Concord University CLA Results, 2006-2012 Prepared by Dr. Lisa Darlington May 2012

Each year, Concord University administers the Collegiate Learning Assessment (CLA) to a maximum of 100 first-semester freshman and 100 graduating seniors who have taken the majority of their coursework at Concord. The CLA is funded by the HEPC (through 2013). "The CLA offers a value-added, constructed-response approach to the assessment of higher-order skills, such as critical thinking and written communication" (CLA, 2012).

About the Test

Each student is randomly assigned either a Performance Task or an Analytic Writing Task. All tasks are administered online and consist of open-ended prompts. "The CLA requires that students use critical thinking and written communication skills to perform cognitively demanding tasks. The integration of these skills mirrors the requirements of serious thinking and writing task faced in life outside of the classroom" (CLA, 2012).

In the Performance Task, students are presented with a series of open-ended questions about a realistic, but hypothetical situation. Included with the questions and direction is a Document Library that contains information sources such as letters, research summaries, newspaper articles, maps, charts, interview transcripts, and maps. Students are given 90 minutes to respond to the Performance Task questions, using the included evidence. "Performance Tasks often require students to marshal evidence from different sources; distinguish rational arguments from emotional ones and fact from opinion; understand data in tables and figures; deal with inadequate, ambiguous, and/or conflicting information; spot deception and holes in the arguments made by others; recognize information that is and is not relevant to the task at hand; identify additional information that would help resolve issues; and weigh, organize, and synthesize information from several sources" (CLA, 2012).

The Analytic Writing Task consists of two essays: Make-an-Argument and Critique-an-Argument. In Make-an-Argument, students are presented with an opinion on some issue and are given 45 minutes to write a persuasive analytic essay to support a position on the issue. Students are expected to develop a position and support it with relevant and persuasive examples. In Critique-an-Argument, students are given 30 minutes to evaluate the reasoning used in an argument (rather than simply agreeing or disagreeing), including identifying logical flaws or fallacies and how they affect the conclusion of the argument.

Scoring and Value Added

The institution, not the student, is considered the primary unit of analysis. "The CLA is designed to measure an institution's contribution, or value-added, to the development of higherorder thinking skills" (CLA, 2012). In addition to an overall score and scores for each task, subscores are reported for Analytic Reasoning and Evaluation, Writing Effectiveness, Writing Mechanics, and Problem Solving.

A key component of the score report is the Value Added score. Using a statistical technique known as hierarchical linear modeling (HLM), the value added score takes into account students' entering academic ability (SAT or ACT scores), as well as the performance of both freshmen and seniors. "Value-added modeling is often viewed as an equitable way of estimating an institution's contribution to learning. [...] providing scores that can be interpreted as relative to institutions testing students of similar entering academic ability." "Under this methodology, a school's value-added score indicates the degree to which the observed senior mean CLA score meets, exceeds, or falls below expectations established by (1) senior's Entering Academic Ability (EAA) scores and (2) the mean CLA performance of freshman at that school, which serves as a control for selection effects not covered by EAA" (CLA, 2012).

Summary by Year

Score reporting formats are inconsistent from year to year; summary information may vary based on reported data.

2006-2007¹. Seventy-six (76) freshmen and 29 seniors took the CLA in 2006-2007. Subscore data for seniors was not reported because the total number per test was under 25 (recall that students are split equally between the two tasks). Freshmen CLA scores were lower than expected from entering academic ability (EAA) and seniors performed as expected. The value added decile was 10, meaning our value-added score was better than 90% of four-year institutions taking the CLA. See Table 1 for scores.

2007-2008¹. Sixty (60) freshmen and 13 seniors took the CLA in 2007-2008. Again, subscore data for seniors was not reported due to small sample size. Freshmen CLA scores were above expected from EAA (well above for the performance task, at expected for make an argument) and overall were in the 81st percentile (better than 81% of participating institutions); senior data was not reported—there were not enough students with both CLA data and EEA data. No value added score was reported this year. See Table 1 for scores.

2008-2009¹. Ninety-six (96) freshmen and 49 seniors took the CLA in 2008-2009. Fewer than 25 seniors took the Analytic Writing task, so these scales and subscales are not reported. Freshmen scored below expected from EAA (23rd percentile) and seniors were above expected (76th percentile). Value added score was in the 92nd percentile; after adjusting for entering academic ability, the difference in performance between seniors and freshmen was higher than 92% of comparison institutions. See Table 1 for scores.

2009-2010¹. Eighty (80) freshmen and 34 seniors took the CLA in 2008-2009. Freshmen scored in the 22nd percentile and seniors in the 13th. Overall, CLA scores were lower than expected from EAA. Value added score was in the 10th percentile, meaning we did better than only 10% of participating institutions. See Table 1 for scores.

¹ **NOTE:** For some years, sample sizes are extremely small; this makes analysis of data less reliable. Use caution when citing or analyzing data from a single year.

2010-2011². Thirty-six (36) freshmen and 29 seniors took the CLA in 2010-2011.

Freshmen scored in the 10th percentile and seniors in the 31st; overall CLA scores were near

expected. Our value added score was in the 61^{st} percentile. See Table 1 for scores.

2011-2012². Fifty-six (56) freshmen and 18 seniors took the CLA in 2011-2012.

Freshmen scored in the 5^{th} percentile and seniors in the $39^{\text{th}};$ overall CLA scores were near

expected. Our value added score was in the 65th percentile. See Table 1 for scores.

006-07 76	2007-08	2008-09	2009-10	2010-11	2011-12
76					
	60	96	80	36	56
991	1044	1025	1021	932	888
984	1045	999	1023	929	887
998	1035	1050	1019	935	888
1010	1021	1053	1023	922	887
984		1047	1015	915	887
		1008	999	955	972
29	13	49	34	29	18
1210		1201	1093	1119	1143
1184	914	1136	1052	1156	1179
1214	941		1133	1067	1071
1189	1000		1116	1026	1079
1145	978		1151	1108	1062
		1025	1025	1054	1097
100		92	10	61	65
		85	7	71	66
			20	30	38
P			17	16	63
			29	56	16
	984 998 1010 984 29 1210 1184 1214 1189 1145	984 1045 998 1035 1010 1021 984	98410459999981035105010101021105398410211047984104710082913491210134912101201120111849141136118910001145114597810251009292	9841045999102399810351050101910101021105310239841047101598410471015984100899929134934121012011093118491411361214941113311891000111611459781151100921010192101001025201001017	9841045999102392999810351050101993510101021105310239229841047101591598410089999552913493429121012011093111911849141136105211561214941113310671189100011161026114597811511108100921061100921061100101857100101102301011011023010110110716

Table 1: CLA Scores, by Year

² **NOTE:** For some years, sample sizes are extremely small; this makes analysis of data less reliable. Use caution when citing or analyzing data from a single year.

Analysis of Subscores

Because of small and uneven sample sizes, further analysis of data is complicated. However, in an attempt to glean more data, data from Concord was compared to all institutions giving the CLA. This comparison used a t-test. If probability is less than 0.05 (5%), the sample (Concord students) is significantly different from the comparison group (all CLA institutions); if less than 0.01 (1%), the sample is strongly significantly different.

In **2006-2007**, freshmen scored strongly significantly lower than all students for every measure (Performance Task, Analytic Writing Task, Make-an-Argument, Critique-an-Argument, Total CLA, Entering Academic Ability), but seniors were statistically no different (with the exception of total CLA). In other words, our freshmen started out lower than average, but our seniors were comparable to other graduating seniors. In the case of total CLA score, our seniors scored significantly higher than other seniors. See Table A1 in Appendix.

In **2007-2008**, only freshmen Entering Academic Ability (EAA) was strongly significantly lower than all students. All other scores were comparable. See Table A2 in Appendix.

In **2008-2009**, freshmen scored strongly significantly lower than all students for every measure (Performance Task, Analytic Writing Task, Make-an-Argument, Critique-an-Argument), but seniors were statistically no different. (Total CLA and EEA for all schools not reported this year.) In other words, our freshmen started out lower than average, but our seniors were comparable to other graduating seniors. See Table A3 in Appendix.

In 2009-2010, freshmen scored significantly lower than all students for every measure (Performance Task, Analytic Writing Task, Make-an-Argument, Critique-an-Argument, Total CLA, Entering Academic Ability); however, so did seniors, for everything except EAA, which was not significantly different. See Table A4 in Appendix.

In **2010-2011**, freshmen scored strongly significantly lower than all students for every measure (Performance Task, Analytic Writing Task, Make-an-Argument, Critique-an-Argument, Total CLA, Entering Academic Ability). Seniors were significantly lower in the Analytic Writing

Task and strongly significantly lower in Make –an-Argument, but no different for other measures and overall. In other words, our freshmen started out lower than average, but our seniors were comparable to other graduating seniors. See Table A5 in Appendix.

Summary subscores were included for the first time in this year's report. Analytic Reasoning and Evaluation, Writing Effectiveness, and Writing Mechanics subscores were included for each task, and Problem Solving was included for the Performance Task. Freshmen were significantly lower for all subscores except writing effectiveness in the Performance Task. Seniors scored significantly lower for subscores in Make-an-Argument, but no different in other subscores. See Table A6 in Appendix.

In **2011-2012**, freshmen scored strongly significantly lower than all students for every measure (Performance Task, Analytic Writing Task, Make-an-Argument, Critique-an-Argument, Total CLA, Entering Academic Ability), but seniors were statistically no different. In other words, our freshmen started out lower than average, but our seniors were comparable to other graduating seniors. See Table A7 in Appendix.

Summary subscores were included again this year. Freshmen were significantly lower for all subscores, and seniors no different for all subscores, compared to other students taking the CLA. See Table A8 in Appendix.

Combined Score Analysis

The final analysis resulted in a combined CLA score (and subscores) for 2006-2012. Data for all six years were combined using a weighted average (taking into account sample size for each year). Scores prior to Fall 2010 were re-scaled for consistency³. T-test comparisons

³^{cc} From fall 2006 to spring 2010, CAE used the same scaling equations for each assessment cycle in order to facilitate year-to-year comparisons. With the introduction of new scoring criteria in fall 2010, raw scores are now on a different scale than they were in previous years, which makes it necessary to revise the scaling equations. [...] [W]e encourage you to use the equation below to convert pre-fall 2010 scale scores to current scale scores. [...]

 $score_{new} = 102.29 + (0.8494 . score_{old})$ " (CLA, 2012)

for the new scaled data did not indicate any significant differences between Concord students and students at all CLA institutions. See Table A9 in Appendix.

The score report for each year includes information on how to calculate a value added score for subgroups. This analysis is not feasible, given our small sample sizes. However, using the parameters described in the 2011-2012 Institutional Report, the combined CLA scores from 2006-2012 were combined into a value added score. This is at best a rough comparison—parameters are different for each year. With this limitation in mind, consider Table 2.

Using this rough combined score, Concord seniors scored better than 33% of CLA institutions on the Performance Task from 2006-2012 (taking into account entering academic ability and freshman performance). They scored better than 81% on the Analytic Writing Task, 86% on Make-an-Argument, and 44% on Critique-an-Argument. Overall, the combined CLA score indicates that our seniors performed better than 79% of CLA institutions from 2006-2012, when scores are adjusted for entering academic ability.

Table 2:	Combined Value	Added Scores,	2006-2012
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	Expected		Value Added
	Value	Value Added	Percentile
Performance Task	1119	-0.36828	33
Analytic Writing Task	1114	0.079406	81
Make-an-Argument	1099	0.203717	86
Critique-an-			
Argument	1127	-0.10518	44
Total CLA	1115	0.074932	79

Summary

Although small sample sizes make complete analysis problematical, a general picture of the value added by a degree from Concord University can be gleaned from the CLA data from 2006-2012. In general, our freshmen are less prepared than freshman at other institutions, but our seniors are no different from their graduating peers—in fact, they generally score better than expected on the CLA, based on entering academic ability. Our value added scores are generally in the 60th percentile or higher, indicating that the value added at Concord is higher than at least 60% of CLA institutions.

Works Cited

2011-2012 Institutional Report for Concord University of the Collegiate Learning Assessment

Appendix I

2006-07				*Schools that	at tested	freshm	en & seniors		
Summary statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	t score	р	sig
FRESHMEN									
Performance Task	980	158	44	1065	103	114	-3.30756	<.01	**
Analytic Writing Task	997	123	35	1099	100	103	-4.43334	<.01	**
Make-an-Argument	1007	165	41	1096	103	107	-3.22165	<.01	**
Critique-an-Argument	984	135	35	1089	102	109	-4.23001	<.01	**
Total CLA	991	101	76	1077	101	116	-5.76982	<.01	**
SAT score	990	178	87	1059	133	115	-3.03168	<.01	**
SENIORS (n)									
Performance Task	1184	153	20	1180	113	94	0.110673	>.05	
Analytic Writing Task	1214	181	15	1207	93	83	0.146334	>.05	
Make-an-Argument	1189	216	16	1187	92	90	0.036454	>.05	
Critique-an-Argument	1207	184	18	1218	100	90	-0.24646	>.05	
Total CLA	1210	102	29	1174	102	108	1.687536	<.05	*
SAT score	1061	135	35	1097	127	104	-1.38482	>.05	

Table A1: 2006-2007 Subscores

Table A2: 2007-2008 Subscores

2007-08				*Schools tha	at tested	freshm	nen & seniors		
Summary statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	t score	р	sig
FRESHMEN									
Performance Task	1045	165	30	1051	98	161	-0.19293	>.05	
Analytic Writing Task	1035	123	31	1072	82	157	-1.60587	>.05	
Make-an-Argument	1021	145	31	1074	88	159	-1.96576	>.05	
Critique-an-Argument	1049	162	31	1068	84	157	-0.63634	>.05	
Total CLA									
SAT score	973	173	60	1053	123	168	-3.29671	<.01	**
SENIORS (n)									
Performance Task	1081	239	8	1157	95	148	-0.8956	>.05	
Analytic Writing Task	1165	224	7	1176	78	142	-0.12954	>.05	
Make-an-Argument	1191	241	8	1170	83	143	0.245647	>.05	
Critique-an-Argument	1123	200	7	1178	80	144	-0.72477	>.05	
Total CLA									
SAT score	1071	131	14	1079	115	161	-0.22121	>.05	

2008-09				*Schools that	at tested	freshm	nen & seniors			
Summary statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	t score	р	sig	
FRESHMEN								-		
Performance Task	992	131	50	1067	90	183	-3.81009	<.01	**	
Analytic Writing Task	1046	132	48	1110	106	183	-3.10665	<.01	**	
Make-an-Argument	1050	170	50	1113	114	183	-2.47294	<.01	**	
Critique-an-Argument	1043	142	49	1105	102	183	-2.86484	<.01	**	
Total CLA	1025		96							
SAT score										
SENIORS (n)										
Performance Task	1132	164	27	1170	83	191	-1.18276	>.05		
Analytic Writing Task	1227	200	26	1230	95	191	-0.07534	>.05		
Make-an-Argument	1239	247	26	1215	96	191	0.490435	>.05		
Critique-an-Argument	1215	183	26	1243	98	191	-0.76538	>.05		
Total CLA	1201		49				•			
SAT score										
Table A4: 2009-2010	Subscor	26								
						<u> </u>	<u> </u>			

Table A3: 2008-2009 Subscores

Table A4: 2009-2010 Subscores

2009-10				*Schools that	t tested	freshm	en & seniors		
Summary statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	t score	р	sig
FRESHMEN		5							
Performance Task	1023	142	40	1070	89	153	-1.99347	<.05	*
Analytic Writing Task	1019	136	40	1115	101	153	-4.17362	<.01	**
Make-an-Argument	1023	166	40	1118	108	153	-3.43443	<.01	**
Critique-an-Argument	1015	172	40	1111	97	153	-3.39179	<.01	**
Total CLA	1021	138	80	1092	93	153	-4.13673	<.01	**
EAA	999	131	80	1054	115	153	-3.17041	<.01	**
SENIORS (n)									
Performance Task	1052	176	17	1156	89	159	-2.40374	<.01	**
Analytic Writing Task	1133	141	17	1226	95	159	-2.65581	<.01	**
Make-an-Argument	1116	174	17	1215	97	159	-2.30788	<.05	*
Critique-an-Argument	1151	169	17	1235	97	159	-2.01419	<.05	*
Total CLA	1093	163	34	1191	90	159	-3.39675	<.01	**
EAA	1025	154	34	1071	107	159	-1.65822	>.05	

Table AJ. 2010-201		00							
2010-11				*Schools that	t tested	freshm	en & seniors		
Summary statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	t score	р	sig
FRESHMEN									
Performance Task	929	170	19	1048	97	188	-3.00224	<.01	**
Analytic Writing Task	935	121	17	1052	96	188	-3.87797	<.01	**
Make-an-Argument	922	154	19	1048	100	188	-3.49273	<.01	**
Critique-an-Argument	915	160	17	1051	99	188	-3.44551	<.01	**
Total CLA	932	147	36	1050	95	188 '	-4.63456	<.01	**
EAA	955	152	38	1045	114	188	-3.45865	<.01	**
SENIORS (n)									
Performance Task	1156	167	17	1157	91	186	-0.02436	>.05	
Analytic Writing Task	1067	142	12	1154	87	186	-2.09713	<.05	*
Make-an-Argument	1026	168	12	1141	91	186	-2.34913	<.01	**
Critique-an-Argument	1108	150	12	1165	90	186	-1.30133	>.05	
Total CLA	1119	161	29	1156	86	186	-1.21094	>.05	
EAA	1054	138	29	1060	105	186	-0.22424	>.05	

Table A5: 2010-2011 Subscores

Table A6: 2010-2011 Summary Subscores

Freshmen:	2011 Odin								
Summary									
Subscore									
Statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	T (df>29)	р	sig
Performance			00 11		7 11 00	,	1 (017 23)	۳	5.8
Task			36			188			
Analytic									
Reasoning and									
Evaluation	2.1	0.9	19	2.8	0.9	188	-3.23092	<.005	**
Writing									
Effectiveness	2.6	1.1	19	3	0.9	188	-1.53401	>.05	
Writing									
Mechanics	2.5	1.1	19	3.1	0.9	188	-2.30102	<.025	*
Problem									
Solving	2.3	1.1	19	2.9	0.9	188	-2.30102	<.025	*
Make-an-									
Argument									
Analytic									
Reasoning and									
Evaluation	2.7	0.7	19	3.2	0.8	188	-2.92634	<.005	**
Writing									
Effectiveness	2.6	0.8	19	3.2	0.9	188	-3.07823	<.005	**
Writing									
Mechanics	2.9	0.8	19	3.4	0.8	188	-2.59627	<.005	**

Freshmen:									
Summary									
Subscore									
Statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	T (df>29)	р	sig
Critique-an-	co mean	00 50	0011	/ III WICUII	711 30	/	1 (0123)	Υ	318
Argument									
Analytic									
Reasoning and									
Evaluation	2.1	1	17	2.8	0.9	188	-2.78595	<.005	**
Writing	2.1		17	2.0	0.5	100	-2.78555	<.005	
Effectiveness	2.2	0.8	17	2.9	0.8	188	-3.45489	<.005	**
Writing	2.2	0.0	17	2.9	0.8	100	-3.43489	<.003	
Mechanics	2.8	0.8	17	3.4	0.8	188	-2.96134	<.005	**
	2.8	0.8	17	3.4	0.8	100	-2.96134	<.005	
Seniors:									
Summary									
Subscore									
Statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	t (df>29)	р	
Performance									
Task			29			186			
Analytic							•		
Reasoning and									
Evaluation	3.5	1	17	3.4	0.9	186	0.397847	>.05	
Writing									
Effectiveness	3.4	1	17	3.5	0.9	186	-0.39785	>.05	
Writing									
Mechanics	3.7	0.8	17	3.5	0.8	186	0.986672	>.05	
Problem									
Solving	3.5	1.1	17	3.4	0.9	186	0.363862	>.05	
Make-an-									
Argument									
Analytic				P					
Reasoning and									
Evaluation	3.1	0.9	12	3.6	0.8	186	-1.87725	<.05	*
Writing									
Effectiveness	3.2	0.8	12	3.7	0.9	186	-2.08174	<.025	*
Writing									
Mechanics	3.4	0.7	12	3.8	0.7	186	-1.91856	<.05	*
Critique-an-									
Argument									
Analytic									
Reasoning and									
Evaluation	3	0.9	12	3.3	0.9	186	-1.11916	>.05	
Writing									1
Effectiveness	3.1	0.8	12	3.4	0.9	186	-1.24904	>.05	
Writing						'			
Mechanics	3.7	0.8	12	3.9	0.7	186	-0.8454	>.05	
	5.7	0.0	14	5.5	0.7	100	0.0434	2.00	

Table A7. 2011-2012 Subscores												
2011-12				*Schools that	at tested	freshm	en & seniors					
Summary statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	t score	р	sig			
FRESHMEN												
Performance Task	887	137	29	1048	98	167	-10.4722	<.01	**			
Analytic Writing Task	888	153	27	1048	89	169	-8.89836	<.01	**			
Make-an-Argument	887	187	28	1047	96	169	-7.06313	<.01	**			
Critique-an-Argument	887	165	27	1046	88	169	-8.71634	<.01	**			
Total CLA	888	144	56	1048	93	169 *	-13.3466	<.01	**			
EAA	972	137	57	1031	110	169	-4.49507	<.01	**			
SENIORS (n)												
Performance Task	1179	166	12	1165	95	171	0.288853	>.05				
Analytic Writing Task	1071	146	6	1157	84	172	-1.43459	>.05				
Make-an-Argument	1079	162	6	1142	86	172	-0.94793	>.05				
Critique-an-Argument	1062	192	6	1170	91	172	-1.37247	>.05				
Total CLA	1143	164	18	1162	87	172	-0.48444	>.05				
EAA	1097	116	18	1062	102	172	1.231262	>.05				

Table A7: 2011-2012 Subscores

Table A8: 2011-2012 Summary Subscores

Freshmen:		,							
Summary									
Subscore									
Statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	t (df>29)	р	
Performance									
Task			56	•		169			
Analytic									
Reasoning and				r					
Evaluation	2.1	0.9	29	2.9	0.8	167	-4.48876	<.005	**
Writing									
Effectiveness	2	0.8	29	2.9	0.9	167	-5.48543	<.005	**
Writing									
Mechanics	2.4	0.9	29	3.2	0.8	167	-4.48876	<.005	**
Problem Solving	2	0.6	29	2.7	0.8	167	-5.49191	<.005	**
Make-an-									
Argument									
Analytic									
Reasoning and									
Evaluation	2.5	0.9	28	3.2	0.8	169	-3.87009	<.005	**
Writing									
Effectiveness	2.3	0.9	28	3.2	0.9	169	-4.90105	<.005	**
Writing									
Mechanics	2.8	1	28	3.4	0.8	169	-3.01888	<.005	**

Freshmen:									
Summary									
Subscore									
Statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	t (df>29)	n	
Critique-an-		CO 3D	COTI	All Mean	All 3D	AILU	t (u1/29)	р	
Argument									
Analytic									
Reasoning and									
Evaluation	1.9	0.9	27	2.8	0.9	169	-4.825	<.005	**
Writing	1.9	0.9	27	2.0	0.9	109	-4.023	<.003	
Effectiveness	2.1	0.8	27	2.8	0.8	169	-4.22187	<.005	**
Writing	2.1	0.0	27	2.0	0.0	105	-4.22107	<u> <.005</u>	
Mechanics	2.7	0.9	27	3.4	0.8	169	-3.80823	<.005	**
Seniors:	2.7	0.5	27	5.4	0.0	105	-5.00025	1.005	
Summary									
Subscore									
Statistics	CU Mean	CU SD	CU n	All Mean	All SD	All n	T (df>29)	n	
Performance		CO 3D	COTI	All Mean	All 3D	AILU	1 (ul>29)	р	
Task			18			172			
Analytic			10			172			
Reasoning and									
Evaluation	3.5	1	12	3.4	0.9	171	0.336966	>.05	
Writing	5.5		12	Jur	0.5		0.550500	2.05	
Effectiveness	3.8	1	12	3.5	0.9	172	1.011055	>.05	
Writing	5.0			5.5	0.5	1/2	1.011035	2.00	
Mechanics	3.8	0.6	12	3.7	0.8	172	0.544566	>.05	
Problem Solving	3.4	1	12	3.3	0.9	172	0.337018	>.05	
Make-an-	5.4		12	5.5	0.5	1/2	0.557010	2.05	
Argument									
Analytic									
Reasoning and									
Evaluation	3.2	1	6	3.6	0.8	172	-0.96904	>.05	
Writing		_		2.0	0.0				
Effectiveness	3.3	1	6	3.7	0.9	172	-0.96624	>.05	
Writing								-	
Mechanics	3.5	0.8	6	3.8	0.7	172	-0.90653	>.05	
Critique-an-									
Argument									
Analytic									
Reasoning and									
Evaluation	3	1.1	6	3.4	0.9	172	-0.8805	>.05	
Writing									
Effectiveness	3	1.1	6	3.5	0.9	172	-1.10063	>.05	
Writing									
Mechanics	3.2	1.2	6	3.9	0.7	172	-1.42046	>.05	

Summery statistics Combined											
Summary statistics	Combined										
FRESHMEN	CU Mean	CU SD	CU n	All Mean	All SD	All n	t	р			
Performance Task	954.5425	148	212	1057.59	96	966	-0.58361	>.05			
Analytic Writing Task	968.8462	132	198	1080.917	96	953	-0.68639	>.05			
Make-an-Argument	967.9446	166	209	1081.062	102	959	-0.58119	>.05			
Critique-an-Argument	965.591	155	199	1077.098	95	959	-0.61201	>.05			
Total CLA	959.617	111	344	1064.728	95	626	-0.71905	>.05			
EAA	960.8616	156	322	1047.478	118	793	-0.44183	>.05			
SENIORS (n)											
Performance Task	1096.341	172	101	1163.169	93	949	-0.34207	>.05			
Analytic Writing Task	1119.192	177	83	1190.445	89	933	-0.36034	>.05			
Make-an-Argument	1111.613	212	85	1177.513	91	941	-0.28596	>.05			
Critique-an-Argument	1121.111	178	86	1200.594	93	942	-0.39542	>.05			
Total CLA	1119.229	124	159	1169.666	90	625	-0.32905	>.05			
EAA	1034.251	138	130	1071.509	110	782	-0.21102	>.05			

Table A9: Combined Scores, 2006-2012