Summary of Years 1 and 2 for the Teagle Foundation Study:

Measuring Intellectual Development and Civic Engagement
through Value-Added Assessment

Consortium of Alma College, Augustana College, Gustavus Adolphus College,
Illinois Wesleyan University, Luther College, and Wittenberg University

Michael Nolan
Principal Researcher

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This report summarizes our initial findings from the first two years of our collaborative work. The six Teagle schools will meet at Gustavus Adolphus September 21-23 to discuss the complete data set for writing and critical thinking and to draw more authoritative conclusions. Since our initial report earlier in the summer, we have moved the study along in the following ways:

1. The institutional researchers have done additional data clean-up and run regressions to control for differences in ACT score for the critical-thinking paper samples. This provides us with more precise measures of value-added, although there was no change in relative ranking as determined by the percentile gains reported in the June interim report.

2. Because of difficulties we had in interpreting the writing data, for our critical-thinking work, we have collected data about the class for which the paper was written and a rating of each paper assignment in terms of its fit with the rubric. Because of time constraints at Luther College in June, this work could not be completed at that workshop. Faculty members at each school assessed the assignments on their campuses in July and early August. This data will be shared with the consortium for the first time at Gustavus Adolphus.

3. We have run correlations of the writing assessment scores with the Collegiate Learning Assessment and the National Survey of Student Engagement. We also have taken a first look at the relation of writing and critical thinking. We have new data on the writing environments on each campus and correlations of these ratings with the NSSE and CLA.

Our overall goals for our collaborative assessment work include the following:

To determine the effect that our schools have on student growth in writing, critical-thinking, and civic engagement;

To explore ways to do authentic value-added assessment using "live" student work effectively;

To understand better what the scores of nationally normed instruments, including the NSSE and CLA, mean for our campuses; and

To determine if any consortium schools are outliers and to examine what campus practices may lead to the greater student growth that the schools achieve.

The discussion below addresses most of the study goals, with the exception of explicit statements about ways to do authentic assessment more effectively, although that is always on our minds as we plan.

Assessment of Writing

Our primary goal in assessing writing is to measure the effect we had on our students' work, with a related goal to see if our results correlate with those of the national instruments, including the Collegiate Learning Assessment and the National Survey of Student Engagement.

To accomplish these goals, we assessed argumentative/case-building papers because they are a type of writing common to all schools and would be appropriate for critical-thinking assessment as well. We looked for the value added longitudinally from early in the first year to the end of the first year and cross-sectionally from first year to junior year.

In June 2006, the schools met at Alma College to assess student writing using the rubric developed by the faculty. Each school was asked to bring 130 papers, 65 from first-year students and 65 from juniors. Guided by Dr. Craig Sirles, a chief reader with 17 years of experience in writing assessment with the College Board, faculty members from each school assessed papers in terms of main idea/thesis, argument, evidence, organization, readability, conventions, and overall impression on a five-point scale. Each paper had a discrete random number, with all other identifying information concerning school, student, and class level masked to maintain student and teacher anonymity and to minimize the possibility that readers could make mental adjustments for the writer's year in school. All told, over 600 papers were read. Inter-rater reliability was high: .937 (Guzman Split Half) and .938 (Cronbach's alpha). Although the final sample size was not 130 papers for all schools, it was sufficiently large for valid statistical analysis. Analysis of the papers in terms of demographic characteristics showed that the samples were representative of the institutions.

Based on the faculty ratings, means and standard deviations were computed, and student change in writing skill was expressed as a percentile change. The first-year fall term to first-year spring term change is summarized in Table 1. By prior agreement, school identities are masked.

TABLE 1: First-Year Students Fall to First-Year Students Spring
(N= 339 fall, 243 spring)

School	FY Fall Paper Average	FY Spring Paper Average	Fall/Spring Difference	Pooled Standard Deviation	Effect Size	Percentile Change
A	2.67	2.83	0.16	0.65	0.25	10%
B	2.67	3.08	0.41	0.56	0.73	27%
C	2.73	2.57	-0.16	0.62	-0.26	-10%
D	3.11	3.49	0.38	0.66	0.56	22%
E	2.43	2.69	0.26	0.59	0.46	17%
F	2.58	2.95	0.37	0.69	0.54	20%
All	2.69	2.85	0.24	0.63	0.38	14.5%

The change in the first year ranges from -10% to 27%. There is no national data on gains in writing skill in the first year alone. It is worth noting that schools B, D, and F showed effect-size gains over .50 standard deviations. This effect size is what Ernest Pascarelli and Patrick Terenizi report in their meta-analysis of studies that were done prior to the 1990s for first-year to senior-year gains. Studies after 1990 report a .77 effect size for "English skills," a category however that includes not only "writing" but also "reading" and "literature" (Ernest Pascarelli and Patrick Terenizi, *How College Affects Students, Volume II,* 572-573).

We also calculated scores for growth in writing skill from first to junior year, as shown in Table 2.

TABLE 2: First-Year Students Fall to Junior Student Scores
(N= 339 first-year, 288 junior)

School	FY Paper Average	JR Paper Average	JR/FY Difference	Pooled StDev	Effect Size	Percentile Change
A	2.67	3.05	0.38	0.68	0.56	21%
B	2.67	3.03	0.36	0.70	0.51	20%
C	2.73	3.22	0.49	0.69	0.69	25%
D	3.11	3.15	0.04	0.67	0.06	2%
E	2.43	2.79	0.36	0.69	0.52	20%
F	2.58	3.10	0.52	0.75	0.69	25%
ALL	2.70	3.05	0.36	0.70	0.51	19%

Percentile changes range from 2% to 25%. All but school D surpassed the benchmark of .50 for first to senior-year gains. Interestingly though students at most schools continued to show gains in writing skill, the effects were modest, and some schools' students seemed to lose gains made in the first year. Reasons for this apparent loss will be a subject for future analysis in light of critical-thinking assessment data and writing survey questions recently compiled. Some evidence suggests that the selection of papers may explain some of the anomalous scores. We also saw some drops between junior and senior year in our critical-thinking data.

TABLE 3: First-Year Students to Junior Students Percentile Change
(N= 339 first-year, 288 junior)

School	Percentile Change First Year Fall to Spring	Percentile Change First Year Fall to Junior Year	Percentile Change First to Junior Year
A	10%	21%	11%
B	27%	20%	-7%
C	-10%	25%	35%
D	22%	2%	-20%
E	18%	20%	2%
F	20%	25%	5%
ALL	14.5%	19%	4.5%

Our data shows that the majority of the Teagle Consortium schools help students improve their writing skill, at effect sizes equal to those reported in the literature. While this is positive news, given that we are selective colleges, we may seek ways to foster greater student gains. It is possible that the literature is reporting gains from standardized tests and that our methodology makes our results non-comparable. Whether a first-year to senior comparison would show greater gains is debatable, given faculty belief that seniors may be somewhat less motivated as they look ahead to graduation and their life beyond.

Correlations of CLA, NSSE, and Local Ratings of Writing Skill

We ran correlations among the six institutions between the scores on the CLA and NSSE benchmark scores and the CLA and the rating of papers by the faculty. Because our sample size is only six, we need to be tentative about any conclusions using data from the CLA and NSSE. Our results for the correlations between the NSSE benchmark scores and the CLA Total Score are shown in Table 4 on the next page.

Except for a cluster of statistically significant correlations around Active and Collaborative Learning and Student/Faculty Interaction for the CLA Total Score and the Analytic Writing Task Score, the correlations are low or negative. Interestingly, there were no statistically significant correlations between the NSSE and the Performance Task. But even so, the correlations there also tended to be strongest for Active and Collaborative Learning and Student/Faculty Interaction in the senior year. (Our results differ from those of Colorado and Kalamazoo Colleges, which report no significant correlations between the NSSE and CLA, though their sample size of two may partly explain that.)

TABLE 4: Correlation of NSSE Benchmarks with CLA Total Score and Sub-scores
(N=6)

NSEE Benchmark	CLA Total Score	CLA Analytic Writing Difference	CLA Performance Task Difference
Level of academic Challenge-FY	-.239	.095	-.479
Level of academic Challenge-SR	-.377	.652	-.002
Active & Collaborative Learning-FY	.654	***.822 (.045)***	.295
Active & Collaborative Learning-SR	***.934 (.006)***	***.948 (004)***	.658
Student/Faculty Interaction—FY	.733	***.830 (.041)***	.382
Student/Faculty Interaction—SR	***.853 (.031)***	.811	.628
Enriching Educational Experiences—FY	-.437	-.200	-.516
Enriching Educational Experiences—SR	.200	.222	.099
Supportive Campus Environment—FY	.097	-.174	.397
Supportive Campus Environment—SR	.106	.046	.181

We also ran correlations between CLA scores and the faculty's rating of papers for writing quality. The first row in Table 5 correlates the change in paper scores from fall to spring for first-year students as rated by faculty using the rubric. The second row correlates change in papers' scores from first year to junior year. Table 5 shares this data.

Table 5: Correlation of Faculty Rating of Writing Quality and CLA Scores
(N =6)

Paper	Total Score Difference	Performance Task Difference	Analytic Writing Score Difference
First-Year Fall to First-Year Spring Difference	**-.161**	**.024**	**-.250**
First Year Fall to Junior Difference	**.206**	**-.103**	**.426**

It is worth noting that the majority of the correlations are low or negative, with the exception of the modestly positive correlation of .426 for first-year to junior growth in writing skill and the Analytic Writing difference score. One might expect a stronger correlation with the Performance Task difference score, as

this test is a more complex task, akin to the argumentative papers that upper-class students were asked to do and that the faculty assessed. What these low or negative correlations suggest about the value of the CLA or our efforts at assessment using student work is an open question.

Critical-Thinking Assessment

Faculty from all six schools assessed critical thinking at Luther College in June of this year using a rubric developed by a faculty group at Illinois Wesleyan University with the help of Washington State University's Dr. Bill Condon, lead member in a FIPSE- funded project to incorporate critical thinking in the university's curriculum. The Teagle participants decided together what qualities characterize critical thinking. Their definition emphasizes recognizing and identifying an issue or problem and seeking open-mindedly to clarify and then answer it, using valid evidence and support. Furthermore, a critical thinker acknowledges the value and limits of evidence and is explicit about the connection of conclusions to larger questions of meaning and importance. Though nothing in this definition is new, it is flexible enough to apply to student work in various disciplines, and it is relevant to work outside the academy where critical thinkers often address open-ended or ill-defined problems.

The assessment of papers was similar to that at Alma College, although because of the length of the papers, faculty members were not able to read all 130 papers for both cohorts. All told, the 28 faculty and administrators did 1,441 readings of 670 papers. As measured by standard-deviation scores, the critical-thinking readers were somewhat more likely to use all levels of the rubric than the readers for writing quality did at Alma. The overall mean score of 3.42 was near the middle of the rubric's six-point scale, and the standard deviation of the ratings ranged from 1.03 to 1.15 versus 0.65 to 0.71 for the writing assessment scores. The inter-rater reliability was high with an overall Cronbach's alpha of .967.

The critical-thinking rubric has eight sub-scores and a Holistic Score. The Holistic Scores correlated positively though weakly with high-school percentile rank (0.24) and with ACT Composite score (0.32) and somewhat more strongly with end-of-year college GPA (0.41). Factor analysis of the critical-thinking ratings showed that all the scores were highly related, with correlations with the Holistic Score between 0.85 and 0.94. This suggests the Holistic Score is reasonable to use for our analysis.

Table 6 shows the percentage gain for each school using the Holistic Score. Ratings for all the sub-scores and the Holistic Score were computed for change from first-year to junior/senior year. The difference was used to compute an effect size, which was then adjusted for the ACT score and expressed in the table as a percentile gain or loss.

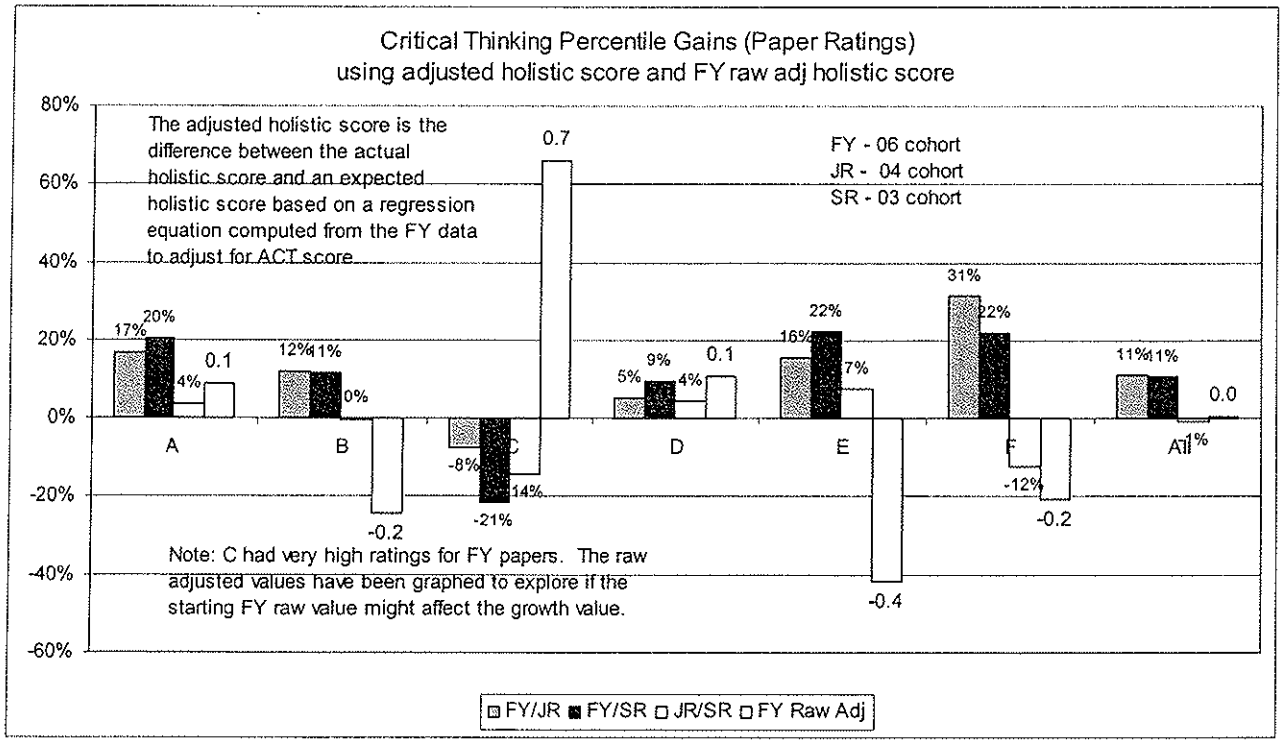
Table 6: Change in Critical-Thinking Rating First Year to Junior/Senior Year

School	Holistic First Year to JR/SR	Effect Size	Percentile Gain/Loss	ACT-Adjusted Percentile Gain/Loss
A	0.71	0.57	22%	20%
B	0.51	0.45	17%	11%
C	-0.56	-0.48	-19%	-21%
D	0.37	0.36	14%	9%
E	0.86	0.79	29%	22%
F	0.70	0.62	23%	22%
ALL	0.44	0.38	15%	11%

The percentile change varies considerably, from a negative 21% to a positive 22%, with a mean of 11%. If we eliminate School C as an outlier, the percentile gain is 17%. As noted in our interim report, our average gain with School C included is .38 standard deviations—lower than the .50 reported by Ernest Pascarelli and Patrick Terenizi in the meta-analysis of studies done in the 1990s (156-160). With School C treated as an outlier, the picture is a bit rosier, with an average gain of .53 standard deviations. As noted in the interim report, the question of how best to contextualize our scores is worth exploring, as the studies that Pascarelli and Terenizi summarize often used standardized instruments such as the Watson Glaser-Critical Thinking Appraisal, the Cornell Critical Thinking Tests, and the California Critical-Thinking Test. These tests address more structured defined problems, informal logic, recognition of fallacies, and the like. How such results compare to the more authentic assessment we are attempting is an open question, one to address at Gustavus.

A question for us is whether there is something unique in the situation of School C that would allow us to treat it as an outlier in our analysis. Dr. Ty Buckman, the chief reader for the assessment work this summer, reported that several readers brought him papers from School C that they felt were not a good match with the rubric. Though the papers from this assignment were eventually rated by other readers, it is possible that School C's scores were lowered by the rating of an inappropriate assignment. Furthermore, our analysis shows that School C's first-year papers earned exceptionally high scores, perhaps setting the bar very high and making value-added growth more difficult to demonstrate. As Graph 1 shows, School C's first-year sample scored 0.7 standard deviations higher than might be expected given the writers' ACT scores. We hypothesize that the first-year papers may have been benefited from multiple drafts and greater-than-average input from faculty and peers. The junior and senior sample may have included papers that were not as heavily revised, that did not receive as much faculty input, and that accounted for a smaller percentage of the course grade. The data from the assessment of the assignments will help us see if this tentative hypothesis is correct.

Graph 1: Critical-Thinking Percentile Gains



Writing and Critical-Thinking

It is has long been a staple of composition theory that writing aids thinking. The act of writing, because it enforces attention, is said to encourage habits of mind that can help clarify thought. Revision, in which writer returns to the written text to see if it says what the writer intends, again enforces attention in the give and take between intended meaning and expression.

Table 7 addresses the possible link between writing and critical thinking by listing the percentage gains for both skills as measured by faculty rating of student papers. Any conclusions are tempered by the problematic data of School C, which showed the greatest gains in writing, a 25% gain from first to junior year, but a drop of 21% in students' critical-thinking ability from first to junior/senor year.

Table 7

School	Writing FY to JR Difference	Critical Thinking FY to JR/SR Difference
A	21%	20%
B	20%	11%
C	25%	-21%
D	2%	9%
E	20%	22%
F	25%	22%
ALL	19%	11%

If writing helps increase critical thinking, we ought to see a high correlation between the percentage gains in each area, demonstrating that gains in writing skill are linked to increases in critical thinking. Because of School C, which we have noted above may be a source of data confounded by unusual assignments, the results are mixed. Correlation for all schools data is -0.09, suggesting a very small negative relationship between increase in writing skill and increase in critical-thinking ability. If we assume that there are unusual factors at work and eliminate School C, the correlation is 0.75, suggesting a moderately strong relationship between writing and critical-thinking. Given the small sample size, neither of these correlations reach a .05 significance, with Pearson Correlations of .865 for all schools (N =6) and .751 with School C removed (N=5). Again, we are hopeful that the data for the assignments, which describes both their weight and importance in the class and their fit with the rubric, may help us draw useful conclusions from the data.

Upcoming Work

This report adds considerable information beyond that of the interim report of June, but still leaves a number of questions and issues to be explored further. We will do more fine-gained analysis at Gustavus Adolphus in September. In addition to preparation for the assessment of civic engagement, our work will address the following areas:

1. Using just compiled data from supplemental questions on writing given along with the National Survey of Student Engagement, we will seek patterns in the data of schools that performed well versus those that performed less well. In our analysis in the fall of 2006, individual schools sometimes found the data useful, such as School D, whose lower than expected scores for writing prompted considerable campus discussion. But all in all our initial analysis of writing data did not show any strong patterns. In fact we sometimes

reached counterintuitive conclusions. For example, one school showed a small drop in writing skill in the first year, but much stronger gains by the junior year. However, the school has a well organized first-year writing program and no formal writing instruction after the first year, which made these results puzzling. Analysis of data from the NSSE and the supplemental writing questions for first-year students also did not indicate any patterns that explained the differences between the schools whose students showed smaller gains versus those that showed greater gains. We hope that the supplemental writing questions given to seniors as part of the Spring 2006 NSSE will allow us to see if there are differences between the experiences of first-year and senior students that can help explain the differences in learning. We may explore if the gains some schools' students made in the first year that seem to disappear by the junior year is evidence of some lack at the schools or whether the drop is an artifact of the paper samples. Charts detailing first-year and senior students' responses to the supplemental questions and correlations of CLA and paper reading measures with the NSSE Benchmarks and Supplemental Questions are included as an PDF appendix. As this data was just collected, it will be first discussed in detail at Gustavus.

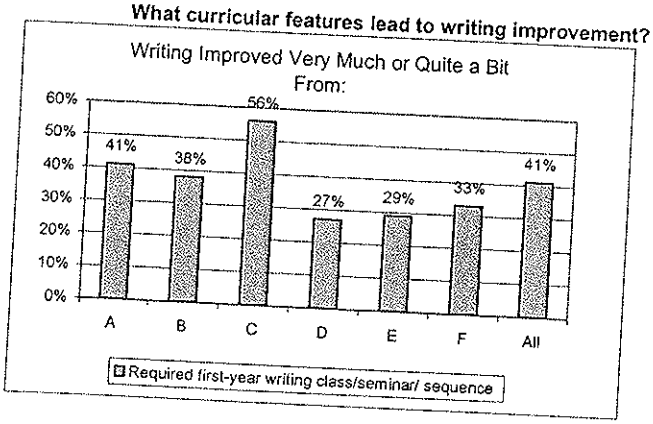
2. While our students' gains in writing and critical thinking are either modest or equal to those reported in the student assessment literature, we need to determine more precisely what our scores mean. Our method of comparative authentic assessment is still rather rare. To contextualize our work, we need to see if we can gather additional data from other schools and consortia that have pursued similar work. These include Washington State University, which as noted above has a campus-wide initiative for critical-thinking using the classroom as a unit of analysis and the FIPSE-funded Inter-Institutional General Education Assessment Project headed by Columbia College (Chicago, Illinois) that used a simpler rubric and analyzed expository rather than argumentative papers. Since both these project assessed actual student work rather than administered standardized tests, they offer us the opportunity to compare percentile gains.

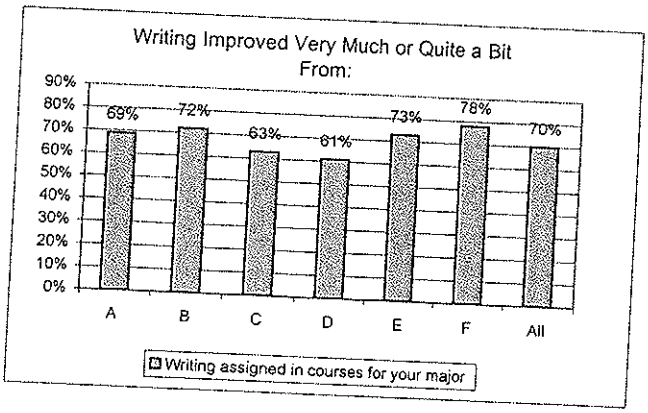
3. The consortium faculty will need to discuss the meaning of the correlations between our faculty's assessment of student work and the ratings of the CLA and NSSE. While there were significant correlations between the faculty rating of student work and two of the NSSE benchmarks, what we can conclude from them is not yet clear. Do the low or negative correlations with the first-year NSSE benchmarks suggest that there are opportunities for improvement at our schools? As for the CLA, there was a lack of any significant correlation with faculty rating of student work. What does this indicate about the value of the CLA or our attempt to assess fundamental skills across institutions? We have invited Mark Chun of the Council for Aid to Education to help us explore our data.

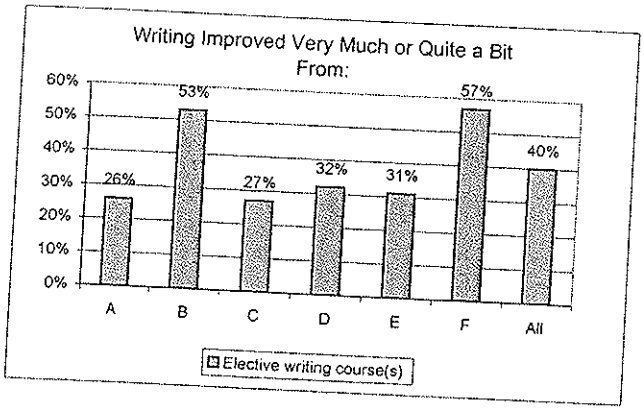
4. The Teagle Consortium schools need to discuss whether we have a true outlier that merits further study. To date our most likely candidate is School F, which is tied for first in writing improvement and is first in gains for critical thinking. We will discuss if School F has scores that are high enough to merit further study. School F has a somewhat puzzling result in that first-year to junior-year gains were an impressive 31 percentiles, but scores dropped from junior to senior year.

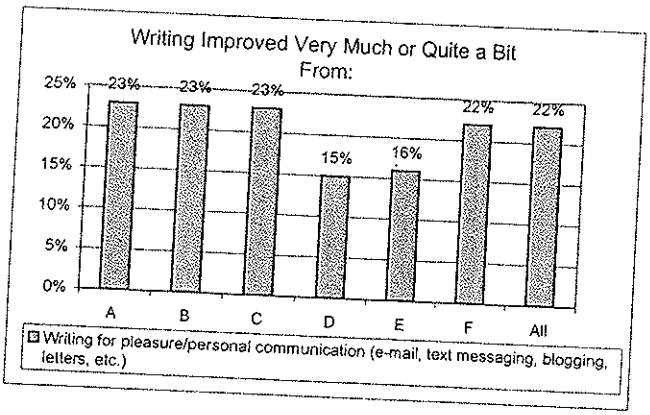
NSSE Supplemental Questions, Spring 2006. Responses from SENIORS

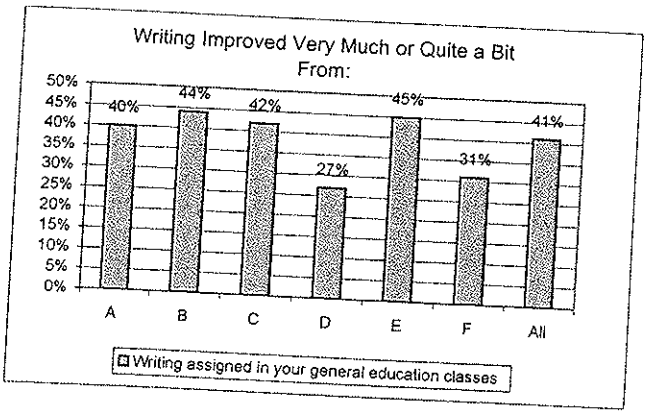
What curricular features lead to writing improvement?

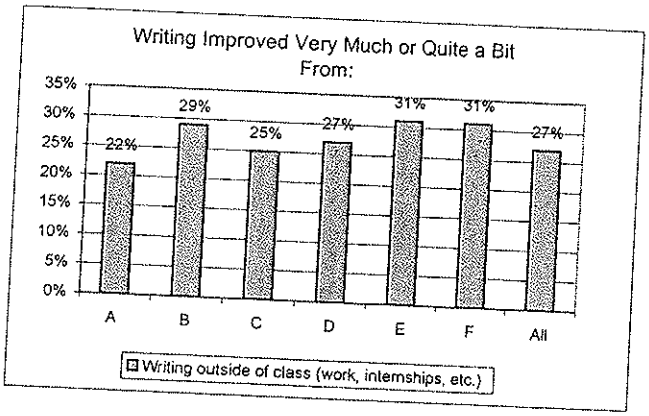




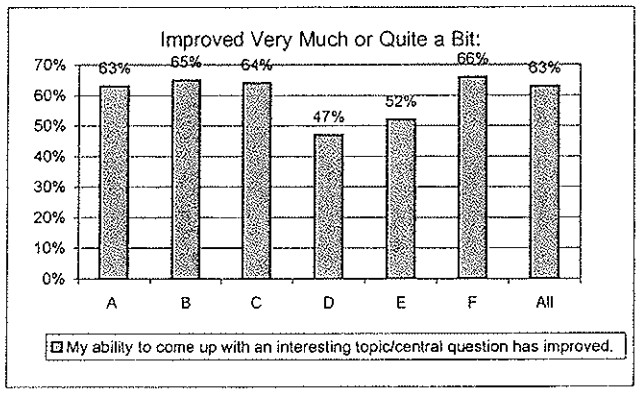


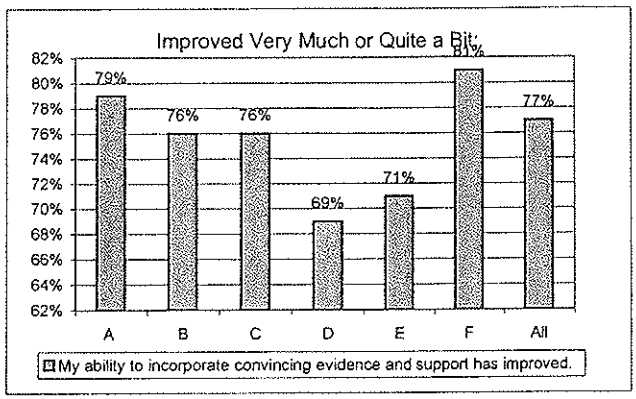


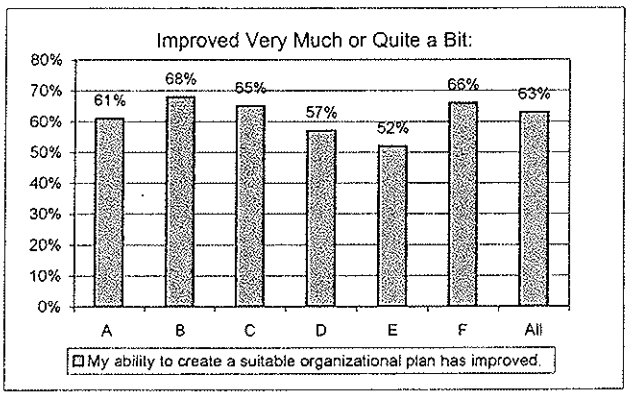


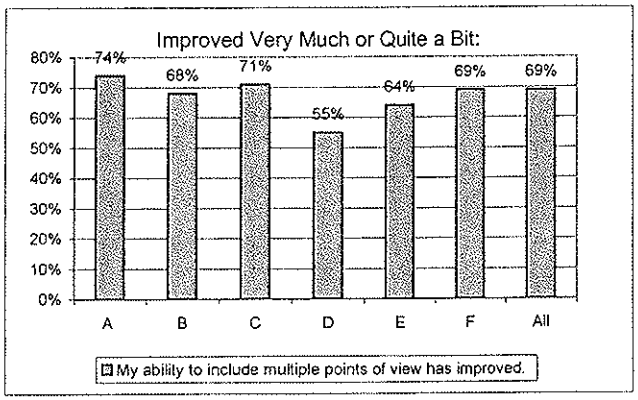


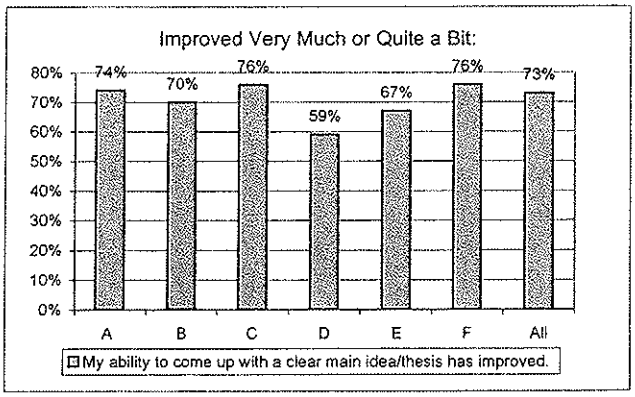
What writing skills improved?

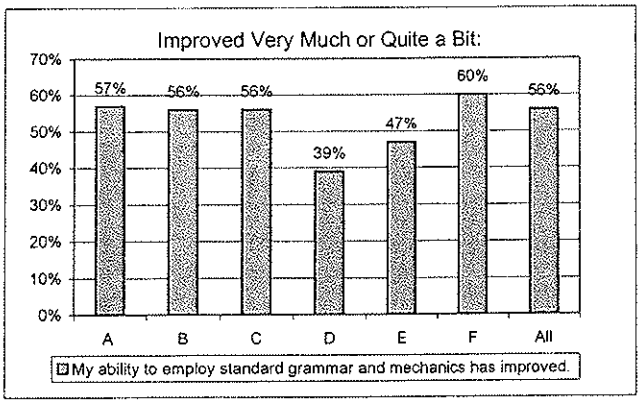


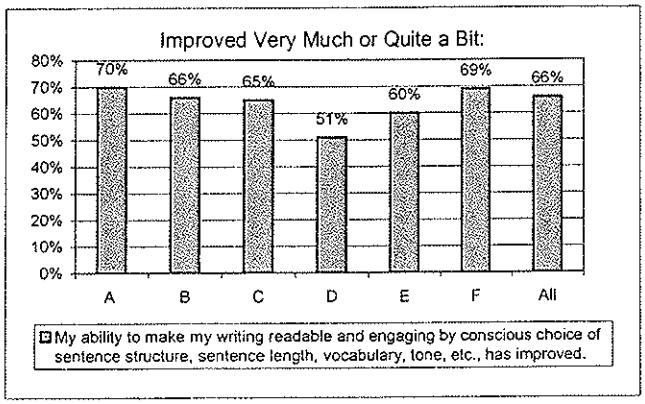




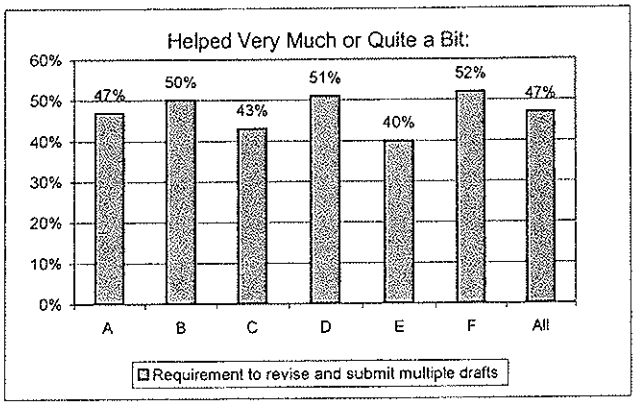


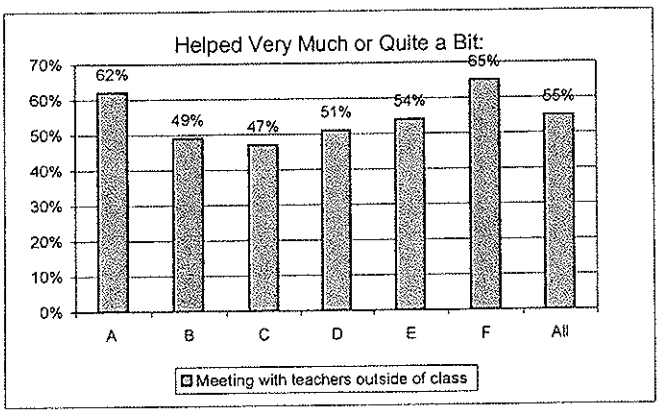


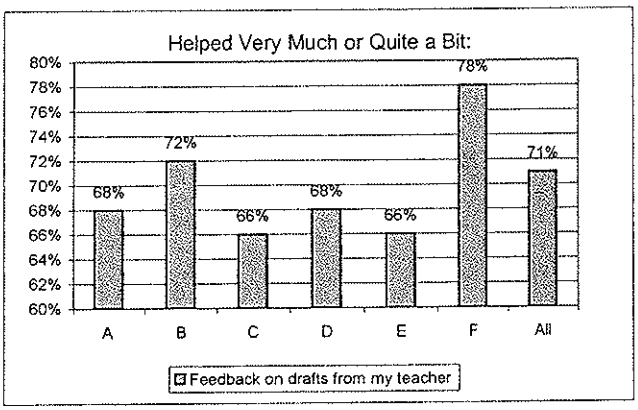


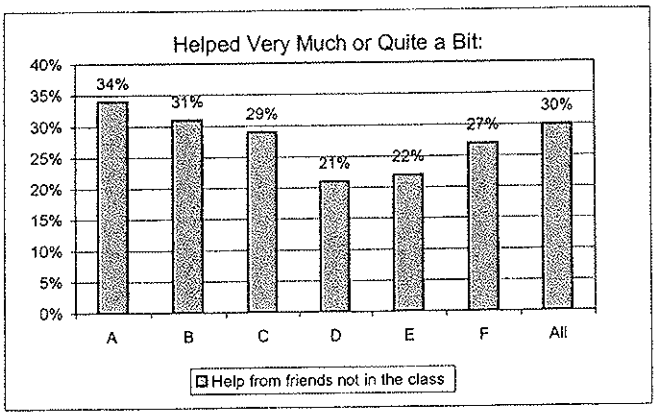


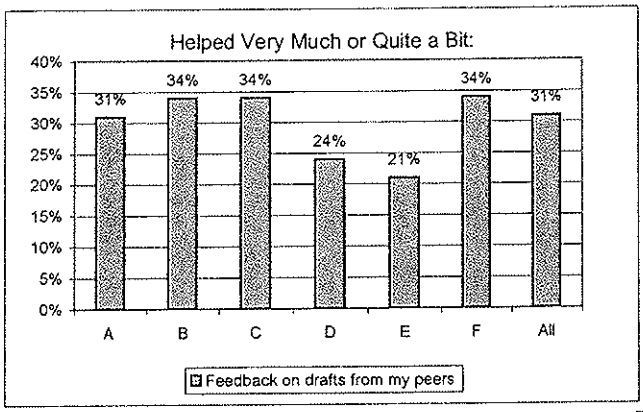
What pedagogical techniques help improve writing?

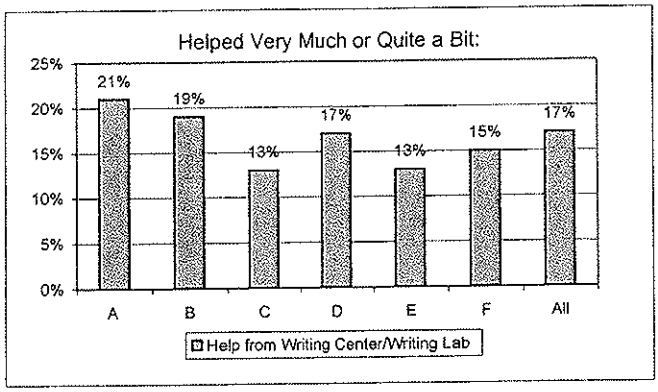


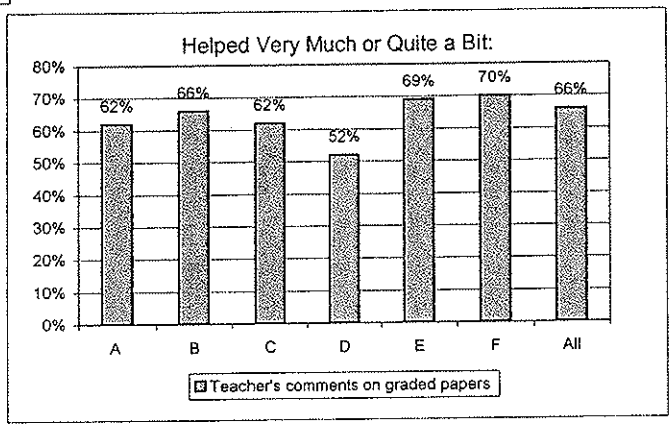






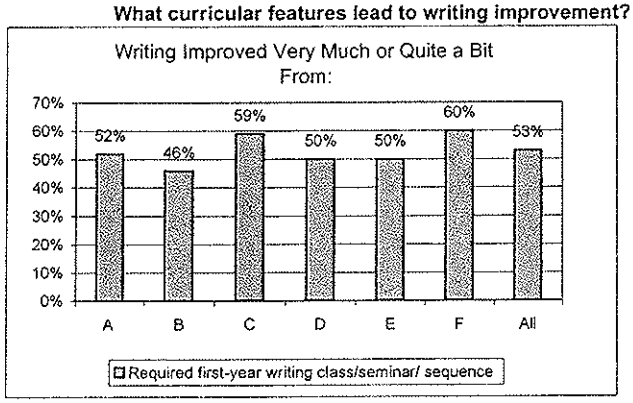


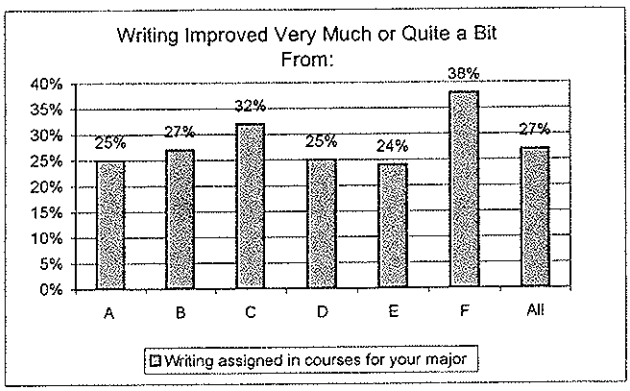


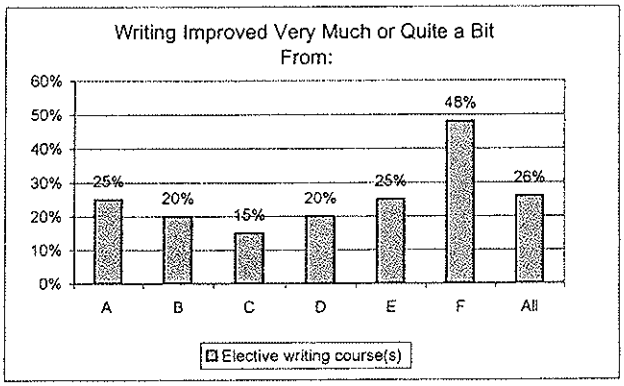


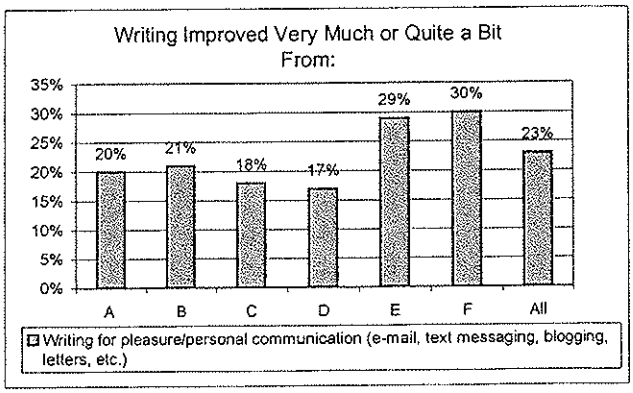
NSSE Supplemental Questions, Spring 2006. Responses from FIRST-YEAR STUDENTS

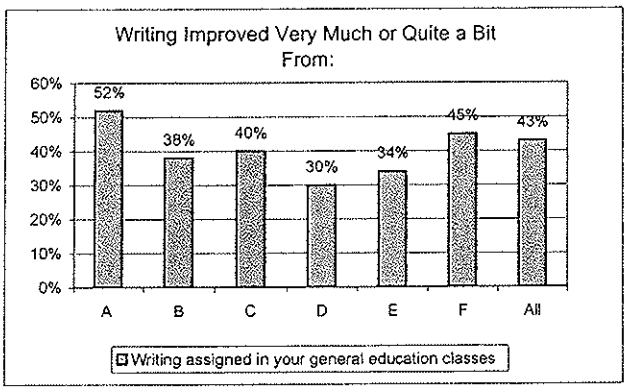
What curricular features lead to writing improvement?

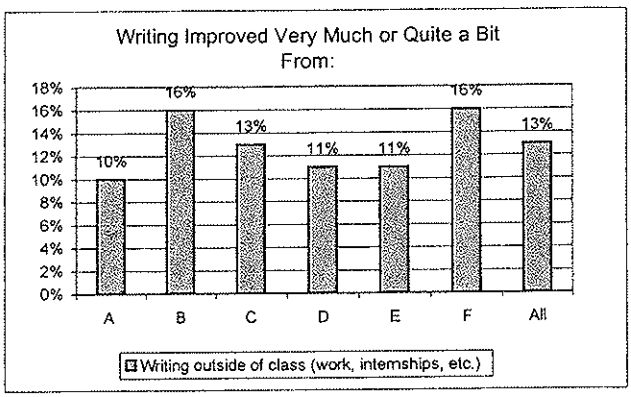












Correlations of CLA and Paper Reading Measures with NSS Benchmarks and NSSE Supplmental Questions		FYJR Writing Pct Growth	CT adj pct FY JRSR level	Analytic Performance Task Diff Score	Analytic Writing Task Diff Score	Make an Argument Diff Score	Critique an Argument Diff Score	Total Score Diff Score
FYJRWritingPctGrowth	Cor.	1.00	0.83	0.44	0.77	0.78	0.65	0.72
	Sig. (2-tld)		0.08	0.38	0.07	0.07	0.17	0.11
	N	6	5	6	6	6	6	6
CTadjpctlevel	Corr.	0.83	1.00	0.21	0.71	0.83	0.57	0.57
	Sig. (2-tld)	0.08		0.74	0.18	0.08	0.32	0.31
	N	5	5	5	5	5	5	5
Performance Task Diff Score	Corr.	0.44	0.21	1.00	0.48	0.46	0.48	0.64
	Sig. (2-tld)	0.38	0.74		0.34	0.36	0.33	0.04
	N	6	5	6	6	6	6	6
Analytic Writing Task Diff Score	Corr.	0.77	0.71	0.48	1.00	0.97	0.94	0.88
	Sig. (2-tld)	0.07	0.18	0.34		0.00	0.01	0.02
	N	6	5	6	6	6	6	6
Make an Argument Diff Score	Corr.	0.78	0.83	0.46	0.97	1.00	0.84	0.85
	Sig. (2-tld)	0.07	0.08	0.36	0.00		0.04	0.03
	N	6	5	6	6	6	6	6
Critique an Argument Diff Score	Corr.	0.65	0.57	0.48	0.94	0.84	1.00	0.85
	Sig. (2-tld)	0.17	0.32	0.33	0.01	0.04		0.03
	N	6	5	6	6	6	6	6
Total Score Diff Score	Corr.	0.72	0.57	0.84	0.88	0.85	0.85	1.00
	Sig. (2-tld)	0.11	0.31	0.04	0.02	0.03	0.03	
	N	6	5	6	6	6	6	6
SR Elective writing course(s)	Corr.	0.32	0.89	0.07	0.34	0.55	0.15	0.26
	Sig. (2-tld)	0.54	0.04	0.90	0.51	0.26	0.77	0.62
	N	6	5	6	6	6	6	6
SR Writing assigned in your general education classes	Corr.	0.64	0.66	-0.12	0.77	0.79	0.60	0.40
	Sig. (2-tld)	0.17	0.23	0.82	0.07	0.06	0.20	0.43
	N	6	5	6	6	6	6	6
SR Writing assigned in courses for your major	Corr.	0.53	0.73	-0.17	0.07	0.23	-0.14	-0.04
	Sig. (2-tld)	0.28	0.16	0.74	0.90	0.66	0.79	0.95
	N	6	5	6	6	6	6	6
SR Writing for pleasure/personal communication (e-mail, text messaging, blogging, le	Corr.	0.46	0.81	0.62	0.51	0.62	0.45	0.68
	Sig. (2-tld)	0.35	0.10	0.18	0.30	0.19	0.38	0.14
	N	6	5	6	6	6	6	6
SR Writing outside of class (work, internships, etc.)	Corr.	0.41	0.32	0.26	-0.04	0.14	-0.32	0.11
	Sig. (2-tld)	0.41	0.60	0.62	0.93	0.79	0.53	0.84
	N	6	5	6	6	6	6	6
SR My ability to come up with an interesting topic/central question has improved.	Corr.	0.64	0.66	-0.39	0.41	0.39	0.30	0.04
	Sig. (2-tld)	0.17	0.23	0.44	0.42	0.44	0.56	0.94
	N	6	5	6	6	6	6	6
SR My ability to create a suitable organizational plan has improved.	Corr.	0.34	0.28	-0.65	0.11	0.10	0.00	-0.29
	Sig. (2-tld)	0.51	0.65	0.16	0.83	0.85	1.00	0.58
	N	6	5	6	6	6	6	6
SR My ability to come up with a clear main idea/thesis has improved.	Corr.	0.32	0.40	-0.70	0.00	0.01	-0.08	-0.37
	Sig. (2-tld)	0.54	0.51	0.12	1.00	0.99	0.89	0.47
	N	6	5	6	6	6	6	6
SR My ability to incorporate convincing evidence and support has improved.	Corr.	0.33	0.42	-0.70	0.12	0.15	-0.01	-0.31
	Sig. (2-tld)	0.53	0.48	0.12	0.82	0.78	0.99	0.56
	N	6	5	6	6	6	6	6
SR My ability to include multiple points of view has improved.	Corr.	0.22	0.47	-0.33	0.53	0.45	0.64	0.17
	Sig. (2-tld)	0.68	0.43	0.53	0.28	0.37	0.17	0.75
	N	6	5	6	6	6	6	6
SR My ability to employ standard grammar and mechanics has improved.	Corr.	0.69	0.94	0.34	0.61	0.78	0.38	0.57
	Sig. (2-tld)	0.13	0.02	0.50	0.20	0.07	0.45	0.23
	N	6	5	6	6	6	6	6
SR My ability to make my writing readable and engaging by conscious choice of sente	Corr.	0.63	0.94	0.13	0.74	0.79	0.70	0.55
	Sig. (2-tld)	0.18	0.02	0.80	0.09	0.06	0.12	0.26
	N	6	5	6	6	6	6	6
SR Requirement to revise and submit multiple drafts	Corr.	0.21	0.74	0.35	0.19	0.38	0.08	0.33
	Sig. (2-tld)	0.69	0.16	0.50	0.71	0.46	0.87	0.52
	N	6	5	6	6	6	6	6
SR Feedback on drafts from my teacher	Corr.	0.27	0.88	0.41	0.49	0.62	0.44	0.55
	Sig. (2-tld)	0.60	0.05	0.42	0.32	0.19	0.39	0.26
	N	6	5	6	6	6	6	6
SR Feedback on drafts from my peers	Corr.	-0.28	-0.17	-0.33	-0.72	-0.54	-0.89	-0.62
	Sig. (2-tld)	0.59	0.78	0.53	0.11	0.27	0.02	0.19
	N	6	5	6	6	6	6	6
SR Meeting with teachers outside of class	Corr.	0.03	0.44	-0.75	-0.05	0.09	-0.20	-0.43
	Sig. (2-tld)	0.96	0.45	0.09	0.93	0.87	0.70	0.40
	N	6	5	6	6	6	6	6
SR Help from friends not in the class	Corr.	0.17	-0.07	0.39	-0.38	-0.34	-0.38	-0.01
	Sig. (2-tld)	0.75	0.91	0.44	0.46	0.51	0.46	0.99
	N	6	5	6	6	6	6	6
SR Help from Writing Center/Writing Lab	Corr.	-0.17	0.27	-0.57	-0.37	-0.15	-0.57	-0.53
	Sig. (2-tld)	0.74	0.66	0.23	0.47	0.77	0.23	0.27
	N	6	5	6	6	6	6	6

Correlations of CLA and Paper Reading Measures with NSS Benchmarks and NSSE Supplmental Questions		FYJR Writing Pct Growth	CT adj pct FY JRSR level	Analytic Performance Task Diff Score	Analytic Writing Task Diff Score	Make an Argument Diff Score	Critique an Argument Diff Score	Total Score Diff Score
SR Teacher's comments on graded papers	Corr.	0.12	0.34	0.54	0.68	0.64	0.74	0.71
	Sig. (2-tld)	0.83	0.57	0.27	0.13	0.17	0.09	0.11
	N	6	5	6	6	6	6	6
LevelofAcademicChallengeFY	Corr.	0.01	-0.28	-0.50	0.10	0.01	0.03	-0.24
	Sig. (2-tld)	0.98	0.65	0.32	0.86	0.99	0.95	0.65
	N	6	5	6	6	6	6	6
LevelofAcademicChallengeSR	Corr.	0.53	0.42	0.00	0.65	0.70	0.41	0.38
	Sig. (2-tld)	0.28	0.48	1.00	0.16	0.12	0.42	0.46
	N	6	5	6	6	6	6	6
ActiveandCollaborativeLearningFY	Corr.	0.79	0.66	0.30	0.82	0.88	0.59	0.65
	Sig. (2-tld)	0.06	0.23	0.57	0.04	0.02	0.22	0.16
	N	6	5	6	6	6	6	6
ActiveandCollaborativeLearningSR	Corr.	0.69	0.60	0.66	0.95	0.94	0.85	0.93
	Sig. (2-tld)	0.13	0.29	0.16	0.00	0.01	0.03	0.01
	N	6	5	6	6	6	6	6
StudentFacultyInteractionFY	Corr.	0.85	0.97	0.38	0.83	0.91	0.68	0.73
	Sig. (2-tld)	0.03	0.01	0.45	0.04	0.01	0.14	0.10
	N	6	5	6	6	6	6	6
StudentFacultyInteractionSR	Corr.	0.43	0.61	0.63	0.81	0.77	0.88	0.85
	Sig. (2-tld)	0.40	0.27	0.18	0.05	0.07	0.02	0.03
	N	6	5	6	6	6	6	6
EnrichingEducationalExperiencesFY	Corr.	-0.13	-0.44	-0.52	-0.20	-0.23	-0.32	-0.44
	Sig. (2-tld)	0.80	0.45	0.29	0.70	0.66	0.53	0.39
	N	6	5	6	6	6	6	6
EnrichingEducationalExperiencesSR	Corr.	0.78	0.69	0.10	0.22	0.29	0.05	0.20
	Sig. (2-tld)	0.06	0.20	0.85	0.67	0.58	0.92	0.70
	N	6	5	6	6	6	6	6
SupportiveCampusEnvironmentFY	Corr.	0.14	-0.57	0.40	-0.17	-0.30	-0.10	0.10
	Sig. (2-tld)	0.79	0.32	0.44	0.74	0.56	0.85	0.85
	N	6	5	6	6	6	6	6
SupportiveCampusEnvironmentSR	Corr.	0.32	-0.41	0.18	0.05	-0.07	0.02	0.11
	Sig. (2-tld)	0.54	0.49	0.73	0.93	0.89	0.96	0.84
	N	6	5	6	6	6	6	6