Speech Assessment Report
Spring 2019

Author: Joseph F. van Gaalen, Ph.D., Asst. VP of Institutional Research, Assessment & Effectiveness

1 Introduction

Florida SouthWestern's Speech Department has employed a common rubric used by all faculty as a means to evaluate an agreed upon series of student level outcomes. With a goal towards increasing student oral communication achievement, faculty have focused on a series of Student Learning Objectives (SLOs) using the rubric dimensions Introduction, Organization, Support, Oral Documentation, Language, NV-Vocal, NV-Physical, Presentation Media, Attire, and Conclusion, in a formative speech common assessment. Additional department goals for assessment include comparing results of SPC 1017 *Fundamentals of Speech Communication*, with that of SPC 2608 *Introduction to Public Speaking*, and comparisons by campus, dual enrollment (concurrent)/traditional, and online/traditional, when applicable. These correlative measures will serve as support for instructive improvement (Cole et al., 2011; Elder and Paul, 2007).

For additional detail or further analysis not provided in this report, please contact Dr. Joseph F. van Gaalen, Asst. Vice President of Institutional Research, Assessment & Effectiveness, Academic Affairs (jfvangaalen@fsw.edu; x16965).

2 Learning Objectives, Outcomes, and Descriptive Statistics

Using common rubric criterion as an assessment method, in the 2014-15 academic year the FSW Speech faculty defined three areas of interest for evaluation that apply to both SPC 1017 and SPC 2608 and set goals appropriately. Results from that year showed that students met expectations (> 60% at achievement level). As a result, faculty determined that goals were raised in AY 2015-2016 to > 70%. These goals are maintained for AY 2017-2018 with changes to focal elements in this year's SLOs.

The rubric dimensions are modeled on a 5-point scale where a score of 0 indicates "Insufficient", 1 indicates "Beginning" level, 2 indicates the "Developing" level, 3 indicates the "Accomplished" level, and 4 indicates the "Exemplary", or highest level. The SLOs and their measure of success are:

SLO1: Students will know how to avoid plagiarizing when speaking by incorporating an oral citation that includes appropriate information. The faculty established measure of success for this SLO is a rating of "Developing" or higher for 70% of the students.

SLO2: Students will be able to incorporate appropriate nonverbal physical behaviors. The faculty established measure of success for this SLO is a rating of "Developing" or higher in "NV-Physical" for 70% of the students for the Informative Speech.

SLO3: Students will be able to effectively support one's ideas. Students will be able to incorporate presentation media vital to the success of an oral presentation. The faculty established measure of success for this SLO is a rating of "Developing" or higher in "Support" for 70% of the students.

SLO4: Students will improve in the common outcomes of the Informative Speech Outline and the Informative Speech. These areas include Introduction, Oral documentation, Support, Organization, and Conclusion.

2.1 SPC 1017

2.1.1 Learning Objectives

For the spring 2019 assessment, 604 artifacts (based on highest rubric dimension count, not highest overall scores collected) were collected for SPC 1017 from 38 of 48 course sections. In some cases, rubric scores could either not be accessed or located. The faculty established goal for SLO1, a rating of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "Oral Documentation" for 70% of the students was met. Spring 2019 artifacts exhibit 85% of artifacts scored level 2 or greater (Table 1). The faculty established goal for SLO2, a rating of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "NV-Physical" for 70% of the students was met. Spring 2019 artifacts exhibit 95% scored level 2 or greater. The faculty established goal for SLO3, a rating of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "Support" for 70% of the students was met. Spring 2019 artifacts exhibit 98% scored level 2 or greater. Results for SLO4 require a somewhat different reporting process and, for convenience and clarity, are discussed below and listed in Table 2.

Rubric Score	Introduction	Organization	Support	*Oral Documentation*	Language	NV-Vocal	NV-Physical	Presentation Media	Attire	Conclusion
Developing or higher	94%	98%	98%	85%	100%	98%	95%	92%	98%	93%
4	45.0%	54.5%	58.3%	32.6%	64.4%	24.7%	29.5%	47.0%	78.1%	41.9%
3	29.3%	31.5%	28.3%	36.1%	32.1%	41.9%	36.1%	35.3%	12.4%	32.3%
2	20.0%	11.8%	11.4%	16.2%	3.1%	31.8%	29.1%	10.1%	7.1%	18.7%
1	4.8%	1.8%	1.7%	7.3%	0.2%	1.3%	4.6%	2.5%	1.8%	4.1%
0	0.8%	0.5%	0.3%	7.8%	0.2%	0.3%	0.7%	5.1%	0.5%	3.0%

Table 1. Percentage of student achievement level by rubric dimension for Informative Speech (includes percentage of students scoring in developmental level or higher as per SLOs). Rubric dimensions identified in SLOs in blue.

Rubric Score	Introduction	Organization	Support	Oral Documentation	Conclusion
Developing or higher	94%	96%	94%	77%	93%
4	58.5%	73.6%	56.4%	35.9%	56.0%
3	23.3%	13.6%	24.3%	23.5%	25.6%
2	11.9%	9.3%	12.8%	17.8%	11.4%
1	4.1%	1.1%	4.7%	8.9%	3.1%
0	2.2%	2.5%	1.7%	14.0%	4.0%

Table 2. Percentage of student achievement level by rubric dimension for Outline that are common to Informative Speech for (includes percentage of students scoring in developmental level or higher as per SLOs).

The faculty established goal for SLO4, students will improve in the common outcomes of the Informative Speech Outline and the Informative Speech was met. To effectively illustrate this, two separate

descriptions are provided. First, Table 3 describes mean scores by dimension and overall score for both Outline and Informative Speech.

From these results improvement is exhibited in 2 of 5 dimensions. It is somewhat misleading, however, to compare improvement/decline percentages based on all data. Inherently, those scoring '4' on the Outline can only decline or remain unchanged. Similarly, those scoring '0' can only improve or remain unchanged. As the purpose of this study is to determine where improvement occurs and why, it may be more prudent to compare improvement/decline percentages and exclude those scoring 4s on the Outline score (bottom three rows, Table 3). Based on these results, improvement is exhibited in all dimensions and overall score.

Rubric Score	Introduction	Organization	Support	Oral Documentation	Conclusion	OVERALL
All artifacts						
Outline Mean	8.6	9.0	8.5	6.8	8.4	80.3
Informative Speech Mean	8.3	8.8	8.9	7.4	8.1	82.6
Change from Outline to Speech	*-0.3*	*-0.2*	*0.4*	*0.6*	*-0.3*	*2.3*
Only artifacts that did not score 4/4 on outline						
Outline Mean	*6.5*	*6.3*	*6.6*	*5.0*	*6.4*	*79.6*
Informative Speech Mean	*6.9*	*7.3*	*7.8*	*6.5*	*6.9*	*82.1*
Change from Outline to Speech	*0.4*	*1.0*	*1.2*	*1.5*	*0.5*	*2.5*

Table 3. Comparison of changes in mean score from Outline rubric dimensions to Informative Speech.

A second way of describing results for this type of study is to review the percent improvements of common artifacts (originating from the same student) as shown in Figure 1 denoted by the black bar along with percent declines denoted by the red bar. From this figure, only the overall scores exhibit net improvements by students. The others exhibit declines. This may be owing in part to some sections which appear to have near perfect scores, thereby skewing results somewhat. As with Table 3, we compare only those artifacts which did not score perfect results on the Outline (Figure 2). From this figure, as with Table 3 above using extracted data, all five dimensions exhibit net improvement ranging from 35.7% in "Conclusion" to 47.0% in "Support."

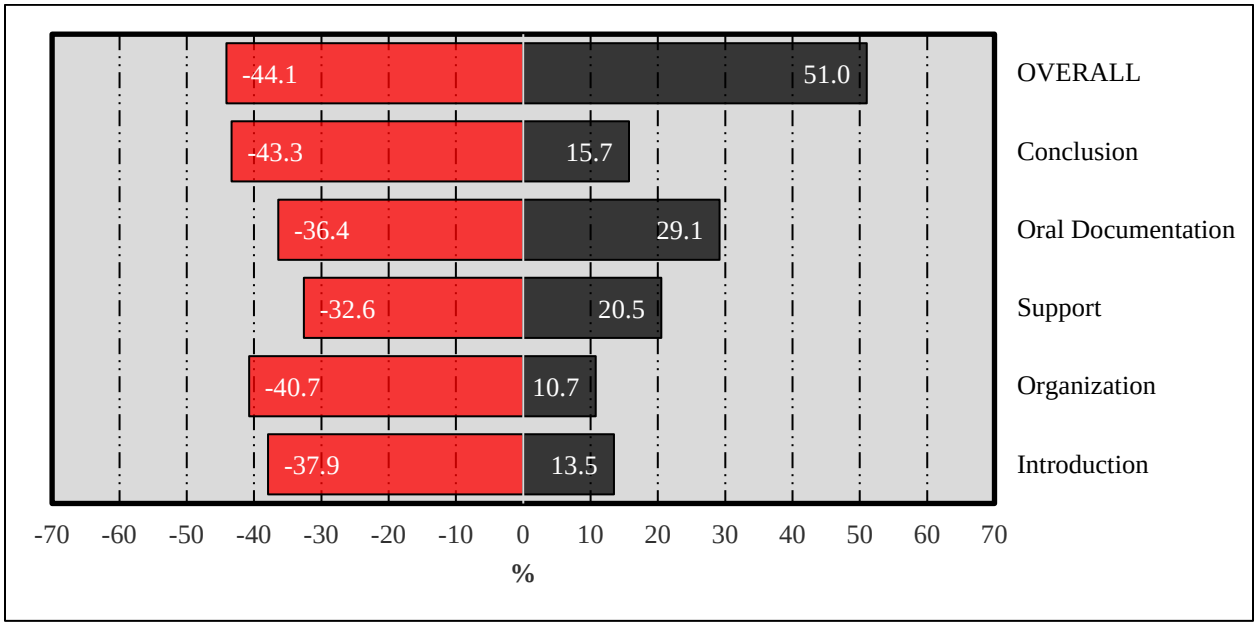

Figure 1. Percent increase/decrease from Outline to Speech by common rubric dimension.

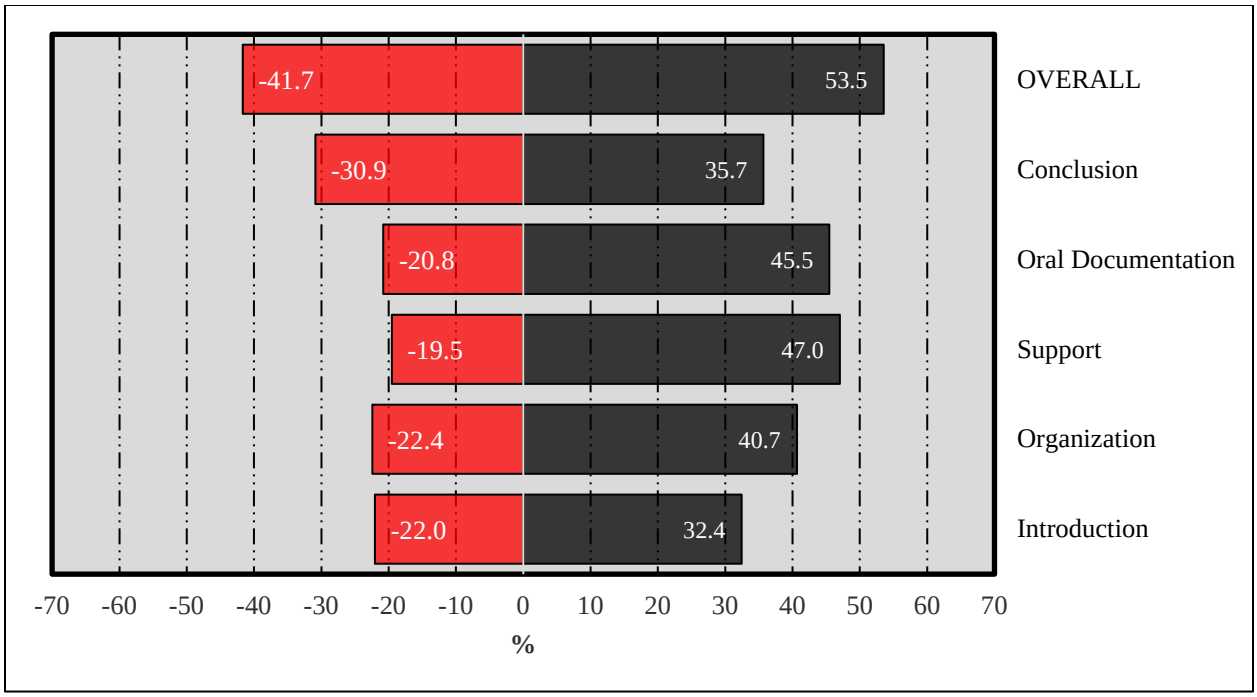

Figure 2. Percent increase/decrease from Outline to Speech by common rubric dimension excluding those artifacts scoring perfect 4/4 on Outline.

2.1.2 Descriptive Statistics & Longitudinal Data

Descriptive statistics for SPC 1017 artifacts for both Outline and Informative Speech can be found in Tables 4 and 5. Note that comparative means in Tables 2 and 3 above may differ from those in Tables 4 and 5 as the comparative study includes common artifacts only. If a student did not complete both Outline and Informative Speech, a comparative score could not be completed and is thus excluded in results for Tables 2 and 3. Tables 4 and 5 exhibit all artifacts. A histogram of artifact scores for both Outline and Speech is shown in Figure 3. The Speech distribution exhibits a negative shift in scores compared with the outline, likely related to a heightened number of near perfect scores in the outline.

	Introduction	Organization	Support	*Oral Documentation*	Language	NV-Vocal	NV-Physical	Presentation Media	Attire	*Conclusion*
n	604	604	604	604	604	604	604	604	604	604
Max	10	10	10	10	10	10	10	10	10	10
Min	0	0	0	0	0	0	0	0	0	0
Mode	10	10	10	8	10	8	8	10	10	10
Mean	8.2	8.7	8.8	7.3	9.2	7.8	7.7	8.2	9.3	8.0
Standard deviation	2.07	1.70	1.65	2.89	1.18	1.66	1.96	2.48	1.59	2.32

Table 4. Descriptive statistics for SPC 1017 Informative Speech.

Rubric Score	Introduction	Organization	Support	Oral Documentation	Conclusion
n	810	810	810	810	810
Max	10	10	10	10	10
Min	0	0	0	0	0
Mode	10	10	10	10	10
Mean	8.6	9.0	8.5	6.8	8.4
Standard deviation	2.23	2.03	2.19	3.45	2.41

Table 5. Descriptive statistics for SPC 1017 Outline.

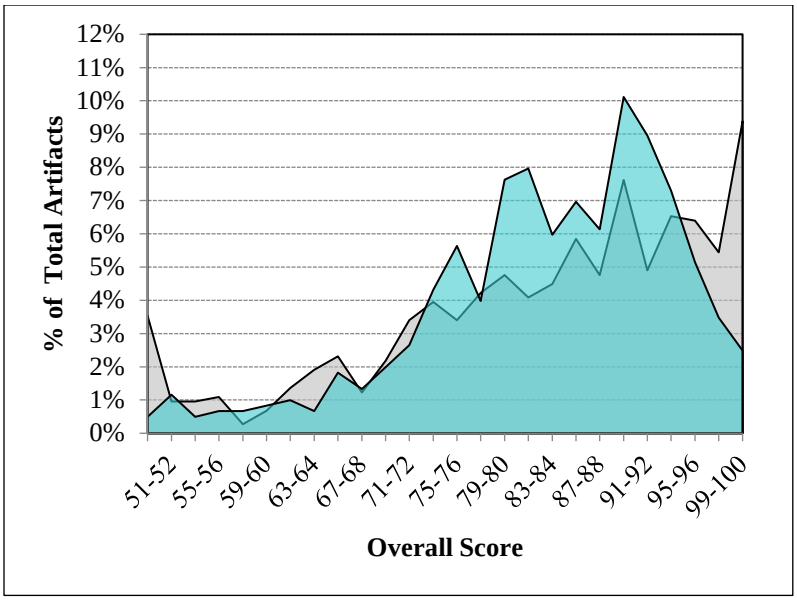

Figure 3. Overall score distribution for Outline (gray) and Speech (aqua) for spring 2019.

To describe the behavior of the rubric dimensions for the Informative Speech based on overall achievement a color map, or binary raster image was created by calculating the mean scores for each dimension as a function of combined score (Figure 4). To create this image the rubric scores (4, 3, 2, 1, or 0) for each artifact was grouped based on combined raw rubric score (10 dimensions x maximum rubric level of 4 = 40 overall points). The color represents the mean rubric score achieved in each dimension based on the combined score as shown in the x-axis.

	Introduction	Organization	Support	Oral Doc	Language	NV-Vocal	NV-Physical	Presentation Media	Attire	Conclusion	Equal Distribution
40	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
39	4.0	3.9	4.0	3.8	4.0	3.9	3.8	4.0	4.0	3.9	3.9
38	3.9	3.9	3.8	3.7	3.9	3.5	3.6	3.9	3.9	3.8	3.8
37	3.7	3.8	3.8	3.6	3.8	3.5	3.5	3.7	3.9	3.7	3.7
36	3.7	3.8	3.8	3.4	3.8	3.2	3.3	3.6	3.9	3.6	3.6
35	3.6	3.7	3.7	3.5	3.7	3.0	3.1	3.5	3.7	3.6	3.5
34	3.4	3.6	3.6	3.0	3.7	3.1	3.0	3.3	3.8	3.4	3.4
33	3.2	3.4	3.7	2.8	3.7	3.1	3.1	3.2	3.7	3.1	3.3
32	3.1	3.5	3.6	2.6	3.5	3.0	2.8	3.3	3.6	3.0	3.2
31	3.1	3.0	3.4	2.6	3.8	2.8	3.0	3.1	3.3	3.0	3.1
30	2.9	3.3	3.2	2.4	3.3	2.8	2.8	2.9	3.5	3.0	3.0
29	2.5	3.0	3.2	2.0	3.7	2.9	2.7	3.0	3.7	2.3	2.9
28	2.2	2.9	3.2	2.6	3.5	2.8	2.5	2.7	3.3	2.3	2.8
27	2.4	2.8	3.2	2.3	3.4	2.8	2.6	2.1	3.4	1.9	2.7
26	2.4	3.2	2.6	1.8	3.3	2.9	2.1	1.8	3.7	2.4	2.6
25	2.1	2.7	2.6	0.2	3.2	2.9	2.6	2.6	3.8	2.2	2.5
≤ 24	2.1	2.1	2.3	1.1	3.3	2.4	2.1	1.8	3.4	1.5	2.4

Scale 1 2 3 4

Figure 4. Colormap of mean scores for each rubric dimension (range: 0-4) based on overall rubric score (combined rubric score of all dimensions, max=40) for SPC 1017. (Right Sidebar) Comparison rubric dimension if dimension score is the same as overall (i.e. artifact overall score is equally distributed across all sections). A rubric dimension with hotter colors (reds) means that dimension achievement exceeds the overall score and is an area of strength. An exam section with colder colors (blues) means that section achievement is lower than the overall score and is therefore an area of weakness.

A review of the colormap in Figure 4 shows that at 38/40 and above (average rubric score of 3.8 or higher) all dimensions fair relatively equally (hot colors fairly evenly distributed). When overall rubric scores range from 32-37, the "Organization," "Support," "Language," and "Attire" dimensions exhibit strong scores even when the overall score is somewhat lower. For example, at an overall score of 32, those four dimensions exhibit average scores ranging from 3.5 to 3.6, while other dimensions range from 2.6 to 3.3. Moreover, the "Language" and "Attire" attributes remains high even at very low overall scores. At an overall score of 27, for example, "Language" and "Attire" exhibit an average of 3.4 and 3.4, respectively, while all other categories range from 1.9 to 3.2. Lastly, when overall rubric scores range 30 or below, "Oral Documentation" is exceptionally weaker than the others.

A comparison of Informative Speech results over time is shown in Figure 5 below. The "Oral Documentation" dimension is consistently the lowest dimension over time, scoring the lowest score in all terms since the study began. The "Attire" dimension is consistently the highest, scoring the highest score in 9 of 10 terms. Some dimensions appear to have made improvements although the most recent term exhibits a drop in all dimensions, so this trend is as yet unclear. Though the recent term exhibits a drop across all dimensions, this does not mean they are the lowest scores in the study. The "Organization" dimension, for example, exhibits the 3rd highest in spring 2019 since the study began.

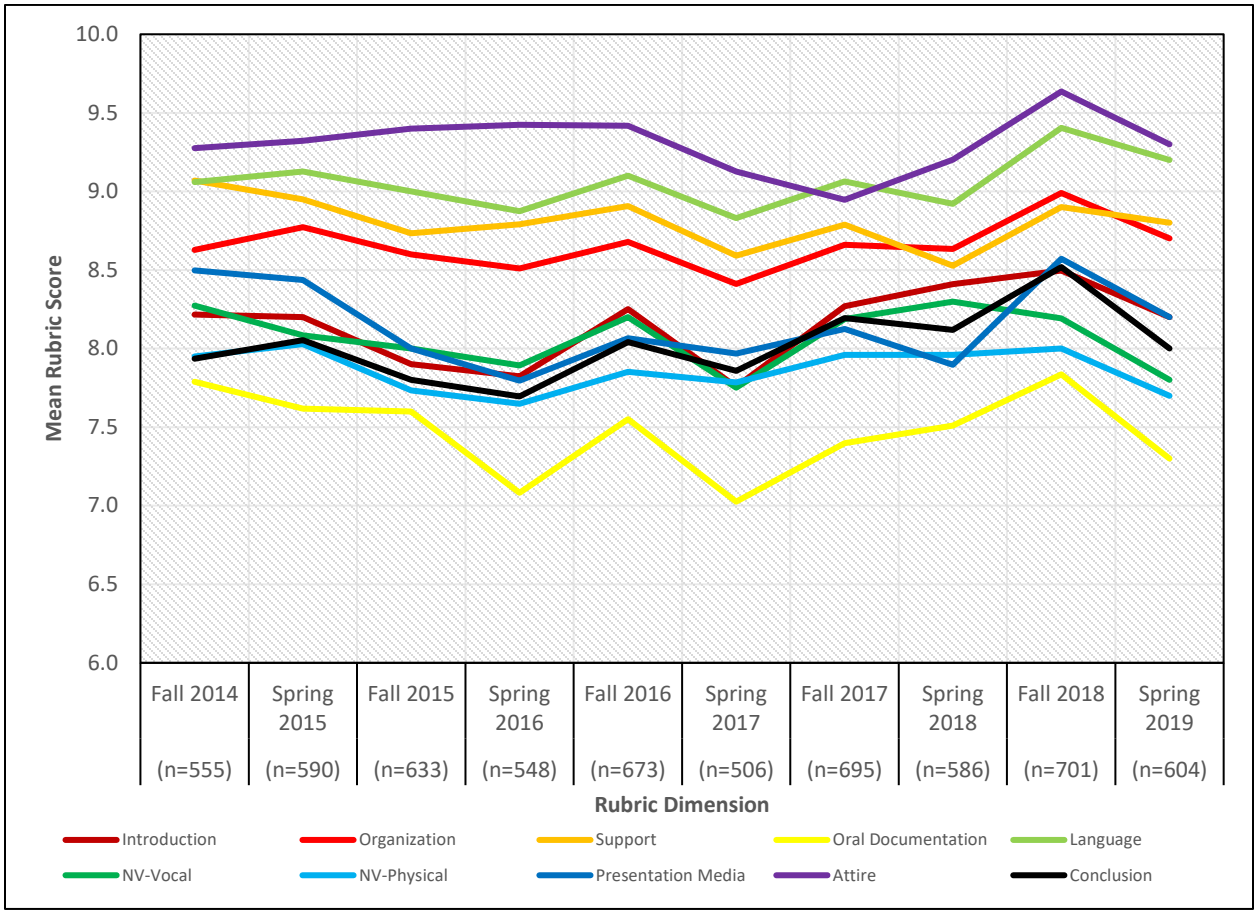

*Figure 5. Comparison of mean scores for Informative Speech through time. *The "Support", "NV-Physical", "Presentation Media", and "Attire" dimensions maximum rubric score was altered beginning fall 2017. The results from previous terms have been normalized to the new dimension maximum for comparative purposes.*

2.2 SPC 2608

2.2.1 Learning Objectives

For the spring 2019 assessment, 119 artifacts (based on highest rubric dimension count, not highest overall scores collected) were collected for SPC 2608 from 12 of 17 course sections. In some cases, rubric scores could either not be accessed or located. In other sections, old versions of the rubric scoring were used or maximum scores differed from the common rubric. The faculty established goal for SLO1, a rating of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "Oral Documentation" for 70% of the students was met. Spring 2019 artifacts exhibit 88% of artifacts scored level 2 or greater (Table 6). The faculty established goal for SLO2, a rating of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "NV-Physical" for 70% of the students was met. Spring 2019 artifacts exhibit 98% scored level 2 or greater. The faculty established goal for SLO3, a rating of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "Support" for 70% of the students was met. Spring 2019 artifacts exhibit 98% of scored level 2 or greater. Results for SLO4 require a somewhat different reporting process and, for convenience and clarity, are discussed below and listed in Table 7.

Rubric Score	Introduction	Organization	Support	*Oral Documentation*	Language	NV-Vocal	NV-Physical	Presentation Media	Attire	Conclusion
Developing or higher	97%	99%	98%	88%	100%	100%	98%	94%	100%	97%
4	52.9%	81.5%	81.5%	50.4%	63.0%	64.7%	53.8%	67.2%	95.8%	66.4%
3	24.4%	10.9%	16.0%	27.7%	37.0%	26.1%	35.3%	17.6%	3.4%	24.4%
2	19.3%	6.7%	0.8%	10.1%	0.0%	9.2%	9.2%	9.2%	0.8%	6.7%
1	3.4%	0.8%	1.7%	5.9%	0.0%	0.0%	0.8%	0.0%	0.0%	1.7%
0	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	0.8%	5.9%	0.0%	0.8%

Table 6. Percentage of student achievement level by rubric dimension (includes percentage of students scoring in developmental level or higher as per SLOs) for SPC 2608. Rubric dimensions identified in SLOs in blue.

Rubric Score	Introduction	Organization	Support	Oral Documentation	Conclusion
Developing or higher	71%	88%	78%	56%	76%
4	71.3%	87.9%	77.7%	55.5%	76.1%
3	16.2%	6.5%	13.4%	12.6%	16.6%
2	9.7%	4.9%	5.3%	10.9%	5.7%
1	1.6%	0.0%	2.8%	4.9%	0.8%
0	1.2%	0.8%	0.8%	16.2%	0.8%

Table 7. Percentage of student achievement level by rubric dimension for Outline that are common to Informative Speech for (includes percentage of students scoring in developmental level or higher as per SLOs).

The faculty established goal for SLO4, students will improve in the common outcomes of the Informative Speech Outline and the Informative Speech was met. To effectively illustrate this, again two separate descriptions are provided. First, Table 8 describes mean scores by dimension and overall score for both Outline and Informative Speech.

From these results improvement is exhibited in 1 of 5 dimensions. As with SPC 1017, it is somewhat misleading to compare improvement/decline percentages based on all data. As such, the bottom three rows of Table 8 compare improvement/decline percentages and excludes those scoring 4s on the Outline score (bottom row, Table 8). Based on these results, improvement is exhibited in 5 of 5 dimensions and the overall score.

Rubric Score	Introduction	Organization	Support	Oral Documentation	Conclusion	OVERALL
All artifacts						
Outline Mean	9.1	9.6	9.2	7.4	9.3	90.1
Informative Speech Mean	8.4	8.9	9.1	7.5	9.3	88.1
Change from Outline to Speech	*-0.7*	*-0.7*	*-0.1*	*0.1*	*0.0*	*-2.0*
Only artifacts that did not score 4/4 on outline						
Outline Mean	*7.1*	*6.8*	*7.8*	*4.6*	*7.7*	*85.3*
Informative Speech Mean	*7.6*	*8.7*	*8.7*	*7.3*	*8.7*	*87.9*
Change from Outline to Speech	*0.5*	*1.9*	*0.9*	*2.7*	*1.0*	*2.6*

Table 8. Comparison of changes in mean score from Outline rubric dimensions to Informative Speech.

As with SPC 1017 above, a second way of describing results for this type of study is to review the percent improvements of common artifacts (originating from the same student) as shown in Figure 6 denoted by the black bar along with percent declines denoted by the red bar. From this figure, the "Introduction," "Support," "Oral Documentation," and "Conclusion" exhibit net improvements by students (as well as the overall). And as before, we compare only those artifacts which did not score perfect results on the Outline (Figure 7). From this figure, as with Table 8 above using extracted data, all five dimensions exhibit net improvement ranging from 40% in "Introduction" to 56% in "Oral Documentation".

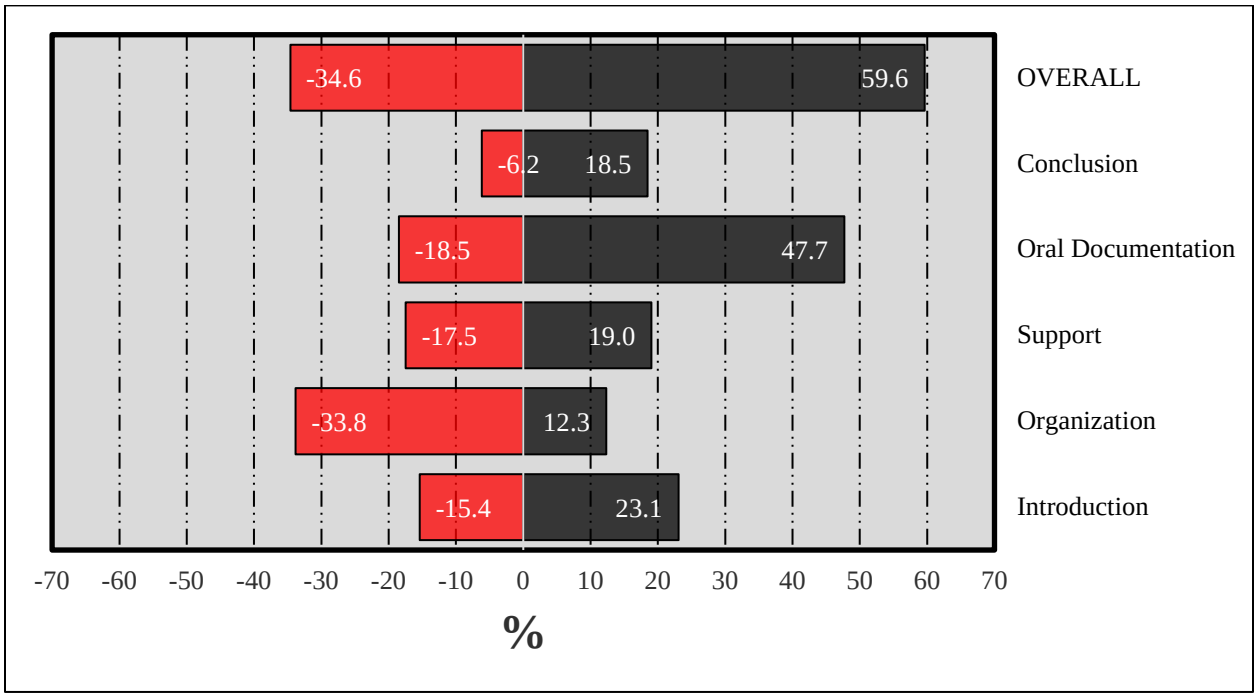

Figure 6. Percent increase/decrease from Outline to Speech by common rubric dimension.

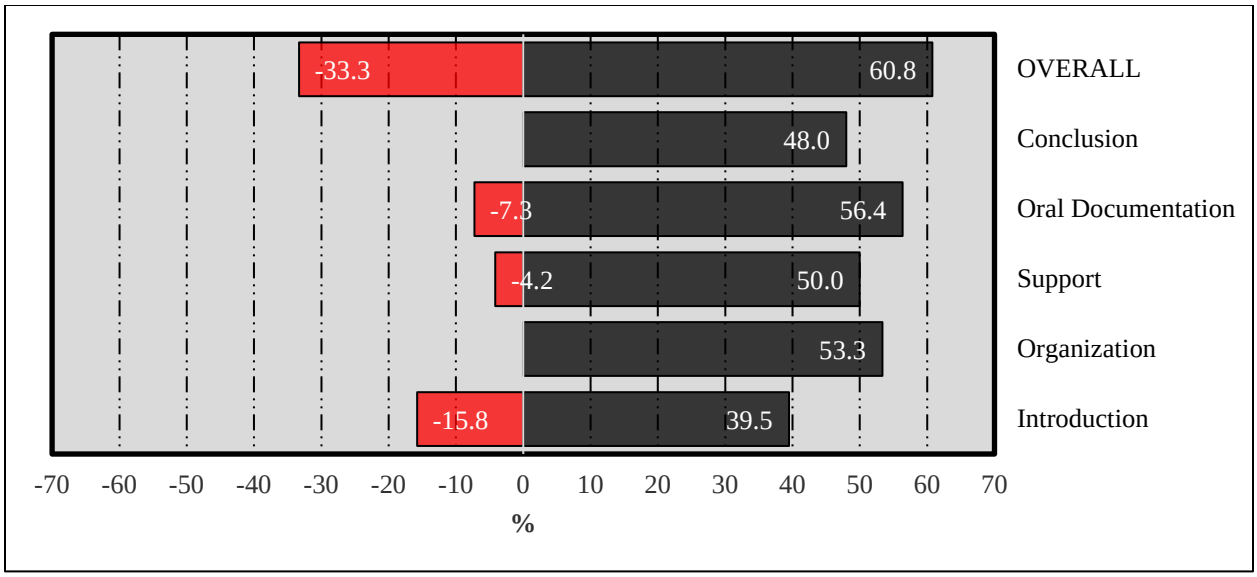

Figure 7. Percent increase/decrease from Outline to Speech by common rubric dimension excluding those artifacts scoring perfect 4/4 on Outline.

2.2.2 Descriptive Statistics & Longitudinal Data

Descriptive statistics for SPC 2608 artifacts for both Outline and Informative Speech can be found in Tables 9 and 10. Note that comparative means in Tables 6 and 7 above may differ from those in Tables 9 and 10 as the comparative study includes common artifacts only. If a student did not complete both Outline and Informative Speech, a comparative score could not be completed and is thus excluded in results for Tables 6 and 7. Tables 9 and 10 exhibit all artifacts. A histogram of artifact scores for both Outline and Speech is shown in Figure 8. Both Speech and Outline data exhibit a large percentage of scores in the 99-100 scoring bin, which makes comparisons difficult. The Speech data distribution exhibits a secondary peak centered in the mid-80s while the Outline exhibits one at 89-90. This is perhaps the most change in score distribution.

	Introduction	Organization	Support	Oral Documentation	Language	NV-Vocal	NV-Physical	Presentation Media	Attire	Conclusion
n	119	119	119	119	119	119	119	119	119	119
Max	10	10	10	10	10	10	10	10	10	10
Min	3	3	3	0	8	6	0	0	6	0
Mode	10	10	10	10	10	10	10	10	10	10
Mean	8.5	9.5	9.5	8.0	9.3	9.1	8.8	8.7	9.9	9.0
Standard deviation	1.87	1.28	1.18	2.78	0.97	1.32	1.64	2.53	0.51	1.68

Table 9. Descriptive statistics for SPC 2608.

Rubric Score	Introduction	Organization	Support	Oral Documentation	Conclusion
n	247	247	247	247	247
Max	10	10	10	10	10
Min	0	0	0	0	0
Mode	10	10	10	10	10
Mean	9.1	9.6	9.2	7.4	9.3
Standard deviation	1.82	1.30	1.74	3.72	1.52

Table 10. Descriptive statistics for SPC 2608 Outline.

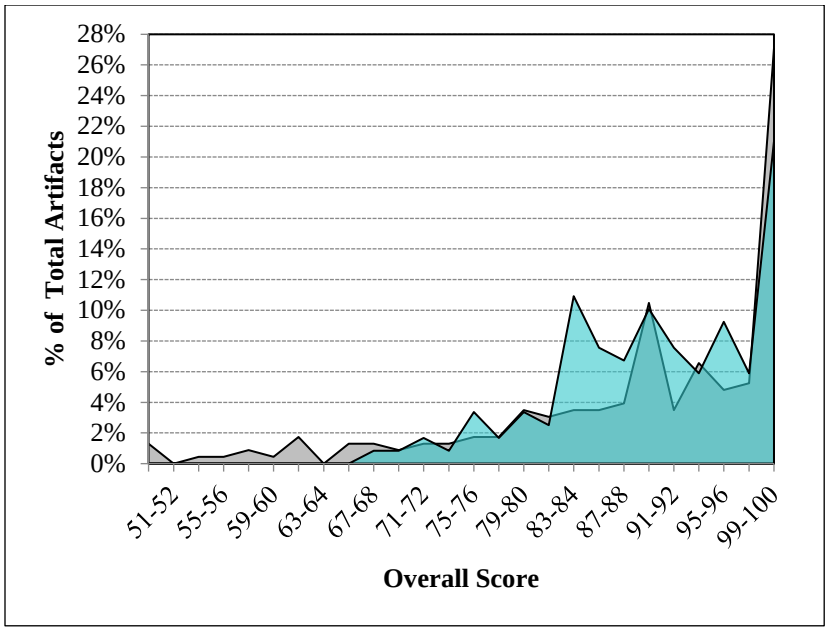

Figure 8. Overall score distribution for Outline (gray) and Speech (aqua).

To describe the behavior of the rubric dimensions based on overall achievement a color map, or binary raster image was created by calculating the mean scores for each dimension as a function of combined score (Figure 9). To create this image the rubric scores (4, 3, 2, 1, or 0) for each artifact was grouped based on combined raw rubric score (10 dimensions x maximum rubric level of 4 = 40 overall points). The color represents the mean rubric score achieved in each dimension based on the combined score as shown in the x-axis.

	Introduction	Organization	Support	Oral Doc	Language	NV-Vocal	NV-Physical	Presentation Media	Attire	Conclusion	Equal Distribution
40	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
39	3.9	3.9	3.9	4.0	4.0	4.0	4.0	4.0	4.0	3.6	3.9
38	3.6	3.7	4.0	3.6	4.0	3.8	3.7	4.0	4.0	3.7	3.8
37	3.4	3.9	3.9	3.3	3.9	3.7	3.4	3.8	4.0	3.5	3.7
36	3.3	4.0	3.8	2.4	3.7	3.9	3.6	3.3	4.0	3.9	3.6
35	3.4	3.5	3.7	2.6	4.0	3.4	3.0	3.8	4.0	3.7	3.5
34	2.5	3.8	3.6	1.7	3.8	3.7	3.4	3.9	4.0	3.5	3.4
33	2.8	4.0	3.2	2.6	3.6	4.0	3.2	2.0	4.0	3.6	3.3
32	3.0	4.0	3.5	3.0	3.5	3.7	2.2	2.2	4.0	3.8	3.2
31	3.2	4.0	2.5	3.5	3.2	3.2	2.5	0.8	4.0	3.7	3.1
30	1.8	3.6	3.2	2.2	3.6	3.2	3.2	3.2	4.0	2.2	3.0
29	2.0	3.7	2.6	2.0	2.0	3.6	2.0	2.0	2.0	1.6	2.9
28	2.0	2.7	2.6	2.0	2.0	2.9	2.0	2.0	2.0	1.6	2.8
≤ 27	1.5	1.9	1.9	1.7	1.6	1.7	1.6	1.5	1.9	1.8	2.7

Scale 1 2 3 4

Figure 9. Colormap of mean scores for each rubric dimension (range: 0-4) based on overall rubric score (combined rubric score of all dimensions, max=40) for SPC 1017. (Right Sidebar) Comparison rubric dimension if dimension score is the same as overall (i.e. artifact overall score is equally distributed across all sections). A rubric dimension with hotter colors (reds) means that dimension achievement exceeds the overall score and is an area of strength. An exam section with colder colors (blues) means that section achievement is lower than the overall score and is therefore an area of weakness.

A review of the colormap in Figure 9 shows that the "Organization," "Attire," and to a lesser extent "Language" dimensions remain strong even at low overall scores. For example, at 30/40, the mean score for those three are 3.6/4, 3.6/4, and 4.0/4, respectively. By comparison, all other dimensions range from 1.8/4 to 3.2/4. The "Oral documentation" dimension exhibits the steepest drop-off at higher overall scores. At 36/40, for example, "Oral documentation" is 2.4/4 when all other dimensions are 3.3/4 or higher.

A comparison of Informative Speech results over time is shown in Figure 10 below. Over time, the "Attire" dimension has been the highest achieving in 10 of 10 terms. The "Oral documentation" dimension has been the lowest in 6 of 10 terms. The "NV-Physical" has shown vast improvement since a dip in fall 2017, down to 7.6/10 rising to 8.7/10 in spring 2019. The "Support" dimension exhibits the highest score in spring 2019 since the study began at 9.55/10.

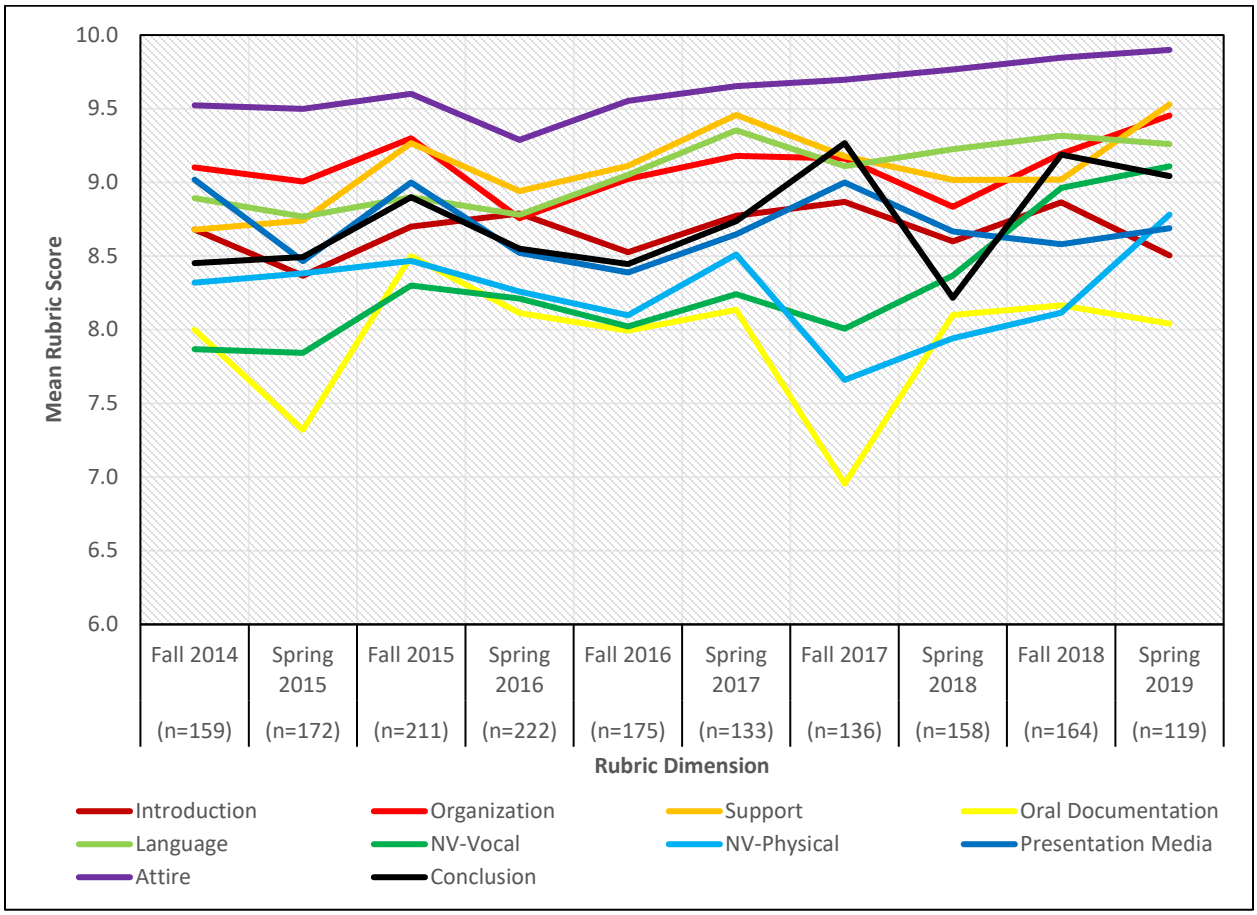

Figure 10. Comparison of mean scores for Informative Speech through time.

3 Exploratory Analysis and Significance Testing

Multiple comparisons of artifact scores across varying formats, campuses, and student types were made in order to add depth to the distribution of the artifacts by achievement level. Each course was divided into the appropriate subgroups to perform the analysis. Where possible, additional methods of analysis were conducted to provide a broader picture of these comparisons.

3.1 SPC 1017

3.1.1 Dual Enrollment (Concurrent) to non-Dual Enrollment Comparison

No dual enrollment sections of SPC 1017 were offered during spring 2019 so no comparison study could be completed.

3.1.2 Online to Traditional Comparison

During the spring 2019 semester, 187 total online artifacts and 416 traditional artifacts were collected from SPC 1017 course sections. A comparison of mean scores by rubric dimension is provided in Table 11 and a graphical representation is provided in Figure 11. Mean scores are higher for online courses in all ten dimensions. Differences in the means for all dimensions and overall score were tested for significance using a Welch's t-test according to standard methods (Davis, 1973; McDonald, 2009; Wilkinson, 1999). Of these, "Introduction," "Organization," "Support," "Language," "NV-Vocal," "NV-Physical", "Attire," and the overall scores are statistically significantly different. Therefore, we must reject the null hypothesis that the differences in the means of the artifacts of the two course section types are equal to 0 for these dimensions, and we can conclude with a 95% confidence that the differences in scores are not solely due to chance.

	Introduction	Organization	Support	*Oral Documentation*	Language	NV-Vocal	NV-Physical	Presentation Media	Attire	*Conclusion*	Combined Score
Rubric Max	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*100*
Online mean	8.9	9.4	9.5	7.8	9.7	8.5	8.8	8.2	9.6	8.6	8.9
Traditional mean	8.0	8.6	8.8	7.2	9.2	7.6	7.4	8.2	9.2	7.8	8.0
Effect Size	-0.39	-0.53	-0.51	-0.15	-0.45	-0.39	-0.56	-0.01	-0.20	-0.29	-0.30
p-value	**4.4×10^{-5}**	**1.6×10^{-8}**	**3.7×10^{-8}**	0.829	**9.8×10^{-7}**	**2.5×10^{-5}**	**3.7×10^{-9}**	0.319	**0.040**	0.051	**3.5×10^{-4}**

Table 11. Comparison of mean scores for Online and Traditional for SPC 1017. Bold denote statistically significant difference. Rubric dimensions identified in SLOs in blue. Positive effect sizes indicate a higher mean score for Traditional artifacts.

Effect size was calculated using a method devised by Rosenthal and Rosnow (1991) for meta-analytical purposes in potential comparisons with other institutions (Lipsey and Wilson, 1993). The statistically significant results exhibit what Cohen (1988) would consider ranges of small-to-medium effect sizes ranging from 0.01 to 0.56 (Table 11). In other words, non-overlap from online artifacts to traditional artifacts range from approximately 0% to 35%.

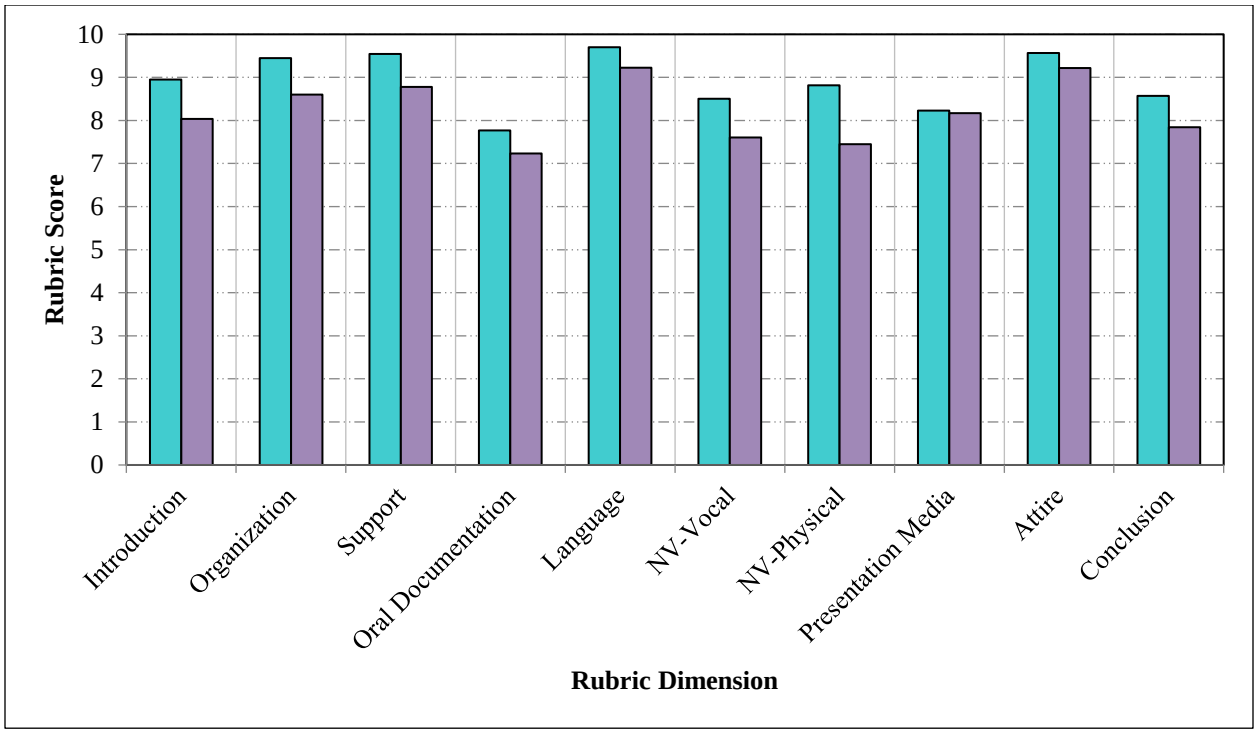

Figure 11. Comparison of mean scores for online (aqua) and traditional (purple) scores for SPC 1017.

3.1.3 Comparison by Campus/Site

Of the 604 artifacts collected from SPC 1017, 73 originated from the Charlotte campus, 130 from the Collier campus, 187 from FSW Online, 0 from the Hendry-Glades Center, and 212 from the Thomas Edison (Lee) campus. Scores by rubric dimension varied greatly across campuses. A comparison of mean scores by rubric dimension is provided in Table 12.

	Introduction	Organization	Support	*Oral Documentation*	Language	NV-Vocal	NV-Physical	Presentation Media	Attire	*Conclusion*	Combined Score
Rubric Max	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*100*
Charlotte	**9.2**	9.3	**9.5**	7.6	9.8	8.2	7.9	**9.4**	9.6	**9.2**	89.9
Collier	7.1	8.6	9.3	7.5	**9.8**	6.7	6.8	7.5	8.8	7.5	79.6
FSW Online	8.9	**9.4**	9.5	**7.8**	9.7	**8.5**	**8.8**	8.2	**9.6**	8.6	85.8
Hndry Gldes	~	~	~	~	~	~	~	~	~	~	~
Edison (Lee)	8.2	8.4	8.2	6.9	8.7	7.9	7.7	8.1	9.3	7.6	81.4

Table 12. Comparison of mean scores by site for SPC 1017. Bold denotes highest mean score in that dimension among all sites. Rubric dimensions identified in SLOs in blue.

FSW Online exhibits higher scores in 5/10 dimensions, which is most commonly the highest scoring site. Charlotte exhibits the highest scores in 4/10 dimensions and the overall score. Collier exhibits the highest scores in 1/10 dimensions.

A plot comparing score distribution of the combined (overall) scores by site is presented in Figure 12. Collier and Thomas Edison (Lee) exhibit similar distributions both in range and central tendency. Both Charlotte and FSW Online exhibit a negative skewness (shift towards more positive values). The former two sites are centered between 80 and 84 while the latter two are centered between 89 and 94.

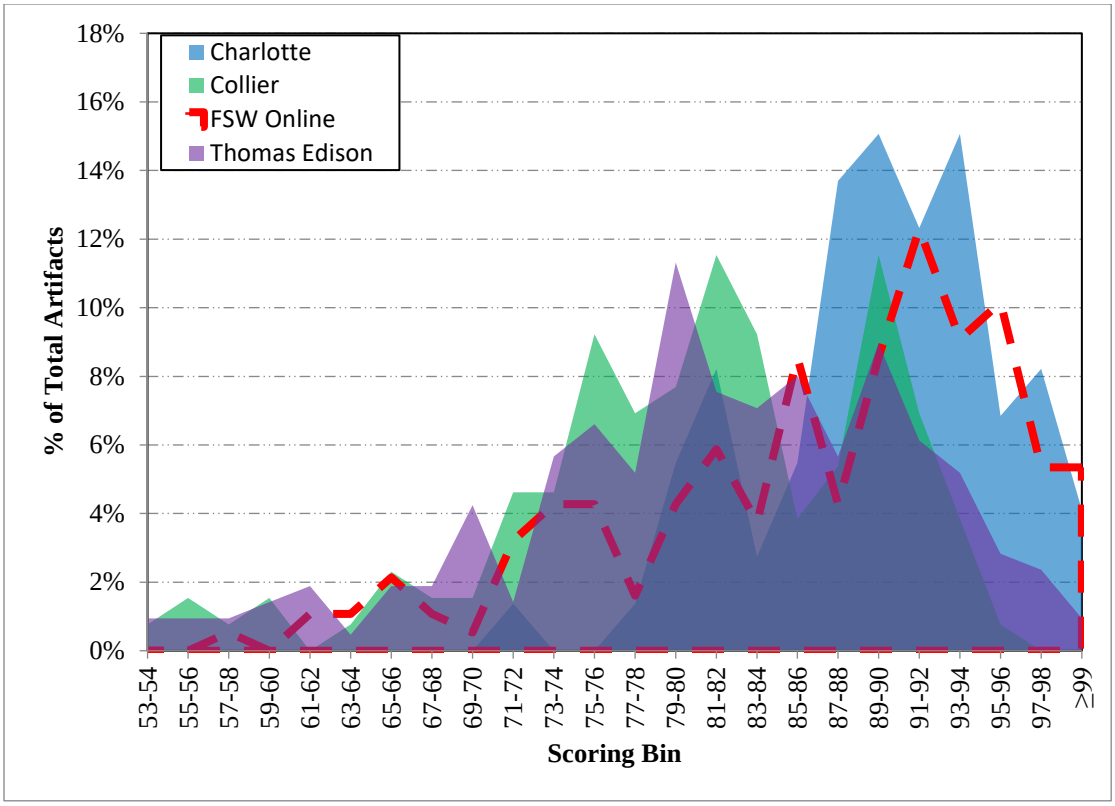

Figure 12. Comparison of artifact score distribution by site.

A one-way analysis of variance was used to compare means of the combined rubric scores at each site. Results of the ANOVA exhibit a statistically significant difference between sites (see Table 13). Therefore, we can reject the null hypothesis that the mean combined rubric scores at each site are equal to each other and we can conclude with a 95% confidence that the differences in scores are not solely due to chance.

Source of Variation	Sum of squared differences	df	Mean Squares	F_{obs}	p-value	F_{crit}
Between Sites	6821.2	3	2273.7	21.25	$4.34x10^{-13}$	2.62
Within Sites	63,994.3	598	107.0			
Total	70,815.5	601				

Table 13. Results of one-way ANOVA of combined rubric scores at each site for SPC 1017.

3.2 SPC 2608

3.2.1 Dual Enrollment (Concurrent) to non-Dual Enrollment Comparison

No dual enrollment sections were offered in spring 2019 and so no comparison study could be completed.

3.2.2 Online to Traditional Comparison

During the spring 2019 semester, 77 total online artifacts and 42 traditional artifacts were collected from SPC 2608 course sections. A comparison of mean scores by rubric dimension is provided in Table 14 and a graphical representation is provided in Figure 13. Mean scores are lower for online courses in

6 of 10 dimensions. Differences in the means for all dimensions and overall score were tested for significance using a Welch's t-test according to standard methods (Davis, 1973; McDonald, 2009; Wilkinson, 1999). The "Introduction," "Language," "NV-Vocal," "NV-Physical," "Presentation Media," and "Attire" dimensions are statistically significantly different. Therefore, we must reject the null hypothesis that the differences in the means of the artifacts of the two courses in the statistically significant dimensions as well as the overall score are equal to 0, and we can conclude with a 95% confidence that the differences in scores are not solely due to chance. It should be noted that there is a 17-25% chance that the marginally significant results between the means of the "Introduction," "Physical," and "Attire" dimensions may be a Type I error according to Johnson (2013).

Effect size was calculated using a method devised by Rosenthal and Rosnow (1991) for meta-analytical purposes in potential comparisons with other institutions (Lipsey and Wilson, 1993). The statistically significant results exhibit a wide range of effect sizes from 0.0 to 1.6 (Table 14). In other words, non-overlap from online artifacts to traditional artifacts range from approximately 0% to 73%.

	Introduction	Organization	Support	Oral Documentation	Language	NV-Vocal	NV-Physical	Presentation Media	Attire	Conclusion	Combined Score
Rubric Max	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*100*
Online mean	8.8	9.5	9.5	8.6	8.9	8.9	8.6	8.0	9.8	9.0	89.6
Traditional mean	8.0	9.4	9.5	7.0	10.0	9.6	9.1	10.0	10.0	9.1	91.5
Effect Size	-0.42	-0.09	-0.01	-0.54	1.60	0.63	0.37	1.13	0.40	0.03	0.26
p-value	**0.028***	0.640	0.966	0.058	**8.9×10^{-14}**	**0.001**	**0.045***	**3.9×10^{-8}**	**0.033***	0.883	0.164

*Table 14. Comparison of mean scores for Online and Traditional for SPC 2608. Bold denote statistically significant difference. Rubric dimensions identified in SLOs in blue. Positive effect sizes indicate a higher mean score for Traditional artifacts. *Denote marginal significance as defined by Johnson (2013).*

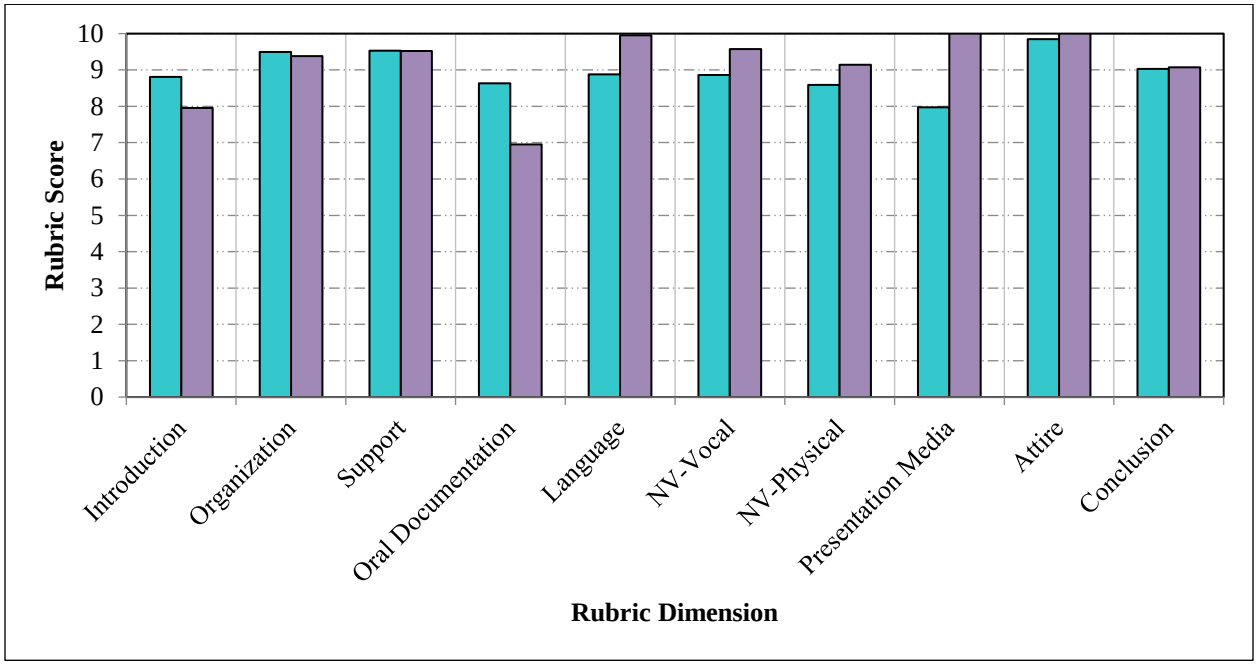

Figure 13. Comparison of mean scores for online (aqua) and traditional (purple) scores for SPC 2608.

3.2.3 Comparison by Campus/Site

Data was only reported from two sites, Lee, and FSW Online. As such, the analysis for this area is included in Section 3.2.2 above.

4 CONCLUSIONS

FSW's Speech Department employed a common rubric used by all faculty as a means to evaluate an agreed upon series of student level outcomes for SPC 1017 and SPC 2608. Faculty goals in assessment included tracking rubric implementation, Student Learning Objectives (SLOs) to include Oral Documentation, NV-Physical, and Support, and comparisons between dual enrollment (concurrent) and non-dual enrollment students, online and traditional students, and by site.

A drilldown of SPC 1017 results are as follows:

1. SLO 1 – Achievement of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "Oral Documentation" for 70% of the students was met.
2. SLO 2 – Achievement of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "NV-Physical" for 70% of the students was met.
3. SLO 3 – Achievement of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "Support" for 70% of the students was met.
4. SLO 4 – Improvement in common outcomes between Informative Speech Outline and Speech was met. Improvement is exhibited in 2 of 5 dimensions as well as the overall. Improvement excluding Outline scores of '4' are exhibited in 5 of 5 dimensions.
5. In a study comparing rubric achievement based on overall score, at 38/40 and above (average rubric score of 3.8 or higher) all dimensions fair relatively equally (hot colors fairly evenly distributed). When overall rubric scores range from 32-37, the "Organization," "Support," "Language," and "Attire" dimensions exhibit strong scores even when the overall score is somewhat lower. For example, at an overall score of 32, those four dimensions exhibit average scores ranging from 3.5 to 3.6, while other dimensions range from 2.6 to 3.3. Moreover, the "Language" and "Attire" attributes remains high even at very low overall scores. At an overall score of 27, for example, "Language" and "Attire" exhibit an average of 3.4 and 3.4, respectively, while all other categories range from 1.9 to 3.2. Lastly, when overall rubric scores range 30 or below, "Oral Documentation" is exceptionally weaker than the others.
6. In a longitudinal study, results exhibit a few attributes. The "Oral Documentation" dimension is consistently the lowest dimension over time, scoring the lowest score in all terms since the study began. The "Attire" dimension is consistently the highest, scoring the highest score in 9 of 10 terms. Some dimensions appear to have made improvements although the most recent term exhibits a drop in all dimensions, so this trend is as yet unclear. Though the recent term exhibits a drop across all dimensions, this does not mean they are the lowest scores in the study. The "Organization" dimension, for example, exhibits the 3rd highest in spring 2019 since the study began.
7. No comparison between dual enrollment (concurrent) sections and traditional sections could be made because no dual enrollment sections were offered during spring 2019.
8. In a comparison of online to traditional artifacts mean scores are are higher for online courses in all ten dimensions. Of these, "Introduction," "Organization," "Support," "Language," "NV-Vocal," "NV-Physical", "Attire," and the overall scores are statistically significantly different.

9. In a cross-campus comparison, FSW Online exhibits higher scores in 5/10 dimensions, which is most commonly the highest scoring site. Charlotte exhibits the highest scores in 4/10 dimensions and the overall score. Collier exhibits the highest scores in 1/10 dimensions. Results of the ANOVA exhibit a statistically significant difference between sites.

A drilldown of SPC 2608 results are as follows:

1. SLO 1 – Achievement of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "Oral Documentation" for 70% of the students was met.
2. SLO 2 – Achievement of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "NV-Physical" for 70% of the students was met.
3. SLO 3 – Achievement of "Developing" or higher (≥ 2) in the Informative Speech rubric dimension "Support" for 70% of the students was met.
4. SLO 4 – Improvement in common outcomes between Informative Speech Outline and Speech was met. Improvement is exhibited in 1 of 5 dimensions as well as the overall. Improvement excluding Outline scores of '4' are exhibited in 5 of 5 dimensions.
5. In a study comparing rubric achievement based on overall score, the "Organization," "Attire," and to a lesser extent "Language" dimensions remain strong even at low overall scores. For example, at 30/40, the mean score for those three are 3.6/4, 3.6/4, and 4.0/4, respectively. By comparison, all other dimensions range from 1.8/4 to 3.2/4. The "Oral documentation" dimension exhibits the steepest drop-off at higher overall scores. At 36/40, for example, "Oral documentation" is 2.4/4 when all other dimensions are 3.3/4 or higher.
6. In a longitudinal study, over time, the "Attire" dimension has been the highest achieving in 10 of 10 terms. The "Oral documentation" dimension has been the lowest in 6 of 10 terms. The "NV-Physical" has shown vast improvement since a dip in fall 2017, down to 7.6/10 rising to 8.7/10 in spring 2019. The "Support" dimension exhibits the highest score in spring 2019 since the study began at 9.55/10.
7. No comparison between dual enrollment (concurrent) sections and traditional sections could be made because no dual enrollment sections were offered during spring 2019.
8. In a comparison of online to traditional artifacts mean scores are lower for online courses in 6 of 10 dimensions. The "Introduction," "Language," "NV-Vocal," "NV-Physical," "Presentation Media," and "Attire" dimensions are statistically significantly different. The "Introduction" dimension is the only case in which the online scores are higher and statistically significantly so.
9. Data was only reported from two sites, Lee, and FSW Online. As such, the analysis for this area is included in #8 above.

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