

## Appalachian State University

### Analyses of Writing Scores – 97 Cohort as Sophomores

**Abstract:** Three pilot assessment projects evaluated Appalachian sophomore writing skills and allowed comparison of essay and objective test formats. In addition, data collected recorded self-reported frequency of specific writing activities (e.g. use of a dictionary and writing rough drafts) and academic performance data from student transcripts.

Methods used were:

1. A cross sectional measure of writing which compared 162 Sophomore essays scored on Appalachian's placement/assessment rubric with similarly scored essays from freshmen.
2. A repeated measures study of 100 students who completed the CAAP – Writing assessment (an objective test of writing/editing skills) as new freshmen and again as sophomores.
3. A measure of writing skill using CAAP – scored essays from 161 sophomores for comparison with locally scored placement essays.
4. A measure of current behaviors and experiences collected with the CSEQ from pilot study students and other sophomores.
5. Analysis of English 1000 grades and selected demographic data.

Both the cross sectional and repeated measure study show that sophomores write better than freshmen. Sophomore self-evaluations additionally confirm this finding, showing that nearly 60% thought their writing ability had improved "very much" or "quite a bit" while at Appalachian. The combination of essay assessment, objective test assessment, and self-reported gains provide multiple measure of writing and is consistent with good practices in outcomes assessment.

Gains in writing were associated with individual behaviors (consciously and systematically thinking about grammar, structure, word choice, etc.) and completion of "W" (writing intensive) courses. Gain scores, limited to measures from the objective test, showed that the weakest writing students at the point of entry made the largest gains by the sophomore year. Essay scores showed that females were better writers both as freshmen and sophomores.

A comparison of writing assessment scores produced by Appalachian faculty, using a locally developed rubric, and those produced by the American College Testing (ACT) assessment program found the two scoring methods produced similar mean scores – further validating Appalachian's long standing practice of using internal assessment measures.

These pilot study results will be expanded and checked by the full study of writing skills which began with the 1998 entering class and will continue across their years at Appalachian.

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#### Methods:

During Spring 1999 Focus Day, 162 students completed essays which were scored by Appalachian faculty using a placement/assessment rubric. That day 161 other students completed two short essays from the American College Testing (ACT) Collegiate Assessment of Academic Proficiency (CAAP) writing assessment test. ACT scores each CAAP essay on a 1-6 scale. In this comparison a CAAP composite score was created by adding the two CAAP essay scores together. Both the CAAP composite and ASU scores were based on a 2 – 12 point scale with high scores showing greater writing proficiency.

An additional 100 students completed the ACT – CAAP writing test (objective format) both as freshmen and again as second semester sophomores. This method provided pretest, posttest, and gain scores.

All sophomores, including those in the pilot studies, completed the College Student Experiences Questionnaire (CSEQ). One section focused on frequency of selected writing behaviors and recorded self-perceived gain in writing ability.

## Research Question: How do freshman writing scores compare to sophomore scores?

### 1. Cross Sectional Approach:

Because the expanded placement/assessment rubric was developed after the 97Cohort entered Appalachian, there was not an equivalent pretest available for direct comparison of essay-based assessments. In 1998, however, essays from all entering freshmen were scored on an equivalent rubric so a cross-sectional comparison of freshmen to sophomores can be made.

A one-way analysis of variance ( $F_{1,2374} = 21.61, p = .000$ ) showed that the mean essay score from sophomores (mean = 7.11) is significantly higher than for freshmen (mean = 6.57).

### 2. Repeated Measure Approach:

During 1997 summer orientation, 196 entering freshmen completed the CAAP Writing Assessment Instrument (an objective-format test of writing knowledge and editing skills). On the 1999 Spring Focus Day, 100 of those students completed the CAAP Writing Assessment Instrument for the second time as part of a repeated measure design. This format allowed for analyses of gain scores.

Sophomores scored higher than freshmen with mean scores of 63.3 compared to 62.1. The difference is statistically significant as evaluated by the Wilcoxon Signed Ranks test ( $Z = 3.58, p = .000$ ) which showed gains for 61%, no change for 11%, and declines for 28%.

### 3. Self-reported Gain in Writing:

On the CSEQ, students reported how much their writing skills had improved while at college. Nearly 60% thought their writing skills had improved "quite a bit" or "very much". Females rated their gains more positively than males.

CSEQ Question	Very Little	Some	Quite A Bit	Very Much
In thinking over your experiences in college up to now, to what extent do you feel you have gained or made progress in each of the following respects?				
. . . Writing clearly and effectively	5.9	35.6	42.8	15.7

## Research Question: How frequently do students participate in selected writing behaviors?

The College Student Experiences Questionnaire was given to 1,470 students in the second semester of the sophomore year. Ten questions dealt with writing behaviors. As shown in the chart below a majority of students reported using a variety of writing skills "often" or "very often". Seeking help from an instructor and submitting a paper for publication were reported as less frequent behaviors.

Response Items	Never	Occasionally	Often	Very Often
Used a dictionary or thesaurus to look up the proper meaning of words	3.7	35.9	38.7	21.7

Consciously and systematically thought about grammar, sentence structure, paragraphs, word choice, and sequence of ideas or points as you were writing	3.2	26.9	42.0	27.9
Wrote a rough draft of a paper or essay and then revised it your self before handing it in	4.0	23.4	40.6	32.0
Spent at least five hours or more writing a paper (not counting time spent in reading or at the library)	8.7	36.7	32.0	22.7
Asked other people to read something you wrote to see if it was clear to them.	6.0	34.3	37.3	22.4
Referred to a book or manual about style of writing, grammar, etc.	8.5	38.0	36.6	16.9
Revised a paper or composition two or more times before you were satisfied with it	13.0	39.9	32.1	15.0
Asked an instructor for advice and help to improve your writing	14.7	45.9	28.3	11.1
Made an appointment to talk with an instructor who had criticized a paper you had written	33.0	39.3	19.1	8.5
Submitted for publication an article, story, or other composition you had written	81.7	11.5	4.7	2.1

### Research Question: Does frequent use of behaviors supportive of writing lead to higher assessment scores?

Results of a step regression analysis found that only "consciously and systematically thought about grammar, sentence structure, paragraphs, word choice, and sequence of ideas or points as you were writing" was correlated with higher scores on the sophomore essay ( $r = .15$ ,  $p = .009$ ). The list of writing support behaviors covered on the CSEQ mostly contained behaviors which were not allowed during the assessment testing situation, so it is not clear if other strategies for timed, independent writing were used.

### Research Question: What is the correlation between writing assessment scores and English 1000 grades?

All three assessment instruments were positively correlated with ENG 1000 grades. The CAAP- Writing instrument (objective test) most correlated with ENG 1000 grades ( $r = .35$ ,  $p = .000$ ), followed by the ASU Essay test ( $r = .34$ ,  $p = .000$ ) and the CAAP Essay test ( $r = .22$ ,  $p = .006$ ). These findings show that assessment scores and grades overlap between 5% and 12%, providing evidence that the variety of measures provide unique information about writing skills.

### Research Question: What is the relationship between writing assessment scores and number of "W" (writing intensive) courses completed?

The 323 students who completed either the ASU or CAAP essay exams had earned an average of 4.25 "W" designators. Regression analysis showed a small positive relationship between number of completed writing intensive courses and scores on assessment essays ( $r = .14$ ,  $t_{(321)} = 2.48$ ,  $p = .014$ ). While the relationship is statistically significant, the number of "W's" earned accounted for only 2% of the variance in essay scores.

Number of "W" courses completed had a low correlation to gain in writing skills as measured by the CAAP – Writing (objective) test. Entering CAAP Writing scores were negatively correlated with sophomore gain scores ( $r = -.26$ ,  $p = .004$ ) and was significant in explaining about 11% of the variance in gain scores. This finding showed that students with lower freshman scores had the largest net gain in writing skills.

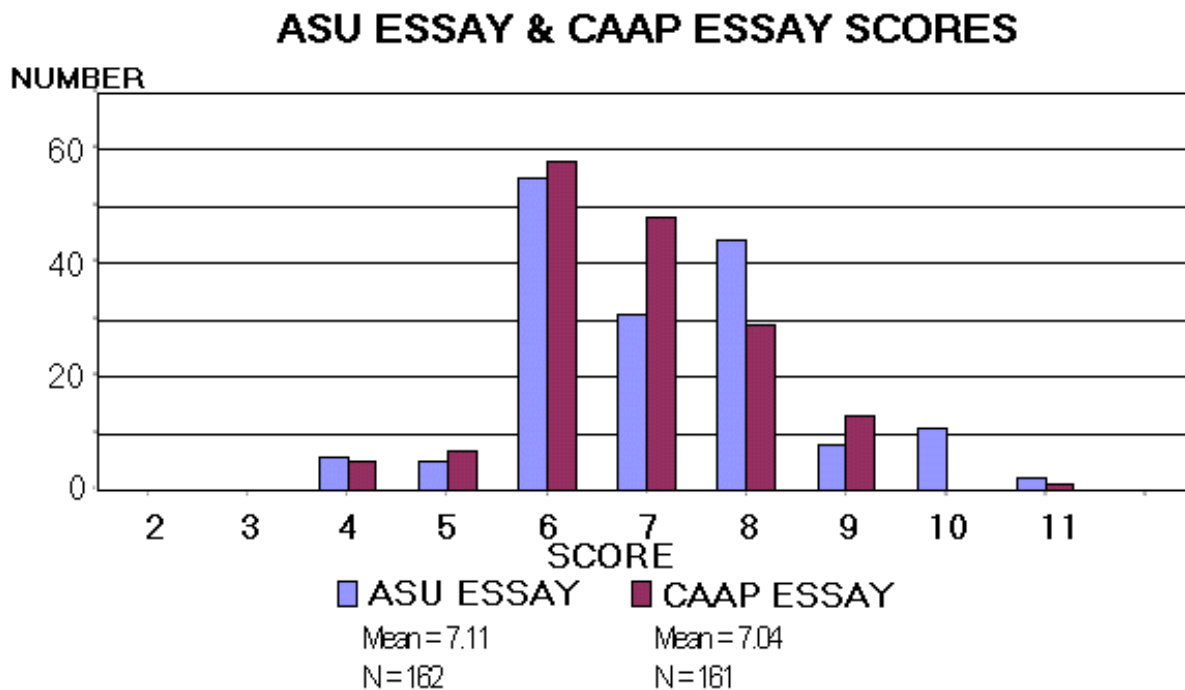
### Research Question: Are gender differences found in writing outcome measures?

No gender differences were found in CAAP – Writing (objective) test scores. Differences were found in both the ASU essay test ( $F_{1,157} = 7.78$ ,  $p = .006$ ) and the CAAP essay test ( $F_{1,159} = 9.47$ ,  $p = .002$ ) scores. Females received higher assessment scores than males on both essay tests. Differences in assessment outcomes are similar to variances in ENG 1000 grades by gender: The mean male ENG 1000 grades for this sample population was 2.97 and for females the mean was 3.15 ( $F_{1,345} = 6.58$ ,  $p = .01$ ).

Females self-reported greater gains in their writing abilities on the CSEQ ( $F_{1,412} = 5.82$ ,  $p = .02$ ). On the CAAP objective test, the only pre-post data available, no significant difference was found in gain scores by gender.

### Research Question: How do CAAP scores compare to scores from ASU's placement/assessment rubric?

As shown in the chart below, the two scoring methods produced similar results with the mean for the ASU-Essay at 7.11 and the CAAP-Essay at 7.04. The variance in scores was evaluated with a Kruskal-Wallis independent samples test for nonparametric data and found to be non-significant.



Assessment Report

Date: May 4, 1999

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