General Education Assessment Report

Vincennes University

2014-2015

Office of Institutional Effectiveness & Assessment

Critical Thinking Assessment

A critical thinking survey was administered to faculty teaching courses with a CT outcome and a separate survey was given to students in these courses in the spring of 2015. The surveys were taken online and the results aggregated by the Office of Institutional Research. The faculty survey addressed issues pertaining to student achievement of the CT outcome, the demonstration of the outcome in the classroom, the effects of assignment design on its demonstration, and the challenges of CT instruction. The student survey asked students to indicate their level of interest in the work, their confidence completing the work, and the frequency of high-impact practices associated with successful demonstration of critical thinking. Students were also asked to indicate the total time expended during the critical thinking work, from the research phase to finalizing their written work. A final open-ended question asked students to indicate what they felt was valuable in the work, what was most difficult for them, and to indicate how classroom activities and instruction improved their critical thinking abilities.

Student CT Survey Results:

Respondents by College (N = 737)	
College of Science, Engineering & Mathematics	105
College of Humanities	201
College of Social Sciences & Performing Arts	364
College of Health Sciences & Human Performance	67

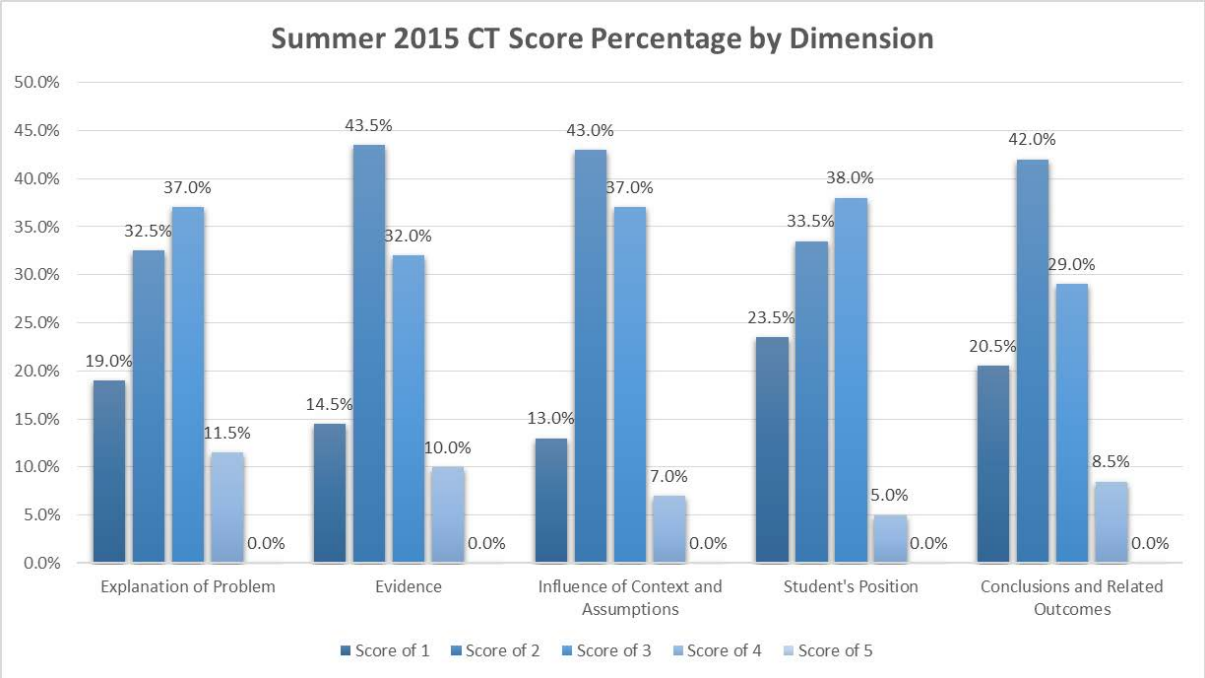
OUTCOME: Apply Critical Thinking to Ill-Defined Problems
Project A: Critical Thinking Student Survey Responses in Liberal Education Courses
Success Standard: At least 70% of students will "agree" or "strongly agree" each survey question.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response
The expectations of the critical thinking assignment were clearly presented.	53.9%	32.8%	9.6%	2.3%	1.2%	0.1%
I was interested in the topic for my critical thinking assignment.	39.6%	33.1%	16.8%	5.3%	3.3%	1.9%
I had to do research to complete my critical thinking assignment	55.9%	32.2%	8.3%	1.4%	1.1%	1.2%
I presented multiple reasons for my position.	42.3%	39.8%	13.4%	0.8%	0.8%	2.8%
As part of my assignment, I identified the consequences or implications of my position.	38.7%	42.2%	15.3%	1.9%	0.9%	0.9%
The instruction offered on the critical thinking assignment helped me better understand the elements of critical thinking.	42.2%	33.5%	16.7%	3.7%	3.5%	0.4%
The instruction offered on the critical thinking assignment helped me feel confident that I could successfully complete the assignment.	46.7%	30.4%	16.0%	3.5%	2.7%	0.7%
Doing a rough draft is important for completing this assignment well.	36.5%	32.3%	21.6%	6.1%	2.7%	0.8%

The high rate of affirmative responses that "agree" or "strongly agree" with the statements suggests the majority of students understand the requirements of the critical thinking assignments, and students are engaged in high-impact practices associated with it including research-based writing, the analysis of varied positions, and composing multiple drafts. While the majority of responses for every question are affirmative at a rate of approx. 75-85%, the questions pertaining to student interest and the completion of rough drafts evince slightly lower rates of affirmative responses at 72.7% and 68.8% respectively. The question of whether the completion of a draft is important for completing the CT work was the only question in the survey that did not meet the standard.

OUTCOME: Apply Critical Thinking to Ill-Defined Problems
Project B: Critical Thinking Essays in Liberal Education Courses
Success Standard 1: 60% of students will achieve at least a score of "3" in each dimension
N = 200

In the summer of 2015 four groups of assessors, comprised of twelve faculty members and two deans, assessed 200 written student artifacts using the AAC&U VALUE rubric for critical thinking. The student critical thinking artifacts were randomly sampled from liberal education courses across the curriculum containing a critical thinking outcome. The rubric measures student achievement in five dimensions: explanation of the problem; evidence; influence of contexts and assumptions; student position; and conclusions and related outcomes on a 1-4 scale: Benchmark (1), Milestones (2-3), and Capstone (4). Each assessment group member received the same 50 student artifacts and were asked to derive consensus group scores for each artifact in each dimension of the rubric. After completing the assessments, the assessors were asked to respond to an open-ended qualitative survey that asked for their feedback and observations of the assessment process, the student work, and any trends or patterns observed during the assessment process. The results of the assessment illustrate the majority of students score in the Milestone range on the rubric with the greatest proportion of higher scores going to Student's Position although this dimension also had the highest ratio of low scores across the assessed artifacts as well.



The standard was not met in each of the CT dimensions with the percentage of students achieving a score of "3" or higher in each dimension as follows:

Explanation of the Problem:	48.5%
Evidence:	42%
Influence of Contexts and Assumptions:	44%
Student's Position:	43%
Conclusions and Related Outcomes:	37.5%

In the dimensions of Explanation of the Problem, Student's Position, and Conclusions and Related Outcomes students had the highest preponderance of low scores with approximately 20% of students scoring a "1". Two of these assessed dimensions, Explanation of the Problem and Student's Position, demonstrate a higher percentage of students scoring a "3" than "1" or "2" and Explanation has the highest percentage of students scoring a "4" while Position has the lowest. Faculty awarded no scores of "5" in any dimension. This suggests the rubric may merit some review for content and application of to ensure it reflects appropriate levels of success that are applied appropriately. A revision of the rubric may also prompt a review of the standard for this project. Faculty assessors were surveyed upon

completion of the summer assessment process and asked to identify strengths and weakness within student work and within the assessment process:

Faculty responses from first-time reviewers:

- Effective process: trio process valuable, worthwhile use of time/worthwhile professional development activity
- Valuable for all UCC faculty, especially valuable to faculty new to VU
- Rubric needs some revision: often adjacent categories seemed redundant
- Rubric generally effective
- Having groups of three from different areas has value, but groups who represented the same discipline could learn a lot from each other, too
- As teacher, useful to see lots of ways to approach CT with our students
- Next step: invite faculty to bring their own assignments to CT workshop during the school year and work with reps who have done CT assessment
- Blackboard Collaborate works well with the Trio model

Faculty responses from veteran reviewers:

- Rubric could be tightened, some detail could enhance the various "ways of knowing" as rubric is a) presented to students and b) used for assessment
- Faculty input on tightening the rubric would lead to more faculty ownership
- Rubric has value for interdisciplinary thinking
- Better quality assignments from faculty than last year
- Better quality writing from students than last year
- Some issues persist: students have a hard time with "evidence," what is evidence and how to include evidence effectively
- Problems that are "ill-defined" seem unclear to both students and faculty; hence, ineffective assignments and little evidence of critical thinking
- Good assignments will yield better thinking: another reason faculty need more opportunities to share assignments/assignment building

Deans' input, beyond notes above:

- Process very effective for educating UCC faculty about expectations across disciplines
- Students need CT skills in all majors; it is disservice **not** to focus on CT skills at college level
- CT skills can be demonstrated beyond traditional papers; value in diverse activities
- Creative approaches to CT help faculty better understand how to teach this important skill.
- Lots of CT definitions: VU should identify our definition for CT.

Toward a CT Library for VU Faculty Use

- Archive of Effective Assignments
- Faculty hand-outs to help students with some principles of CT

- Rubric described in more narrative detail to complement the one-page version
- VU's definition of CT and a Glossary of Terms and Critical Thinking FAQs. For example, what is a claim? How can a student take a position other than pro/con?
- Faculty CT task force to advise on this online CT library

Project C: Critical Thinking Faculty Survey Responses in Liberal Education Courses

The Faculty Survey of Critical Thinking ask faculty to indicate their range of agreement to questions pertaining to critical thinking work by students in the classroom. Only seven faculty members took the survey, but they generally indicated agreement with most questions though almost 15-30% indicated they were neutral for every questions besides the question pertaining to directions:

	Total Responses	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Students seemed to understand my directions for the critical thinking assignment.	7	0	6	0	1	0
% of total responses		0.00%	85.71%	0.00%	14.29%	0.00%
Students seemed to be interested in the critical thinking topic(s) I assigned.	7	1	4	2	0	0
% of total responses		14.29%	57.14%	28.57%	0.00%	0.00%
Students did a sufficient amount of research needed to complete the assignment successfully.	7	0	4	2	0	1
% of total responses		0.00%	57.14%	28.57%	0.00%	14.29%
Students successfully considered multiple perspectives as a part of this assignment.	7	0	4	2	0	1
% of total responses		0.00%	57.14%	28.57%	0.00%	14.29%
Students successfully presented multiple reasons for their positions.	7	0	3	2	1	1
% of total responses		0.00%	42.86%	28.57%	14.29%	14.29%
My classroom presentation was sufficient for student success.	7	1	5	1	0	0
% of total responses		14.29%	71.43%	14.29%	0.00%	0.00%
Classroom discussion of the critical thinking assignment is essential for student success.	7	4	2	1	0	0
% of total responses		57.14%	28.57%	14.29%	0.00%	0.00%
My students completed more than one critical thinking assignment this semester.	7	4	1	2	0	0
% of total responses		57.14%	14.29%	28.57%	0.00%	0.00%

Other General Education Assessment

a. Speaking

OUTCOME: Demonstrate articulate, confident expression through oral and written communication.
Project A: COMM 143 – Informative Presentation Common Rubric
Success Standard 1: 70% of students will achieve a grade of 70% or better on each speech
Success Standard 2: 70% of students will improve their grade from the 1st to the 2nd speech
Sample Size: 336

Fall 2014												
Section	**# First Informative Speakers**	**Mean Grade**	**Deviation from Mean**	**Scored 70% or Higher**		**# Second Informative Speakers**	**Mean Grade**	**Deviation from Mean**	**70% or Higher**		**Improved 1st to 2nd**	
				#	**%**				**#**	**%**	**#**	**%**
143-001	20	83.5%	2.3	17	85.0%	20	70.6%	(10.2)	13	65.0%	7	35.0%
143-002	22	84.6%	3.4	19	86.4%	20	81.0%	0.2	20	100%	8	40.0%
143-003	22	78.8%	(2.4)	20	91.0%	22	72.0%	(8.8)	14	63.6%	8	36.3%
143-005	21	81.8%	0.6	17	81.8%	18	79.8%	(1.0)	11	61.1%	3	16.6%
143-006	12	89.4%	8.2	12	100%	12	91.0%	10.2	12	100%	3	25.0%
143-007	19	79.5%	(1.7)	16	84.2%	17	80.2%	(0.6)	14	82.3%	8	47.0%
143-008	17	77.0%	(4.2)	17	100%	15	82.3%	1.5	13	86.7%	6	50.0%
143-009	19	84.8%	3.6	18	94.7%	19	83.4%	2.6	15	78.9%	8	42.0%
143-010	17	81.7%	0.5	16	94.0%	17	80.8%	0.0	16	94.0%	5	29.0%
143-012	17	78.9%	(2.3)	16	94.0%	15	80.6%	(0.2)	13	86.6%	7	46.6%
143-013	20	77.9%	(3.3)	16	80.0%	19	73.9%	(6.9)	14	73.7%	6	31.5%
143-014	18	82.3%	1.1	15	83.3%	18	86.5%	5.7	17	94.4%	11	61.1%
143-016	23	75.8%	(5.4)	17	73.9%	21	74.0%	(6.8)	13	61.9%	6	28.6%
143-017	17	85.5%	4.3	17	100%	15	88.4%	7.6	15	100%	9	60.0%
143-018	21	73.0%	(8.2)	14	66.7%	19	75.9%	(4.9)	14	73.7%	12	63.2%
143-019	21	83.7%	2.5	18	85.7%	21	82.9%	2.1	20	95.2%	10	48.0%
143-020	19	79.6%	(1.6)	18	94.0%	16	75.1%	(5.7)	10	62.0%	6	37.0%
143-022	20	79.8%	(1.4)	19	95.0%	19	74.3%	(6.5)	14	73.0%	3	15.0%
143-023	15	84.3%	3.1	15	100%	17	74.9%	(5.9)	15	88.2%	6	46.2%
143-024	21	81.6%	(0.4)	20	95.2%	20	83.0%	2.2	20	100%	7	35.0%
143-RIV	14	88.5%	7.3	14	100%	14	84.3%	3.5	14	100%	2	14.3%
TOTAL	**395**	**81.2%**		**351**	**88.9%**	**374**	**80.8%**		**307**	**82.1%**	**141**	**37.8%**
TARGET		**70.0%**		**277**	**70.0%**		**70.0%**		**262**	**70.0%**	**262**	**70.0%**
GAP (–)		**11.2%**		**74**	**18.9%**		**10.8%**		**45**	**12.1%**	**(121)**	**(32.2%)**
Spr-2015												
Section	**# First Informative Speakers**	**Mean Grade**	**Deviation from Mean**	**Scored 70% or Higher**		**# Second Informative Speakers**	**Mean Grade**	**Deviation from Mean**	**Scored 70% or higher**		**Improved 1st to 2nd**	
				#	**%**				**#**	**%**	**#**	**%**
143-001	17	72.5	(4.9)	12	70.6%	8	66.9%	(8.4)	3	37.5%	2	25.0%
143-002	16	80.7	3.3	14	87.5%	16	77.3%	2.0	12	75.0%	7	43.8%
143-003	19	75.7	(1.7)	10	52.6%	16	76.2%	0.9	10	62.5%	8	50.0%
143-005	16	78.5	1.1	16	100.0%	16	75.1%	(0.2)	12	75.0%	4	25.0%
143-007	19	76.1	(1.3)	14	73.0%	17	74.7%	(0.6)	10	58.8%	6	37.0%
143-008	13	72.0	(5.4)	8	61.0%	9	67.5%	(7.8)	3	33.3%	0	00.0%
143-009	17	80.4	3.0	13	76.5%	17	75.1%	(0.2)	4	23.5%	13	35.3%
143-010	23	85.4	8.0	21	91.3%	23	87.0%	1.7	21	91.3%	13	56.5%
143-012	22	78.0	0.6	19	86.4%	20	72.0%	(3.3)	16	75.0%	6	30.0%
143-013	21	78.3	0.9	17	81.0%	18	70.9%	(4.4)	10	55.5%	4	23.0%
143-014	16	81.0	3.6	15	93.8%	14	74.0%	(1.3)	10	71.4%	2	13.6%
143-016	20	70.6	(6.8)	9	45.0%	20	73.0%	(2.3)	14	70.0%	13	65.0%
143-017	23	64.6	(12.8)	9	69.6%	20	70.5%	(4.8)	16	80.0%	10	50.0%

143-018	12	76.6	(0.8)	7	58.0%	13	77.1%	1.8	10	76.0%	6	50.0%
143-019	21	82.0	4.6	17	80.9%	21	79.7%	4.4	16	76.2%	10	47.6%
143-020	20	83.2	5.8	19	95.0%	20	77.4%	2.1	16	80.0%	4	20.0%
143-021	19	77.7	0.3	16	84.0%	19	77.8%	2.5	14	73.0%	7	41.0%
143-022	22	79.7	2.3	21	95.5%	20	72.0%	(3.3)	15	75.0%	9	45.0%
TOTAL	**336**	**77.4%**		**257**	**76.5%**	**307**	**75.3%**		**212**	**69.1%**	**124**	**40.4%**
TARGET		**70.0%**		**235**	**70.0%**		**70.0%**		**215**	**70.0%**	**215**	**70.0%**
GAP (–)		**+7.4%**		**+22**	**+6.5%**		**+5.3%**		**(3)**	**00.9%**	**(91)**	**(29.6%)**

Project B: COMM 143 – Speech Component Effectiveness Analysis – Introductions
Success Standard: At least 60% of randomly selected students will demonstrate improvement in speech introductions from Informative Speech #1 to the Final Persuasive Speech.
Sample Size: 59

PART 1

Overall Results: 0-12 (0 = no introduction, 4 = poor, 8 = acceptable, 12 = all components well done)

FALL 2014

Number of Participants who completed all speeches	Average score on Speech #1 (0-12)	Average score on speech #3 (0-12)	Number improved from #1 to #3	Improvement from #1 to #3 on 0-12 point scale	Percent who improved from #1 to #3	Target (Goal) improvement Percentage from #1 to #3
44	6.842	8.159	30	1.317 points	68.2%	60.0%

SPRING 2015

Number of Participants who completed all speeches	Average score on Speech #1 (0-12)	Average score on speech #3 (0-12)	Number improved from #1 to #3	Improvement from #1 to #3 on 0-12 point scale	Percent who improved from #1 to #3	Target (Goal) improvement Percentage from #1 to #3
59	6.795	7.305	28	0.559 points	47.5%	60.0%

FALL 2014 TO SPRING 2015 DIFFERENCE

Number of Participants who completed all speeches	Average score on Speech #1 (0-12)	Average score on speech #3 (0-12)	Number improved from #1 to #3	Improvement from #1 to #3 on 0-12 point scale	Percent who improved from #1 to #3	
+15	+0.047	-0.854	-2	-0.758 points	-10.7%	

PART 2
Four Introduction Component Results: 0-3 (0=not included, 1=poor, 2=acceptable, 3=well done)
FALL 2014

	Avg. Score Speech #1 (0-3)	Avg. Score Speech #3 (0-3)	Point Improvement	Percent Improvement	# improved: speech #1 to speech #3	Percent who improved: speech #1 to speech #3
Component #1 (Attention)	1.705	2.523	+.818	+49.0%	31 of 44	70.5%
Component #2 (Central Idea)	2.182	2.318	+.136	+6.2%	22 of 44	50.0%
Component #3 (Credibility)	1.682	1.886	+.204	+12.1%	19 of 44	43.2%
Component #4 (Preview)	1.273	1.432	+.159	+12.5%	17 of 44	38.6%
Overall	6.842	8.159	1.317	+19.5%	14 of 44 Improved on all components	31.8% Improved on all four components

SPRING 2015

	Avg. Score Speech #1 (0-3)	Avg. Score Speech #3 (0-3)	Point Improvement	Percent Improvement	# improved: speech #1 to speech #3	Percent who improved: speech #1 to speech #3
Component #1 (Attention)	1.694	2.034	+.390	+23.01%	28 of 59	47.5%
Component #2 (Central Idea)	2.288	2.315	+.027	+01.18%	16 of 59	27.1%
Component #3 (Credibility)	1.627	1.746	+.119	+07.31%	19 of 59	32.2%
Component #4 (Preview)	1.186	1.210	+.024	+02.02%	12 of 59	20.3%
Overall	6.795	7.305	0.560	+08.38%	7 of 59 Improved on all components	11.9% Improved on all four components

Outcome 1: Demonstrate articulate, confident expression through oral and written communication.

Project A: Informative Presentation Common Rubric

Success Standard: 1) at least 70% of all students will achieve an overall grade of at least 70% on the presentation measured with the rubric; 2) at least 70% of all students will improve their grade from the first to the second informative presentation.

76.5% of all students achieved a grade of 70% or better on informative speech #1, while 69.1% of all students achieved a grade of 70% or better on informative speech #2. For both speeches, the number and percentage of students exceeding the standard of 70% was significant, with a mean grade of 77.4% on informative speech #1 and a mean grade of 75.3% on informative speech #2.

The number of students scoring at 70% or higher actually went down (from 77.4% to 75.3%) from informative speech #1 to informative speech #2. Only 40.4% of all students improved their grade by at least 1% from informative speech #1 to informative speech #2. Additionally, the mean grade dropped from 77.4% to 75.3% from the first to the second speech. This is a negative trend which merits additional analysis.

The students consistently improved their scores from the first to the third speech evincing growth in each of the four speech components—gaining attention, the central idea, establishing credibility, and providing a preview of the main points. Despite consistent growth within each semester, the comparison of results across the academic year demonstrates a decline in improvement in the spring semester compared to the fall in the overall scores as well as each speech component. However, despite less robust improvement in the spring, students improved from the first speech to the third in each assessed component.

Project B: Speech Component Effectiveness Analysis

Success Standard: At least 60% (3 of 5 students assessed in each section) will demonstrate improvement from the Informative Speech #1 to the final Persuasive Speech. Instructors will measure success in each of four criteria for an effective speech introduction – 1) Gain Attention, 2) Clear Central Idea, 3) Establish Credibility, and 4) Preview Statement.

The average score (on a 0-12 point scale) increased from 6.795 to 7.305 from Informative Speech #1 to the Final Persuasive Speech. Approximately half (47.5%) of all students improved from Informative Speech #1 to the Final Persuasive Speech.

Only 47.5% of students improved from Informative Speech #1 to the Final Persuasive Speech. This falls short of the success standard of 60% improving. Additionally, the amount of improvement was minimal (+.559 points on a 0-12 point scale). When compared to the Fall Semester 2014, both the number of students improving and percent of improvement fell. While 59 students were assessed in the Spring Semester 2015, compared to only 44 students in the Fall Semester 2014, the actual number of students who improved from Informative Speech #1 to the Final Persuasive speech actually fell by 2, from 30 to 28.

For Project A for the spring 2015 semester, the results, at first glance, are mixed. While the 70% standard was exceeded for both informative speeches, the mean grade actually went down slightly from informative speech #1 to informative speech #2. The mean grade dipped from 77.4% to 75.3%, a statistically insignificant reduction, but the hope was that the mean grade would improve. Additionally, with regards to the second part of the success standard, “at least 70% of all students will improve their grade by at least 1% from the first to the second informative presentation,” only 40.4% of all students actually achieved a higher grade. This is well below the 70% target and raises questions about the usefulness of such a standard. Since similar results were reported for the Fall Semester 2014, faculty collaborators unanimously agreed that while speeches, in general, were better, their performance

expectations were higher. Faculty has raised concerns that the method of assessment needs to be changed.

For Project B, similar issues to those reported above for Project A were apparent. Slight improvements were noted for the overall performance on Speech Introductions, as well as for each of the four speech introduction components measured in the project. However, there was virtually no consistency in improvement on each of the four components. Looking individually at each of the 59 students who were assessed, there is no consistency in improvement on each component and only 11.9% of the students showed any improvement on all four components. This suggests either that the assessment methodology is insufficient to correlate actual change in performance with increased instructor expectations, or that students actually do not improve with any predictable consistency. Faculty collaborators are mixed with regards to their opinions on this data and will seek to modify the assessment rubric to achieve clarity on this issue. There is also discussion regarding how to re-teach or enhance instruction and clarify increased expectations in the classroom from speech to speech throughout the semester.

At this point, student learning cannot be accurately assessed with the current tools. The data collected is not useful. Faculty collaborators will attempt to create a meaningful "improvement" measurement tool to better gauge actual overall improvement from speech to speech; this tool will control for instructors' higher expectations that tend to limit the efficacy of a grading rubric to measure skill improvement. Data collected with Project A continued to show that students are demonstrating the requisite skills at an acceptable level, but the anticipated improvement from informative speech #1 to informative speech #2 is not apparent, based on student grades. Thus, our measuring mechanism is inadequate to show actual improvement in skills from the first to the second speech. This seems to be the result of instructors' heightened expectations from speech to speech which may result in a lower speech grade despite an improvement in a speaker's demonstration of speaking skills. While students

still expect and deserve a grade on each speech, a better tool for tracking actual skill improvement is needed. At this point, the faculty collaborators are considering uncoupling the measurement of the speaking skills from the actual speech grade. If this is done, a revised assessment rubric, similar to that used for Project B will need to be created.

b. Writing

Outcome: Write clearly and effectively
Project A: Blackboard Pre- and Post-Documentation Test
Success Standard: 70% of students will score 2 ("acceptable") or higher on each dimension of the rubric.
Sample Size: 34

71 % of Students scored a 2 or higher on the pre-test in text citations, while 74% of students scored a 2 or higher on the Works Cited/References pages format. The score percentages increased modestly from the projected scores at 1% and 4% on the pre-test. The percentage of students scoring 2 or higher on the Post test in text citations was 68%, and the percentage of students scoring 2 or higher on Works Cited/References pages was 64%. The percentage of students who scored in the lower two levels was 32% for in-text citations (an increase of 3% from the pre-test and 23% from the paper). The percentage in the two lower scores on the post-test Works Cited/References pages format was 36% on the Post test. This was a 10% increase over the pre-test and a 24 % increase over the low scores on the research paper.

Project B: Documented Long Research Essay Citations
Success Standard: 70% of students will score 2 ("acceptable") or higher on each dimension of the rubric.
Sample Size: 34

The scores on the actual Long Research Paper in-text citations showed a 21% increase in the projected percentage of those scoring 2 or higher, for a 91% total. An equally significant 14% increase in the projected percentage of students scoring 2 or higher occurred in the scores for Works Cited/Research pages format, for a total of 88%. Students were equally split between 2 ("acceptable") and 3 ("good") in the in-text citations. 12% of students scored at the lower two levels of the rubric (0 and 1) for properly formatted Works Cited/References pages.

The percentage of students who scored a 2 or higher on the pre-test in-text citations and Works Cited/References pages indicates that students are being well prepared in English 101 for the citation requirements in English 102. Most students included author attribution and required page or paragraph numbers in parenthetical citations. Many of the students used the correct Works Cited/References page format. The lower scores on the Post-test, occurring between the pre-test and actual paper, indicate students perhaps feel too time-constrained to put forth adequate effort on the Post-Test. It is evident that students are given ample opportunity through instruction and practice to increase their understanding of proper citation in their papers and on their Works Cited/References pages. Evidence of this appears in the high scores on the actual research paper. Students scored high on parenthetical citations and on the correct format of the Works Cited/Reference paper. Scores on the Research Paper indicate student uncertainty about information needed in parenthetical citations, the use of punctuation, and when to use quotation marks or italics for titles. The Long Research Papers contained formatting errors, as well as errors when there are multiple authors, and information that must be included for each entry on a Works Cited or References page.

Lack of student participation in the pre and post-tests was a problem. Students were allowed to access the pre and post-tests on their own time on a Blackboard site. In the next assessment students will be monitored by instructors to ensure better participation. Instructors will be asked to allow students to bring an electronic device to class, or to take their classes to a computer lab to complete the pre and post-tests. We will also ask instructors to take two class days to allow students to bring in their electronic devices, or to take students to a computer lab where they can supervise students taking the tests. This should increase participation. Additionally, instructors will be asked to give two quiz/test scores for students who take the pre and post-tests; this will encourage students to do their best on both tests. Analysis of the lower post-test scores indicates a need to change the assessment tool used. The English department will create a multiple choice test for MLA and APA and put both on Blackboard

for the pre- and post-tests. Although students are required to have and use a V.U. Writer's handbook, it is obvious that they do not make full use of it. In order to raise the number of students from acceptable to good, and the number of students below acceptable to a good range, a handout addressing common errors found in the assessment data will be provided, and students will be required to use it during their writing process . Students will also be given a survey asking how they used it and how it aided their citation process.

c. Quantitative Literacy

Outcome: Appreciate the importance of patterns and mathematical models
Project A: Mortgage Project
Success Standard: 70% of students will receive 17 points overall out of 24 (70%), and 70% of students will receive a 3 (above average) or higher out of 4 (75%) on each dimension of the rubric.
Sample Size*:* 156 students (110 in MATT 109 and 46 in MATH 103)

103 worksheet		**109 worksheet**	
Dimension	% of students who succeeded	Dimension	% of students who succeeded
Interpretation	76.09	Interpretation	79.09
Representation	69.57	Representation	47.27
Calculation	60.33	Calculation	66.36
Analysis	43.48	Analysis	30.00
Assumptions	65.22	Assumptions	45.45
Communication	63.04	Communication	40.91
Overall	52.17	Overall	39.09

The department exceeded its success standards in Interpretation in both classes, with 76% for 103 and 79% for 109. All the other dimensions were below the success standard. Analysis in particular was low in both classes (43% in 103 and 30% in 109), as were overall results (52% in 103 and 39% in 109). 109 struggled more with Representation (47%), Assumptions (45%), and Communication (41%), while 103 was only a little short of success in those categories (70%, 65%, and 63%, respectively).

Project B: Mortgage Problems from Test
Success Standard: 70% of students will receive 16 out of 20 points (70%) overall, and 70% of students will receive a 3 (above average) or higher out of 4 (75%) on each dimension of the rubric.
Sample Size*:* 132 in MATT 109 and 67 in MATH 103

103 test		**109 test**	
Dimension	% of students who succeeded	Dimension	% of students who succeeded
Representation	26.87%	Representation	20.45%
Calculation	26.87%	Calculation	11.36%
Analysis	26.87%	Analysis	9.85%
Assumptions	22.39%	Assumptions	11.36%
Communication	43.28%	Communication	17.42%
Overall	16.42%	Overall	8.33%

With the highest number being 43% in Communication for 103, the project fell short of the standard in each dimension. 109 Consistently scored lower than 103. Since students were able to take the project home and work on it over a few days, it is not surprising that the results for the project (Project A) were higher than the test (Project B). Also, more students took the test than did the project; the numbers given for Project A were only those students who turned it in.

Math 103 scored higher on every category for both parts, save for interpretation in the project. This is appropriate since the pre-requisites for Math 103 are higher than Matt 109. Interpretation was the one category achieving the standard. That category was relevant for only the project as it involved looking up mortgage and interest data online. A low score for Communication is especially troubling because to succeed a student had to write legibly and use complete sentences with correct grammar and punctuation. Most instructors reported anecdotal evidence that students did not feel full sentences and correct grammar were important in a math class.

It is not surprising that the results for the project (Part A) were higher than the test (Part B), since students were able to take the project home and work on it over a few days. The numbers for the test are discouraging with not a single score above 50%. Also, more students took the test than did the project; the numbers given for part A, the project, were only those students who turned it in. Math 103

scored higher on every category for both parts, save for interpretation in the project. Since the pre-requisites for Math 103 are higher than Matt 109, this is not surprising. Interpretation was the one category where the success standard was met. A low score for Communication is especially troubling, because to succeed (get 3 / 4), a student only had to write legibly and use complete sentences with correct grammar and punctuation. Most instructors reported anecdotal evidence that students did not feel full sentences and correct grammar was important in a math class. The main assumption made for both parts was that enough money was had to make a down payment on the house. Despite it being the answer both times, students still answered incorrectly on the test.

The Math department plans on doing an in class activity on finding a mortgage, with assumptions and analysis as components. It will look similar to the test questions on mortgage and cover everything from the project except interpretation. This should give students a starting place for how to answer some of the questions along with separating questions, with calculation and explanations listed separately. Students often did the math but failed to explain, so that may help to clarify that both parts are needed. For 109, the mortgage section currently comes at the very end of the class. Students may perform better if they see it earlier in the semester.