Cross-Sectional Assessment of Technical Writing: Tool Development and Preliminary Data Analysis

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Abstract

An in-depth assessment of undergraduate written and oral communication skills from two departments (Civil Engineering and Biological Systems Engineering) at the University of Nebraska-Lincoln (UNL) was performed using several measurement tools to gain a snapshot of the skill level of the students. Three writing assessment tools and one oral assessment tool were developed and applied to a cross-section of students for this study:

  • A writing attitude survey to assess engineering students' perspectives, reflections, and opinions about writing skills;
  • A basic writing skills test based on a similar test created by the UNL College of Journalism and Mass Communications to determine students' ability to recognize correct grammar, sentence structure and punctuation,
  • A writing sample assessment rubric and methodology to systematically assess engineering students' writing samples;
  • A technical oral presentation assessment rubric, with both individual and group components, to assess senior-level capstone oral presentations.

The writing assessment tools were applied to freshmen, juniors, and seniors in the two departments. The oral presentation rubric was integrated into the capstone presentations from the two departments. The three primary findings from this study were that (1) many engineering students start college with weak writing skills; (2) a significant number of engineering students are graduating with writing skills below the desired level; and (3) based on the ACT score, a basic writing skills test and a writing sample, a heuristic can be developed to effectively identify students required to take an additional writing course at the start of his/her college career.

Introduction

A one-year pilot study was performed to assess the undergraduate written and oral communication skills from two departments, Civil Engineering (CIVE) and Biological Systems Engineering (BSEN), at the University of Nebraska-Lincoln (UNL). Students in these majors are required to take a technical writing class (JGEN 200; generally as sophomores) regardless of their communications proficiency. Transfer students who have two college level writing courses are allowed to substitute those courses for JGEN 200.   These students also are required to take one oral communications class.

This study employed direct and indirect measurement tools to gain a snapshot of the skill level of the freshmen, junior, and senior students in these departments. Three writing assessment tools

and one oral assessment tool were developed and applied to a cross-section of students for this study. These tools are described below:
  • A writing attitude survey to assess perspectives, reflections, and opinions of engineering
    students about the importance of writing skills;
  • A basic writing skills test based on a similar test created by the UNL College of Journalism
    and Mass Communications to determine the ability of students to recognize correct
    grammar, sentence structure, and punctuation;
  • A writing sample assessment rubric and methodology to systematically assess engineering
    student writing samples;
  • A technical oral presentation assessment rubric, with individual and group components, to
    assess senior-level capstone oral presentations.

The oral presentation rubric was developed based on the review of capstone presentations from the two departments. The writing assessment tools were generally applied to freshmen (students enrolled in 100-level classes), juniors (students enrolled in 300-level classes), and seniors (students enrolled in 400-level classes) in the two departments, as noted in Table 1. Although limited writing samples were collected from the junior classes, these were not evaluated by the review team due to budget limitations. The Civil Engineering program offers classes both in Lincoln and in Omaha on the campus of the University of Nebraska-Omaha. The Biological Systems Engineering department offers two B.S. Engineering degrees: Biological Systems Engineering (BSEN) and Agricultural Engineering (AGEN).

Table 1. Classes to Which the Tools were Applied

Class	Campus	Sample Size			Writing Sample Topic
		Basic Writing Skills (BWS) Test	Writing Attitude Survey	Writing Sample	
CIVE 112	Lincoln	87	81	80	Choice of Sub-discipline
CIVE 112	Omaha	44	No individual data	49	Choice of Sub-discipline
BSEN 100	Lincoln	43	44	44	Choice of Sub-discipline
AGEN 100	Lincoln	13	13	12	Choice of Sub-discipline
CIVE 352	Lincoln	36	19	-	-
CIVE 352	Omaha	23	23	-	-
BSEN/AGEN 344	Lincoln	20	20	-	-
CIVE 489	Lincoln	53	51	30	Ethics
CIVE 489	Omaha	20	8	11	Ethics
BSEN/AGEN 470	Lincoln	16	9	13	Ethics

Methods

The basic methodology used to develop and apply each of the four types of tools during the 2007-2008 academic year is described below. The tools were administered to the freshman classes during the mid-to-late portion of the fall semester and to the junior and senior classes mid-semester in both the fall and spring, as appropriate. Basic information such as ACT score and high school class rank was obtained for each student, when available, and used for the subsequent data analysis.

<u>Basic Writing Skills Test</u>

Based on the College of Journalism's student writing skills assessment, the Basic Writing Skills (BWS) test was created and administered to engineering students to determine their ability to recognize correct vs. incorrect grammar, sentence structure, and punctuation. The assessment consists of a combination of multiple choice and fill-in-the-blank questions and was administered through the University's EDU system, which is managed by UNL's Center for Mathematics, Science, and Computer Education. EDU is a Web-based assessment engine marketed by Brownstone Learning that was developed to ease the creation and administration of assignments and tests to large classes. The writing assessment took approximately 15 hours to create and another 15 hours to set up in the EDU system. Ongoing report generation and maintenance took approximately 10 additional hours.

<u>Writing Sample Analysis</u>

The overall approach of the Writing Sample Analysis followed the general methodology used by the Nebraska Department of Education for collecting and scoring elementary school writing samples as part of an overall state-wide assessment. Writing samples were obtained from engineering students at the freshman, junior, and senior levels in order to evaluate students' abilities to apply college-level writing skills to an assignment. Freshman wrote a 1-to 2-page paper on their preferred sub-discipline within their major, and seniors wrote a 2- to 3-page paper about an engineering ethics question. These papers were graded elements of each class. Although writing samples were collected from the junior classes, these were not evaluated by the review team due to budget limitations.

After the papers had received their course grades, copies were gathered, logged and assigned an ID number. Then a professional panel was asked to compare the samples against a rubric that evaluated the following criteria: purpose, focus and originality; organization; clarity; content depth, support, and accuracy; writing style and mechanics; and holistic development and writing skills. The writing sample rubric had four levels (1 = Beginning, 2= Progressing, 3= Proficient, and 4 = Advanced) and is provided in the Appendix. The ten panelists who assisted with the rating session were a combination of technical writers, technical communications instructors, professional communicators and consultants, engineering professionals, and writing teachers. A one-hour training session was provided to the reviewers to ensure consistency in process and scoring method using the rubric. An anonymous rating system was used, which assigned individual rating codes to individual reviewers. With this system, second reviewers were

unaware of the actual ratings given by the previous reviewers. Team members provided a third score to reviewed papers given scores that varied by more than one point.

Once trained, the reviewers scored six to ten papers per hour depending upon the length of the assignment. The reviewers were paid a small stipend ($200/each) and the overall cost for the day-long review team was about $2,200, including refreshments. The panel assessed 229 papers in duplicate in approximately six hours of time on task. The authors spent approximately 30 hours collecting and organizing the writing samples for the grading session. An additional 12 hours was spent on follow-up activities, including data analysis.

Writing Attitude Survey

The Writing Attitude Survey was created and to assess perspectives, reflections, and opinions of engineering students about the importance of writing skills. Survey questions covered such topics as previous studies and experiences in writing and communication, guidance from previous instructors, perceived need for strong writing skills in the student's chosen career field, perceived importance of those skills, and self-assessment of specific communication skills. The 63-question survey combined demographic questions, Likert-Scale questions, and questions that allowed free-form responses. Both Blackboard® and hard copies were used to administer the survey to students. The survey took approximately 20 hours to create and another 10 hours to set up in the Blackboard system. Each student spent 15-30 minutes completing the survey.

Oral Presentation Analysis

Capstone senior design presentations were videotaped for CIVE 489 (both in Lincoln and Omaha) and BSEN/AGEN 470. A total of about six hours of the video was provided to a six-person team of technical communications instructors (from both the College of Journalism and Communications Studies Department at UNL) and communications professionals from local engineering firms. The review team was asked to:

- Provide a "holistic" quantitative assessment of the general performance of each group using the oral communications rubric and their own notes related to the performance of each student;
- Provide a qualitative assessment of the general strengths and areas in need of improvement for each class (e.g., CIVE-Lincoln, CIVE-Omaha, and BSEN/AGEN);
- Provide suggestions for improving the draft rubric (e.g., oral communications grading rubric). Special emphasis was given to simplifying the rubric so it could be subsequently be used by non-communications professionals who might serve as capstone design reviewer.

Results

The data from this pilot study represents only a snapshot of the student performance across the classes in the BSEN and CIVE Departments from the 2007-08 academic year (because the freshmen and seniors represent different subpopulations of a total population of University of Nebraska undergraduates). Data on high school class rank and ACT scores were collected to establish the overall average academic preparation of each class (Table 2). Data were not available for some students, primarily international, transfer, and second-degree students. Data

were unavailable for a higher percentage of the students in Omaha than Lincoln. Nonetheless, these data are useful for putting comparisons between classes and majors into context. It is clear that the BSEN students have stronger high school class ranks and ACT scores than the AGEN and CIVE students. The overall sample mean composite ACT scores are 29.64 (SE=0.49) for all BSEN students, 26.04 (SE=0.31) for all CIVE students and 26.17 (SE=0.83) for all AGEN students.

Also, the CIVE students in Lincoln generally have slightly stronger academic preparation measures than those in Omaha. The observed average freshman ACT score (26.8) is actually slightly higher than that for the seniors (26.4), likely a result of the recruitment of an excellent freshman class in 2007. These scores are consistent with a trend observed in the UNL College of Engineering, where the average ACT scores and high school class rank has been progressively increasing in recent years. Interestingly, the freshman average high school class rank is slightly higher than the seniors, though not significantly from a statistical perspective. This may represent the importance of class rank as a predictor of successful completion of an engineering degree for students with relatively high ACT scores.

Table 2. Average Values for Academic Preparation Measures. Standard deviation values are in parenthesis.

Class	Location	Class Rank %	ACT	ACT English	% Students with Academic Preparation Data
CIVE 112	Lincoln	22 (20)	26.0 (5.0)	24.6 (5.9)	93
CIVE 112	Omaha	30 (28)	25.2 (4.5)	24.7 (5.9)	75
BSEN 100	Lincoln	9 (10)	30.2 (3.5)	29.6 (4.6)	86
AGEN 100	Lincoln	24 (18)	26.2 (2.9)	25.8 (3.6)	100
CIVE 352	Lincoln	20 (20)	27.3 (3.5)	26.3 (5.0)	78
CIVE 352	Omaha	18 (14)	27.0 (4.1)	27.6 (5.0)	61
BSEN/AGEN 344	Lincoln	7 (8)	29.6 (3.7)	29.2 (4.4)	85
CIVE 489	Lincoln	18 (16)	26.5 (4.0)	24.8 (4.9)	91
CIVE 489	Omaha	20 (19)	24.8 (5.0)	24.9 (6.1)	73
BSEN/AGEN 470	Lincoln	10 (7)	28.3 (4.5)	28.8 (3.6)	76
All Freshmen		21	26.8	25.8	88
All Seniors		16	26.4	25.6	83

Basic Writing Skills Test

For a similar basic writing skills test, the UNL College of Journalism and Mass Communications has used a score of 80 (out of 100) as the minimum proficiency standard for entry into the Engineering College. The basic writing skills data are presented in Table 3 for each class, listing the percentage of each group which scored above an 80, above 70 (another possible minimum proficiency standard considered by the project team), and the average and standard deviation of each group.

When comparing groups, the general trends follow those that might be predicted based on the overall academic preparation for each group. Based on ANOVA results it was concluded that the mean score of the BWS tests differs significantly between the freshman and senior classes ($p = 0.004$). Thus, the BWS test was able to measure a relatively small (4.1%) difference between senior and freshman groups' ability to correctly select basic grammar, punctuation, etc. Given that there is relatively little emphasis on these skills in the coursework required for the AGEN, BSEN, and CIVE degrees, the finding of only a small difference is unsurprising.

Table 3. Basic Writing Skills (BWS) Results.

Class	Location	% > 80	% > 70	Average, %	Std Dev
CIVE 112	Lincoln	13	54	70.0	11.3
CIVE 112	Omaha	18	49	71.4	11.0
CIVE 352	Lincoln	27	27	73.3	10.3
CIVE 352	Omaha	26	78	74.3	15.9
CIVE 489	Lincoln	30	64	75.2	9.7
CIVE 489	Omaha	30	70	76.7	9.6
BSEN 100	Lincoln	51	84	79.4	10.1
AGEN 100	Lincoln	15	38	70.9	9.0
BSEN/AGEN 344	Lincoln	45	85	79.4	11.5
BSEN/AGEN 470	Lincoln	56	94	81.3	8.2
All Freshmen		23	59	72.6	11.3
All Seniors		35	71	76.7	9.6

Writing Sample Analysis

The rubric developed for the writing sample analysis lists four levels of ability (1 is the lowest and 4 is the highest), where the third level (3) is designated as the minimum expected proficiency level. Only 19% of all freshmen and only about half of seniors were ranked by the review team as meeting this proficiency level, as noted in Table 4.

Based on ANOVA of the results in Table 4 it was found that the mean scores from the writing samples significantly differ between freshman and seniors ($p<0.001$). This finding is consistent with the hypothesis that a significant improvement (36% using the scoring rubric scale) in writing skills has occurred during the college experience for students in these programs, assuming that the freshman and seniors were not considerably different in terms of their preparedness at a time of admission. It can be argued that the writing sample results show a larger difference, reflecting a potential improvement, between the senior and freshman groups than does the BWS test results.

An analysis of the sub-scores from the scoring rubric for each writing category was performed, and it was found that the smallest average increase (0.55) between freshman and senior level was observed for "writing style and mechanics", which is consistent with the relatively small difference observed on the BWS test. This relative weakness is consistent with comments provided on a Department of Civil Engineering employer survey in 2004 where approximately 15% of employers noted concerns about basic writing skills and mechanics. Potentially a portion of engineering students start college with weak basic writing mechanics skills and these students

do not achieve a minimum level of proficiency while in engineering college. This   suggests that if these students can be identified early in their matriculation, improving their writing skills can be one area of focus.

Table 4. Writing Sample Results.

Location	Class	Mean	Std Dev	% above 3.0	% above 2.0	Average Difference Between Raters[1]
Lincoln	CIVE 112	2.02	0.79	15	63	0.54
Omaha	CIVE 112	2.04	0.76	22	59	0.45
Lincoln	CIVE 489	2.82	0.65	50	83	0.43
Omaha	CIVE 489	3.00	0.55	45	100	0.45
Lincoln	AGEN 100	1.80	0.49	0	53	0.53
Lincoln	BSEN 100	2.38	0.55	27	88	0.54
Lincoln	BSEN /AGEN 470/480	2.92	0.67	67	100	0.45
All	Freshmen	2.11	0.69	19	69	0.52
All	Seniors	2.88	0.63	53	90	0.44

1- Each paper was reviewed by two raters, and if the two provided scores with a difference of greater than 1.0, a third rater evaluated the paper.

For both the BWS test and the writing sample, CIVE-Omaha students generally scored slightly higher than CIVE-Lincoln students, even though their academic preparation scores (class rank and composite ACT) were generally lower. It should be noted that none of the CIVE-Omaha seniors scored below a "2" on the writing sample, but 17% of the CIVE-Lincoln students scored below a "2". The CIVE curriculum on both campuses is very similar but the freshman writing requirements and student profiles are different between campuses. The difference in results from the CIVE Lincoln and Omaha groups is consistent with a hypothesis that the additional writing resources available to Omaha students boost their competency and help them reach required minimum level of writing proficiency. Although these differences were not statistically significant, probably, due to a lack of sufficiently large sample, further study is needed to identify the factors that contribute to the difference in performance, such as the two discussed below.

Among factors that could contribute to the difference in performance between CIVE students in Lincoln and Omaha are student profile differences between the campuses (e.g., academic strengths, employment history, maturity, etc.). Omaha students generally had equal or stronger ACT English scores compared to CIVE-Lincoln students, even though they had lower high school class ranks and composite ACT scores. Also, a higher percentage of CIVE-Omaha were employed full-time than were CIVE-Lincoln students (12% vs. 2%) and more were employed part time (87% vs. 75%), which was found (as described below) to correlate to better writing performance.

A second factor that could contribute to the difference in performance between CIVE students in Lincoln and Omaha is the University of Nebraska-Omaha's English Placement and Proficiency

Exam (EPPE), which CIVE-Omaha students are required to complete. Approximately 75% of the CIVE-Omaha seniors in this study had at least one additional writing class listed on their transcripts, in addition to the technical writing class required for the BS CIVE degree. It is believed that most had taken the additional coursework to satisfy the EPPE requirements. No such placement exam exists at UNL and only 12% of CIVE-Lincoln seniors in this study had more than one writing class listed on their UNL transcript. About 22% of BSEN/AGEN seniors had completed more than one writing class, as many BSEN students seek to fulfill medical school requirements.

The mean difference in scores assigned by the writing sample raters was lower for the senior papers than for the freshmen (0.44 versus 0.52). The senior papers were longer and more complex, and were analyzed after the freshman papers, which could represent greater rater familiarity with the scoring rubric. One other result of the rating team was that anchor papers were identified for potential future use (e.g., example writing samples which the reviewers believed were good examples for each level of the rubric).

Writing Attitude Survey

The Writing Attitude Survey was developed to gain insight regarding the tendency of engineering students to dismiss the importance of writing and to ascertain factors influencing those attitudes. The 63-question survey probed factors ranging from demographics to inquiries about grade school and high school writing and oral communication experiences. Only three questions are reported on here. Those questions (Table 5) were designed to determine if students' attitudes toward anticipated writing requirements on the job changed over their matriculation in the three engineering degree programs assessed.

The data in Table 5 are only from the Lincoln campus and, as with the other data reported in this paper, are not longitudinal (i.e., the freshmen and seniors are not from identical sample populations). Though not analyzed statistically, the data from Question 17 indicate that seniors anticipate that technical writing on the job will be critical much more than do freshmen (57.4 percent "very often" versus 35 percent, respectively); more seniors than freshmen (36 versus 22.4 percent, respectively), recognize that not having to write on the job will never happen. In contrast, freshmen anticipate writing frequently on the job more so than do seniors (Question 16: very often plus often, 47.6 versus 36.2 percent). It can be inferred from the differing responses to Question 16 than to Questions 17 and 18 that, as students progress through their engineering programs, they realize that the writing may not be as frequent as initially anticipated but is more critical than they first thought and that it cannot be avoided.

Table 5. Evolving Attitudes Toward Writing of Matriculating Engineering Students.

	Likert Response (percent)							
	Very Often		Often		Sometimes		Never	
Question	Freshmen	Senior	Freshmen	Senior	Freshmen	Senior	Freshmen	Senior
16	11.2	0	36.4	36.2	50.4	63.8	2.1	0
	Strongly Agree		Agree		Disagree		Strongly Disagree	
17	35	57.4	58.7	42.6	6.3	0	0	0
18	0	0	15.4	6.6	62.2	57.4	22.4	36.1

Question 16 - Prior to majoring in my chosen field, the frequency with which I expected to be writing in my classes and my career was; Question 17 - Possessing strong technical writing skills will be critical to my future career; Question 18 - Future employment will not require me to write very much because others in the organization will be responsible for most of the writing; $n_{freshmen} = 143$; $n_{seniors} = 61$

Statistical Analysis of Writing Rubric Relationships

A further regression analysis of the dataset was performed to tease out potentially useful relationships. After controlling for the class variable it was determined that the BWS test scores were positively associated with the composite ACT scores (the model was significant with p<0.001 and $R^2 = 0.37$). A similar result was observed with respect to the ACT English scores as a predictor of the BSW test scores. Analogous findings were obtained for the writing sample score, although the overall model was not explaining as much data variation ($R^2 = 0.28$) it was significant (p<0.001) and composite ACT scores were identified as a significant predictor of the writing sample score, with positive association. As expected, the composite ACT score was negatively correlated with the class rank ($R^2 = 0.44$, p<0.001), *i.e.,* students with higher scores have lower class rank. There was less of a statistical relationship (while still being significant) between students' scores on the BWS test and the writing sample ($R^2 = 0.11$, p<0.001).

Interestingly, composite ACT score negatively correlated with the number of English classes taken ($R^2 = 0.18$, p=0.007), meaning that students who perform better on the ACT exam are taking fewer English classes. This is evidence that some students with weaker academic preparation, especially in Omaha, are already taking additional English classes beyond the one technical writing class required by the B.S. Civil Engineering curriculum. In Lincoln, students with <19 on the ACT English subscore (though few) must take an additional English class. This trend was in spite of the stronger BSEN students taking two writing classes for medical school reasons.

On average, students with some work experience, as reported on the writing attitude survey, perform better in terms of their writing sample scores than students who don't have any work experience. However, no statistically significant relationship was found with respect to BWS test scores. This result merits further study to determine if (1) employment assists in improving a student's overall writing skills, (2) students with better writing skills are also more likely to gain employment, and/or (3) the result is an anomaly due to the small sample size.

Further analysis of the data found that students with relatively high composite ACT scores (e.g., at least 25) and relatively high writing skills (e.g., at least 70) had statistically greater writing sample scores than the rest of the students. Consequently, an attempt was made to develop a predictive rubric using the composite ACT and BWS test scores from the freshman data. As a result of our analysis we found that a composite ACT of 24.5 and BWS test score of 70.5 served as the cut-off scores that yielded the largest difference the percentage of students scoring above a 2.5 score on the writing sample. Combining the composite ACT 24.5 and BWS 70.5 cut-offs, it was determined that 60% of freshman that had scores above both cut-off values scored a "2.5" or above on the writing sample, but only 22% of the students scored above a "2.5" on the writing sample if they were below at least one of the cut-off values. This rubric could be employed as a first cut rule in determining which students should be required to either take a basic writing skills class OR provide additional writing samples in order to prove a minimum level of proficiency.

Oral Presentation Analysis

The oral communications review team suggested a simplified rubric based on their review of the capstone presentations. Among their suggestions was to include separate rubrics for each individual's portion of the presentation and for the overall group presentation. The group rubric should focus on how the group integrated the materials of each presenter. The suggestions of the oral communications review group were then synthesized by the authors to create an oral presentation set of rubrics, which are in the Appendix.

In addition, the oral communications review team provided an extensive list of suggestions of how to improve the capstone communications presentations. These suggestions may be useful to the capstone design class instructors, as well as to the instructors of the speech communications classes taken by engineering students. Key points from these suggestions are:

- Arrange for each group to videotape themselves and then evaluate themselves before their final presentation;
- Provide more training in how to create effective visual aids, including PowerPoint slides;
- Provide more training (and grading focus) on group cohesiveness for the presentation (transitions between presenters, consistency between speakers, all speakers supporting the central points of the presentation);
- Teach teams how to make their presentations "persuasive" instead of a strictly factual professorial presentation. In the real world these students will need to sell their ideas and themselves.

Conclusions

The three primary findings from this study are that (1) many UNL engineering students start college with weak writing skills; (2) a significant number of these students are graduating with writing skills below the desired proficiency level; (3) a heuristic based on ACT score, a writing skills test, and a basic writing sample test can be constructed to accurately identify students who are required to take an additional writing course at the start of his/her college career.

Acknowledgements

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Appendix

Appendix

Rubric to Assess Engineering Student Writing Samples

	1 = Beginning Unacceptable work. Displays no or limited use of appropriate college-level writing skills. **"Needs to be completely rewritten."**	2 = Progressing Below average work. Displays minimal, ineffective use of college-level writing skills. **"Needs major revisions."**	3 = Proficient Average work. Displays good or adequate use of college-level writing skills. **"Almost there – needs minor revisions."**	4 = Advanced Excellent work. Displays above average college-level writing skills. **"Well done – almost no revisions are needed."**
Main point, focus, and originality	• Main point not well planned • Purpose unclear • Plagiarism a concern	• Main point obvious or unimaginative. • Purpose somewhat vague	• Main point somewhat original • Purposed fairly clear	• Main point is original • Purpose very clear
Organization	• Purpose statement missing or inappropriate • Main points unclear • Main point not supported	• Purpose statement vague • Somewhat logical organization • Few supporting details • Abrupt and/or weak conclusion	• Purpose statement somewhat interesting • Organization could be improved • Need more supporting details • Conclusion could be stronger	• Purpose statement gains audience attention • Main points well organized • Details fully support points • Conclusion provides thoughtful evaluation
Clarity	• Information unclear or very disjointed • Information irrelevant or uninteresting • Key concepts/terms not defined or explained Language inappropriate or unprofessional	• Information not completely clear, somewhat disjointed • Information not very relevant or interesting • Key concepts or terms somewhat confusing • Language used too complex or simplistic	• Information fairly clear/ logical • Information relevant and interesting Key terms/concepts need more explanation Language mostly tailored to audience	• Information clear/ logical • Information relevant and very interesting • Key concepts/terms fully explained and easy to understand Language well tailored to audience
Content depth, support, and accuracy	• Idea development simplistic, undeveloped, or cryptic • Few relevant details given • Support too general, off topic, or faulty	• Ideas obvious, unoriginal, or too broad • Details confusing or inadequate • Details general, irrelevant, not fully supportive	• Ideas solid but show less original thought and reasoning • Too detailed for audience, or not detailed enough • Main points somewhat supported by details/examples	• Idea development thorough and logical • Level of detail appropriate for audience • Main points well supported
Writing style and mechanics	• Sentences simplistic and/or poorly written • Word choice inappropriate • Tone inappropriate and/or unprofessional • Grammar, spelling, and punctuation errors throughout	• Some sentences simple, awkward • Word choice adequate, shows little advanced vocabulary • Tone less professional, not completely appropriate • Errors in grammar, spelling, and punctuation decrease readability	• Sentences less varied/complex • Word choice good, displays some advanced vocabulary • Tone mature, appropriate for the topic and audience • Grammar, spelling, and punctuation mostly correct	• Sentences varied and effective • Word choice precise, advanced vocabulary used • Tone is mature, well-suited to topic and audience • Grammar, spelling, and punctuation are correct

Rubric: Oral Communication Skills Assessment – GROUP EVALUATION – page 1
*criteria for P must be met for HP rating

	Criteria	High Proficiency (HP)	Proficiency (P)	Some Proficiency (SP)	No/Limited Proficiency (LP)
Organization (a.k.a., "Results Oriented")	*Purpose of Overall Group Presentation*	• Very clear, results oriented • Thesis clearly states a persuasive position on the topic • Group shows cohesive purpose	• Clear • Thesis "descriptive" instead of "results oriented" • Mostly cohesive in purpose	• Present • Thesis present, but not clearly articulated • Purpose lacks some focus	• Cannot be determined • Thesis statement missing or unclear • Group does not display cohesive purpose
	Introduction* to Overall Group Presentation	• Audience attention captured • Credibility of the group established	• Thesis clearly stated in introduction • Main *points* previewed	• Thesis stated in introduction • Main *topics* previewed	• Introduction missing, unclear, or inappropriate • Introduction seems disconnected from overall presentation
	Main points of Overall Group Presentation	• Main points consistently clear; stated as points by all presenters; directly and soundly support thesis statement • Sequence of ideas carefully chosen by the group to maximize logical flow • Transitions link main points	• Main points consistently clear; stated as points by all presenters • Sequence of ideas appropriate • Transitions signal/announce new main points	• Main points clear; but inconsistent or stated as *topics* instead of *points* • Sequence of ideas shows some signs of logical organization by the group • Some transitions missing or confusing	• Main points unclear, inconsistent, and/or unrelated to thesis • Sequence of ideas hard to follow • No evidence of transitions • All presenters not focused on logical, clear main points
	Conclusion* to Overall Group Presentation	• Conclusion provides thoughtful evaluation • Final summary and thoughts show cohesive group effort	• Thesis repeated in conclusion • Main points repeated in conclusion	• Conclusion somewhat abrupt • Concluding thoughts lack of group cohesiveness	• Conclusion missing, ineffective, or inappropriate • Conclusion seems disconnected from overall presentation
	Transitions between Presenters	• Handoffs between presenters consistently create seamless transitions • Enhance the presentation	• Mostly smooth transitions btwn presenters • Handoffs are well rehearsed	• Handoffs create confusion among presenters • Transitions interrupt flow of presentation	• Transitions unrehearsed • Detract from presentation

Rubric: Oral Communication Skills Assessment – GROUP EVALUATION – page 2

	Criteria	High Proficiency (HP)	Proficiency (P)	Some Proficiency (SP)	No/Limited Proficiency (LP)
Clarity (a.k.a., "Simple")	Key Terms, Concepts, and Language Choice	• All key terms consistently and clearly defined by all presenters • Explanation of key concepts easy to understand throughout • Language consistently tailored to audience by all presenters	• Most key terms defined with relative consistency by all presenters • Most language tailored to audience with relative consistency	• Many key terms not defined or inconsistently defined by presenters • Some language too complex or simplistic for audience or level of language inconsistent between presenters	• No key terms defined; jargon used throughout • Language used inappropriate for audience • Explanation of concepts incomplete or inaccurate
Content and Research (a.k.a., "Evidence Rich")	Supporting Points	• Development of cohesive group ideas; consistently thorough and logical • Level of detail consistently appropriate for audience • Main points consistently well supported by all presenters with evidence from a variety of sources	• More supporting details needed • Ideas presented offer solid but less cohesive and original thought and reasoning • Too detailed for audience, or not detailed enough, or inconsistent among presenters • Main points somewhat supported by details/examples	• Information presented disjointed, not completely relevant, or inconsistent between presenters • Supporting details lacking • Ideas obvious, unoriginal, or too broad • Details provided confusing or inadequate • Details general/irrelevant and do not fully support main points	• Idea development simplistic, undeveloped, or cryptic • Few relevant details given • Support for main points inappropriate, off topic, too general, or faulty
	Research	• Provides evidence of good research • Uses sources to support and extend own ideas • Cites all sources properly	• Shows evidence of some research using varied sources • Uses source ideas more than own ideas • Most sources cited properly	• Uses relevant sources but lacks in variety • Uses source information as basis or substitute for own ideas • Sources not identified or cited	• Neglects important sources • Uses source information instead of developing own ideas • Uses source material without proper citations

Rubric: Oral Communication Skills Assessment – GROUP EVALUATION – page 3

	Criteria	High Proficiency (HP)	Proficiency (P)	Some Proficiency (SP)	No/Limited Proficiency (LP)
Visual Communication Aids (a.k.a., "Visually Sophisticated")	Overall use	• Very professional and effectively incorporated • PowerPoint expertly used • Multiple types of visual aids presented to increase comprehension	• Clear and effectively incorporated • PowerPoint competently used	• Somewhat unprofessional or included without strong purpose • PowerPoint used as a backbone for the presentation rather than an aid	• Unprofessional, unexplained, or not used appropriately and/or effectively • PowerPoint not used or completely inappropriate
	Appearance	• Professional, sophisticated	• Clear, effective	• Satisfactory	• Unprofessional, sloppy
	Effectiveness	• Graphics reinforce thesis and maximize audience understanding	• Somewhat supportive and helpful, but more needed	• Minimally effective in supporting thesis	• Not used, unclear, and/or ineffective.
	Tables and Figures	• Maximize audience understanding	• Correct; do not add to or detract from audience understanding	• Some problems that detract from audience understanding:	• Significant problems:
	Details	• Attention to details presents polished image	• Spelling correct throughout • Capitalization consistent • Colors effective • Images clear • Font appropriately sized	• Minimal, but noticeable, problems:	• Significant (or reoccurring) problems:

Rubric: Oral Communication Skills Assessment – INDIVIDUAL GROUP MEMBER EVALUATION – page 4

	Criteria	High Proficiency (HP)	Proficiency (P)	Some Proficiency (SP)	No/Limited Proficiency (LP)
Audience Response and Interaction	Audience	• Holds audience's attention throughout own portion of presentation • Engages the audience	• Mostly holds the audience's attention • Encourages audience interaction	• Loses audience's attention at times • Does not encourage audience interaction	• Completely loses audience • Ignores audience
	Q & A	• Demonstrates extensive knowledge of the topic by responding confidently, precisely & appropriately to audience questions • Handles difficult questions with poise and professionalism	• Demonstrates good knowledge of the topic when answering questions • Handles difficult questions with some tact	• Demonstrates satisfactory knowledge when answering questions • Could handle difficult questions with more professionalism	• Unable to answer questions • Handles difficult questions with "I don't know" or "I didn't study that"
Delivery	Gestures, Movement, and Body Language	• Confident; add to presentation	• Do not detract from presentation	• Problem(s) noticeable:	• Problems detract from presentation:
	Eye Contact	• 90%	• 75%	• 60%	<50% -OR- reading

	Voice – Rate and Volume	• Varies to emphasize main points	• Appropriate, steady	• Somewhat
				  – fast | slow
				  – soft | loud
					• Very
					  – fast | slow
					  – soft | loud

	Voice – Enthusiasm	• High energy, good vocal variety	• Medium energy, some vocal variety	• Lower energy, monotone presentation	Appears bored by own presentation
	Voice – Enunciation, Pronunciation	• Exceptionally articulate	• Clear throughout	• Some problems:	Many (or reoccurring) problems:
	Language	• Correct grammar, rich vocabulary	• Grammar, vocabulary well used	• Some problems:	Many (or reoccurring) problems:
	Fillers[1]	• No fillers used	• Minimal	• Very noticeable	• Detracts from presentation
Overall Impression	Demeanor	• Confident, professional	• Comfortable	• Nervous, but able to proceed	• Clearly uncomfortable, unable to proceed
	Appearance	• Neatly groomed and professionally dressed	• Appropriate	• Could be improved	• Unkempt, unprofessional, inappropriate

1 - such as: "umm | like | you know"