Portrait for CU-Boulder (<http://www.collegeportraits.org/CO/CU-Boulder>) updated in January 2011. Cost of our 2009-10 participation: \$6,625 direct to CLA, plus \$10,300 in incentive payments to students, plus approximately 300 hours of student time and 75 hours of staff time. Students received, also in August, email from CLA with information on how well they did compared to other CU-Boulder students, and students around the country, who completed the same task.

CLA reports senior performance relative to expectations established by a statistical model that adjusts for seniors' own "Entering Academic Ability" (as measured by SAT/ACT scores earned before college entry) as well as CLA performance of the previous fall's entering freshmen. Performance is thus interpreted as "value added" by the education received at the institution. **Seniors tested in spring 2010 performed almost exactly as expected, according to CLA's value-added statistical model, as illustrated in the graph and tables below.**



Tables summarizing CU-Boulder’s results from 2009-10 are below. For a more complete description see the full report.

**3.1 Value-Added and Precision Estimates**

	Performance Level	Value-Added Score	Value-Added Percentile Rank	Confidence Interval Lower Bound	Confidence Interval Upper Bound
Total CLA Score	Near	-0.03	49	-0.67	0.61
Performance Task	Near	-0.52	27	-1.26	0.22
Analytic Writing Task	Near	0.46	65	-0.25	1.17
Make-an-Argument	Near	0.51	70	-0.25	1.27
Critique-an-Argument	Near	0.34	62	-0.43	1.11

**3.2 Seniors: Unadjusted Performance**

	Number of Seniors	Mean Score	Mean Score Percentile Rank	25th Percentile Score	75th Percentile Score	Standard Deviation
Total CLA Score	101	1279	82	1166	1393	161
Performance Task	50	1203	73	1129	1271	161
Analytic Writing Task	51	1353	92	1267	1440	122
Make-an-Argument	51	1348	92	1260	1466	163
Critique-an-Argument	51	1358	90	1233	1494	158
EAA	101	1215	90	1140	1300	133

**3.3 Freshmen: Unadjusted Performance**

	Number of Freshmen	Mean Score	Mean Score Percentile Rank	25th Percentile Score	75th Percentile Score	Standard Deviation
Total CLA Score	104	1172	79	1058	1283	155
Performance Task	52	1137	79	1007	1259	170
Analytic Writing Task	52	1207	82	1120	1304	131
Make-an-Argument	52	1222	84	1117	1374	170
Critique-an-Argument	52	1192	80	1084	1314	171
EAA	104	1195	88	1105	1280	137