

Collegiate Learning Assessment (CLA) Results 2009-2010

Introduction:

As part of UNM's commitment to the nationwide Voluntary System of Accountability (VSA) the university has completed its second year administering the Collegiate Learning Assessment (CLA). Starting in 2009 we have tested a random sample of beginning freshmen each fall and a random sample of graduating seniors each spring on key higher-order learning goals: analytical reasoning and problem-solving, and written communication skills. Assessment questions are designed to resemble academic and real-life tasks and are therefore open-ended, as opposed to multiple-choice, and require the participant to construct a reasoned response. The university—not the student—is the primary unit of analysis. Freshman results are reported in terms of whether an institution's students are doing better, worse, or about the same as would be expected given the level of the students' entering academic ability (as measured by students' ACT/SAT scores). Results for Seniors are designed to answer two questions: after holding admissions scores constant, do an institution's seniors earn significantly higher scores than its freshmen, and is this difference larger or smaller than that observed at other colleges? Note that the requisite national uniform methodology means limitations inherent in the data (i.e. self-selected—or voluntary—participation within random samples of freshmen and seniors) and relatively small numbers in some units of analysis apply equally to all participating institutions nationwide.

Results:

Our **participation** target was 250 freshman and 250 senior test takers each year. In Fall 2009, 256 beginning freshmen participated; 127 graduating seniors participated in Spring 2010. Among graduating senior participants, 13% had been required to take remedial coursework, and 60% have been employed for more than five years.

Performance: Fifty-eight percent of both Freshmen and Seniors participants' observed scores were at least one standard deviation above expected scores based on entering academic ability and the mean freshman CLA performance at UNM. For both Freshmen and Seniors, more than half scored "well above expected" (at least two standard deviations above expected). It should be noted that seniors who took required remedial coursework performed above expected while those who did not require remedial coursework performed near expected.

Comparison: UNM Seniors' value-added score ranked at the 90th percentile nationally. UNM Freshmen scored as well as or better than freshmen at 75% of participating schools nationally.

What does this say about UNM students? Despite perennial misgivings about UNM students' entering academic ability and the high percentage of UNM students employed half-time or more off campus and/or providing significant support to family, UNM graduating students' performance on core learning outcomes compares quite favorably with the performance of their peers nationwide.

The Council for Aid to Education (CAE) explains that “a school’s value-added score indicates the degree to which the observed senior mean CLA score meets, exceeds, or falls below expectations established by (1) seniors’ Entering Academic Ability (EAA) scores and (2) the mean CLA performance of freshmen at that school, which serves as a control for selection effects not covered by EAA” (CLA Institutional Report, 2010, p. 4). Entering Academic Ability (EAA) consists of SAT Math + Verbal, ACT Composite, or Scholastic Level Exam (SLE) scores on the SAT scale. (CLA Institutional Report, 2010, p. 4)

Table 1 details how participating freshmen and seniors compare with each other and the UNM population. Participants were excluded from analysis if they did not have Entering Academic Ability scores.

Table 2 continues the comparison between freshmen and seniors, and includes value-added scores and questions from the post-test survey. For both freshmen and seniors, 58% of participants’ observed scores were at least one standard deviation above expected scores, as calculated based on ACT scores and UNM freshman CLA scores.

Table 3 lists the majors that are included in each field of study. These majors and categorizations are based on student self-report on the CLA demographic survey at the beginning of the assessment. By senior year, all students have selected a major, so there are no students in the “Undecided” category.

Table 4 shows value-added scores for subgroups of students. Notably, students who required remedial coursework performed above expected, while students who did not require remedial coursework performed near expected.

Table 5 details the procedures used to calculate value-added. Values for national slopes and intercepts were provided by the CAE, based on all participating universities in 2009-2010.

Table 6 shows the value-added scores and percentile ranks for UNM. It includes 95% confidence intervals for the value-added scores. UNM seniors’ value-added score ranked at the 90th percentile nationally, which means that their value-added (improvement) was as good as or better than 90% of the participating schools. Additionally, UNM seniors’ value added scores for the Essay Task ranked higher than the 90th percentile, although the value-added scores for the Performance Task ranked at the 77th percentile.

Tables 7 and 8 show the raw scores and percentiles of freshmen and seniors, before adjusting for academic ability and national averages. Table 8 indicates that UNM freshmen outperform other freshmen, scoring in the 75th percentile. This indicates that UNM freshmen’s raw scores are as high as or higher than 75% of participating universities. In addition, UNM freshmen who participated in the CLA actually had a lower average SAT score than the 2009 UNM freshman cohort, 1069 compared to 1091 (Table 1).

Collegiate Learning Assessment 2009-2010: University of New Mexico

January 11, 2011

Table 1: Participant Descriptives

		Freshmen		Seniors		UNM
		Count	%	Count	%	%
Participants (Source: CLA demographic survey)	<i>Included in analysis</i>	254	99%	99	78%	-
	<i>Total participated</i>	256	100%	127	100%	-
Sex (Source: CLA demographic survey)	<i>Male</i>	108	42%	45	35%	45%*
	<i>Female</i>	148	58%	82	65%	55%*
	<i>Total</i>	256	100%	127	100%	100%
Ethnicity <i>Sample drawn was 50% White and 50% minority</i> (Source: UNM Registrar data)	<i>White, Non-Hispanic</i>	125	49%	68	54%	44%*
	<i>Minority</i>	131	51%	59	46%	56%*
	<i>Total</i>	256	100%	127	100%	100%
English primary language at home (Source: CLA demographic survey)	<i>No</i>	27	11%	8	6%	-
	<i>Yes</i>	229	89%	119	94%	-
	<i>Total</i>	256	100%	127	100%	-
New Mexico Resident (Source: Official Reporting Data (ORD))	<i>No</i>	24	9%	7	6%	9%**
	<i>Yes</i>	231	91%	115	94%	91%**
	<i>Total</i>	255	100%	122	100%	100%
Remedial Coursework (Source: Official Reporting Data (ORD))	<i>Remedial not required</i>	196	77%	111	87%	70%**
	<i>Remedial required</i>	60	23%	16	13%	30%**
	<i>Total</i>	256	100%	127	100%	100%
Enrollment Status (Source: Official Reporting Data (ORD))	<i>Full Time</i>	254	100%	107	88%	78%*
	<i>Part Time</i>	1	0%	15	12%	22%*
	<i>Total</i>	255	100%	122	100%	100%
Field of Study Based on student report. For freshmen, this represents an interest only, not course enrollment. (Source: CLA demographic survey)	<i>Sciences and Engineering</i>	83	32%	23	18%	-
	<i>Social Sciences</i>	28	11%	38	30%	-
	<i>Humanities and Languages</i>	33	13%	21	17%	-
	<i>Business</i>	18	7%	17	13%	-
	<i>Helping/Services</i>	51	20%	28	22%	-
	<i>Undecided</i>	43	17%	-	0%	-
	<i>Total</i>	256	100%	127	100%	-
Entering Academic Ability (SAT score or ACT equivalent) (Source: Official Reporting Data (ORD))	<i>Minimum</i>	-	640	-	740	-
	<i>Maximum</i>	-	1480	-	1540	-
	<i>Mean</i>	254	1069	99	1078	1091**
College GPA (Source: Official Reporting Data (ORD))	<i>Minimum</i>	-	-	2.22	-	-
	<i>Maximum</i>	-	-	4.25	-	-
	<i>Mean</i>	-	-	127	3.40	-
Age (Source: Official Reporting Data (ORD))	<i>Minimum</i>	-	18.1	-	20.1	-
	<i>Maximum</i>	-	26.6	-	59.9	-
	<i>Mean</i>	255	18.7	122	26.1	23.4*

* UNM Percentage based on 2009 undergraduate population.

** UNM Percentage based on 2009 first-time freshman population.

Collegiate Learning Assessment 2009-2010: University of New Mexico

January 11, 2011

Table 2: Participant Descriptives

		Freshmen		Seniors	
		Count	%	Count	%
Performance Level CLA value-added scores, relative to expectations based on Entering Academic Ability and mean freshman CLA performance. (Source: CLA Institutional Report)	<i>Well Below Expected (<-2 SD)</i>	18	7%	5	5%
	<i>Below Expected (-2 to -1 SD)</i>	46	18%	15	15%
	<i>Near Expected (-1 to 1 SD)</i>	41	16%	21	21%
	<i>Above Expected (1 to 2 SD)</i>	72	28%	22	22%
	<i>Well Above Expected (> 2 SD)</i>	77	30%	36	36%
	<i>Total</i>	254	100%	99	100%
How similar were the tasks in today's CLA to projects/assignments you've had in your high school/college classes? (Source: CLA post-test survey)	<i>Totally Unlike</i>	31	12%	17	13%
	<i>Vaguely Similar</i>	81	32%	39	31%
	<i>Similar</i>	95	37%	52	41%
	<i>Very Similar</i>	49	19%	19	15%
	<i>Total</i>	256	100%	127	100%
Performance Task: How similar were the tasks in today's CLA to projects/assignments you've had in your high school/college classes? (Source: CLA post-test survey)	<i>Totally Unlike</i>	21	16%	10	16%
	<i>Vaguely Similar</i>	50	39%	20	31%
	<i>Similar</i>	43	34%	28	44%
	<i>Very Similar</i>	14	11%	6	9%
	<i>Total</i>	128	100%	64	100%
Essay Task: How similar were the tasks in today's CLA to projects/assignments you've had in your high school/college classes? (Source: CLA post-test survey)	<i>Totally Unlike</i>	10	8%	7	11%
	<i>Vaguely Similar</i>	31	24%	19	30%
	<i>Similar</i>	52	41%	24	38%
	<i>Very Similar</i>	35	27%	13	21%
	<i>Total</i>	128	100%	63	100%
If you have been employed, indicate the total time spent employed: (Source: CLA post-test survey)	<i>Never employed</i>	45	18%	5	4%
	<i>Under 6 mos</i>	41	16%	4	3%
	<i>6-18 months</i>	59	23%	10	8%
	<i>1.5-5 yrs</i>	101	39%	32	25%
	<i>More than 5 yrs.</i>	10	4%	76	60%
	<i>Total</i>	256	100%	127	100%
How similar were the tasks in today's CLA to projects/tasks you've had in your employment? (Source: CLA post-test survey)	<i>Never Employed</i>	46	18%	5	4%
	<i>Totally Unlike</i>	164	64%	66	52%
	<i>Vaguely Similar</i>	36	14%	39	31%
	<i>Similar</i>	9	4%	12	9%
	<i>Very Similar</i>	1	0%	5	4%
	<i>Total</i>	256	100%	127	100%

**Collegiate Learning Assessment 2009-2010:
University of New Mexico**

January 11, 2011

Table 3: Field of Study Broken into Majors

Sciences and Engineering	Agriculture			
	Architecture			
	Biological / Life Sciences (Biology, Biochemistry, Botany, Zoology, etc.)			
	Computer and Information Sciences			
	Engineering and Technology			
	Mathematics			
	Physical Sciences (Physics, Chemistry, Astronomy, Earth Sciences, etc.)			
Social Sciences	Anthropology			
	Economics			
	Ethics, Cultural or Area Studies (Peace Studies, Women Studies, etc.)			
	Geography			
	History			
	Multi/Interdisciplinary Studies			
	Political Science			
	Psychology			
	Sociology			
Humanities and Languages	Art History			
	Communications (Speech, Journalism, Television/Radio, etc.)			
	English and Literature			
	Foreign Languages and Literature (French, Spanish, Chinese, etc.)			
	Liberal/General Studies			
	Philosophy			
	Religion			
	Visual and Performing Arts (Studio Art, Music, Theater, etc.)			
Business	Business			
	Accounting			
	Business Administration			
	Marketing			
	Management			
Helping / Services	Education			
	Health-related (Nursing, Pre-med., Physical Therapy, Health Tech., etc.)			
	Home Economics and Vocational Home Economics			
	Law Enforcement (Criminal Justice, Pre-Law, etc.)			
	Parks, Recreation, Leisure Studies, Sports Management			
	Physical Education			
	Public Administration (City Management, Public Policy, etc.)			
	Social Work			
Undecided	Undecided			
	N/A (Not Applicable)			
	Other			

Collegiate Learning Assessment 2009-2010: University of New Mexico

January 11, 2011

Table 4: Value-Added Subgroups

		N	Expected	Observed	Deviation	Value-Added	Performance Level
Seniors	<i>Total CLA Score</i>	99	1219	1269	50	1.15	Above Expected
Ethnicity (Source: Registrar data)	<i>White, Non-Hispanic</i>	53	1245	1310	65	1.49	Above Expected
	<i>Minority</i>	46	1190	1223	33	0.76	Near Expected
Remedial Coursework	<i>Remedial not required</i>	83	1243	1284	41	0.95	Near Expected
	<i>Remedial required</i>	16	1117	1192	75	1.72	Above Expected
Field of Study (Source: CLA demographic survey)	<i>Business</i>	12	1183	1210	27	0.61	Near Expected
	<i>Sciences and Engineering</i>	19	1226	1267	41	0.93	Near Expected
	<i>Helping/Services</i>	20	1194	1243	49	1.13	Above Expected
	<i>Social Sciences</i>	30	1223	1284	61	1.40	Above Expected
	<i>Humanities and Languages</i>	18	1250	1316	66	1.51	Above Expected

Table 5: Value-Added Formulas

Expected Score:	$(\text{National Intercept}) + (\text{National Senior EAA Slope}) * (\text{UNM Senior Mean EAA}) + (\text{National Freshman CLA Slope}) * (\text{UNM Freshman Mean CLA})$
Difference Score:	$\text{UNM Senior Mean CLA} - \text{Expected Score}$
Value-Added Score:	$\text{Difference Score} / \text{National Standard Deviation}$

Collegiate Learning Assessment 2009-2010: University of New Mexico

January 11, 2011

Table 6: Value-Added and Precision Estimates

	Value-Added		Percentile Rank	95 % Confidence Interval	
	Level	Score		Lower Bound	Upper Bound
	UNM w/in All				
Total CLA Score	Above	1.15	90	0.51	1.79
Performance Task	Near	0.74	77	-0.01	1.49
Analytic Writing Task	Above	1.43	93	0.73	2.13
Make-an-Argument	Above	1.37	92	0.61	2.13
Critique-an-Argument	Above	1.31	93	0.55	2.07

Table 7: Seniors Unadjusted Performance

	N	Mean Score	Percentile Rank	Percentiles		Standard Deviation
				25th	75th	
	UNM w/in All			Student w/in UNM		W/in UNM
Total CLA Score	99	1269	79	1142	1399	152
Performance Task	51	1197	70	1094	1283	133
Analytic Writing Task	48	1346	88	1249	1446	133
Make-an-Argument	48	1344	91	1258	1427	136
Critique-an-Argument	48	1348	86	1257	1458	184
EAA	99	1078	55	950	1190	169

Table 8: Freshmen Unadjusted Performance

	N	Mean Score	Percentile Rank	Percentiles		Standard Deviation
				25th	75th	
	UNM w/in All			Student w/in UNM		W/in UNM
Total CLA Score	254	1156	75	1057	1268	149
Performance Task	127	1132	78	1049	1238	147
Analytic Writing Task	127	1180	73	1069	1291	148
Make-an-Argument	127	1207	80	1093	1319	169
Critique-an-Argument	127	1153	66	1009	1272	184
EAA	254	1069	58	970	1190	163