

Speech Assessment Report

Fall 2017

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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/non-dual enrollment, 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, Director of 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 provide effective speech closure by delivering a conclusion that signals the end, reviews purpose and main points and that ends smoothly and memorably. The faculty established measure of success for this SLO is a rating of "Developing" or higher in "Conclusion" for 70% of the students for both Outline and Informative Speech.

SLO3: 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 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 fall 2017 assessment, 695 artifacts were collected for SPC 1017 from 36 of 49 course sections. In some cases, rubric scores could either not be accessed or located. In three online sections, old versions of the rubric scoring were used. 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. Fall 2017 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 “Conclusion” for 70% of the students was met. Fall 2017 artifacts exhibit 94% scored level 2 or greater. The faculty established goal for SLO3, a rating of “Developing” or higher (≥ 2) in the Informative Speech rubric dimension “Presentation Media” for 70% of the students was met. Fall 2017 artifacts exhibit 92% 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	95%	98%	98%	85%	99%	98%	98%	92%	95%	94%
4	43.6%	48.9%	54.0%	33.2%	58.3%	35.0%	27.1%	43.8%	68.7%	44.4%
3	35.1%	38.4%	34.7%	34.5%	38.1%	42.2%	47.1%	35.7%	19.5%	34.6%
2	16.3%	11.0%	9.5%	17.5%	3.0%	21.2%	24.1%	12.7%	7.2%	15.0%
1	4.2%	1.3%	1.6%	9.1%	0.1%	1.3%	1.2%	4.0%	3.3%	2.6%
0	0.9%	0.4%	0.3%	5.8%	0.4%	0.3%	0.5%	3.7%	1.3%	3.3%

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%	97%	91%	76%	95%
4	55.5%	66.0%	41.2%	29.9%	51.2%
3	25.8%	21.9%	34.6%	29.5%	31.7%
2	13.0%	9.3%	15.3%	16.9%	12.3%
1	4.5%	1.4%	7.2%	8.3%	3.3%
0	1.2%	1.4%	1.7%	15.3%	1.6%

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 as well as the overall. 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
<i>All artifacts</i>						
Outline Mean	8.5	9.0	8.0	6.6	8.5	77.8
Informative Speech Mean	8.1	8.5	9.1	7.2	8.0	82.4
<i>Change from Outline to Speech</i>	<i>-0.4</i>	<i>-0.5</i>	<i>1.1</i>	<i>0.6</i>	<i>-0.5</i>	<i>4.6</i>
<i>Only artifacts that did not score 4/4 on outline</i>						
Outline Mean	6.7	7.0	6.6	5.3	6.9	78.5
Informative Speech Mean	6.9	7.8	7.8	6.6	7.3	81.2
<i>Change from Outline to Speech</i>	<i>0.2</i>	<i>0.8</i>	<i>1.2</i>	<i>1.3</i>	<i>0.4</i>	<i>2.7</i>

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, the same two dimensions which exhibited positive changes in mean scores also exhibit net improvements by students. The "Support" dimension exhibits net improvement in 34.4% of the artifacts (e.g., Speech = 4 compared to Outline = 3, or 3 to 2, etc.), compared with 16.3% decline while "Oral Documentation" exhibits 33.1% net improvement compared with 25.0% decline. 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 30.7% in "Introduction" to 49.5% in "Support."

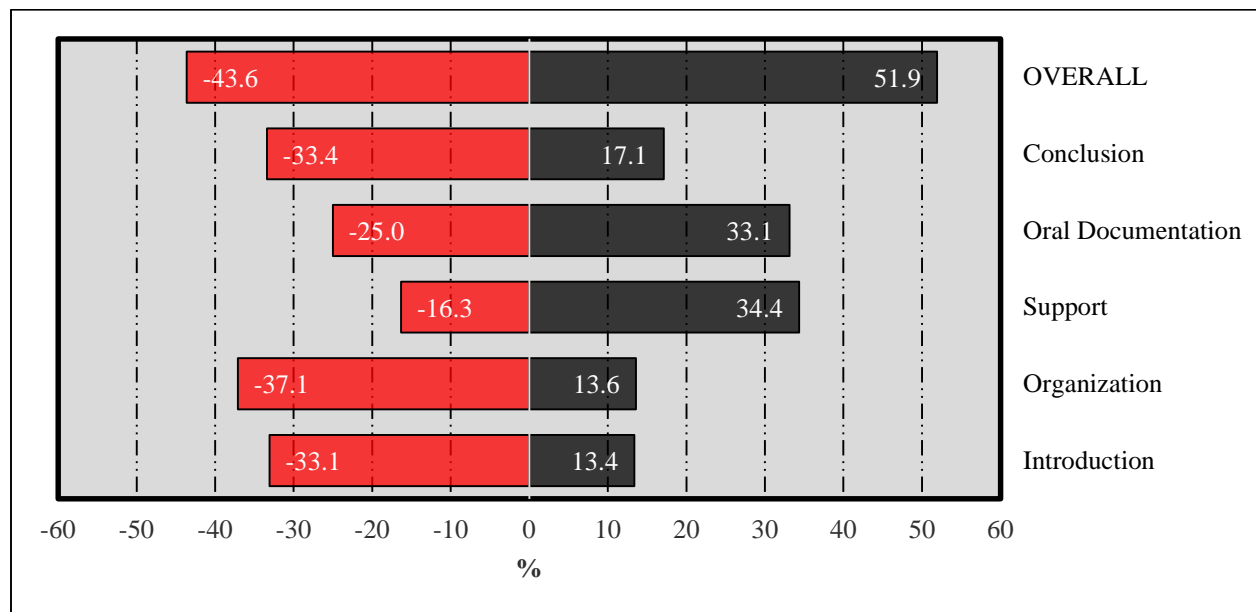


Figure 1. Percent increase/decrease from Outline to Speech by common rubric dimension for fall 2017. Note that no change was exhibited by 54% for "Introduction", 49% for "Organization", 49% for "Support", 42% for "Oral Documentation", and 49% for "Conclusion".

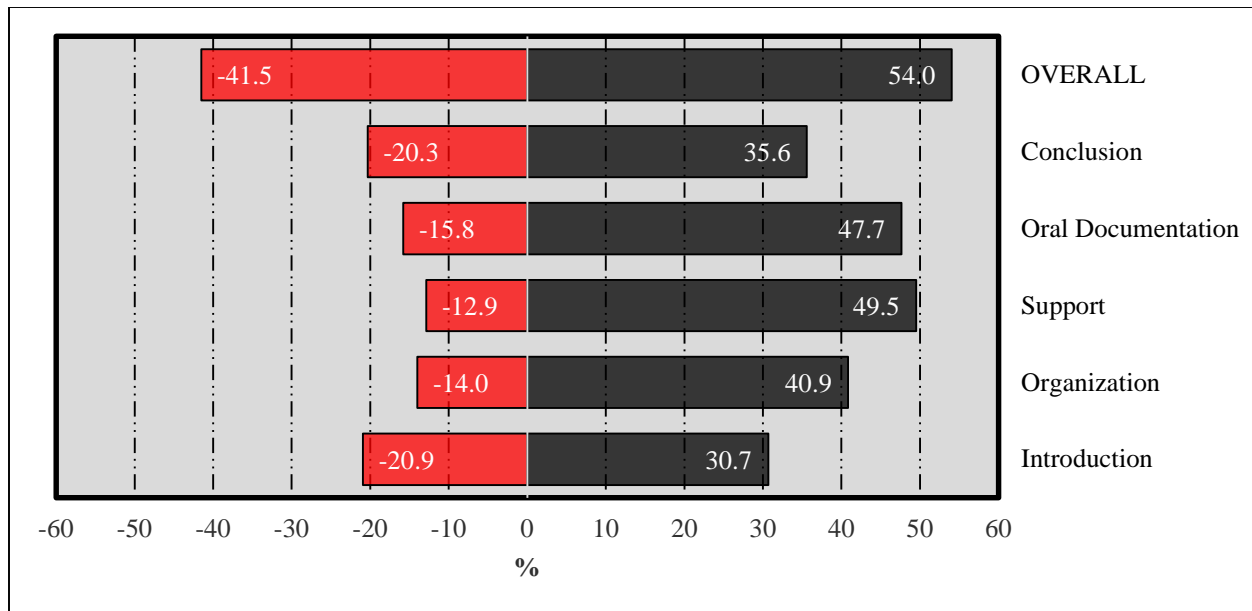


Figure 2. Percent increase/decrease from Outline to Speech by common rubric dimension for fall 2016 excluding those artifacts scoring perfect 4/4 on Outline. Note that no change was exhibited by 48% for "Introduction", 45% for "Organization", 38% for "Support", 37% for "Oral Documentation", and 44% for "Conclusion".

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 larger kurtosis (more pronounced peak) accompanied by a decrease in the bimodality (decrease of peak centered at lower scores).

	<i>Introduction</i>	<i>Organization</i>	<i>Support</i>	<i>Oral Documentation</i>	<i>Language</i>	<i>NV-Vocal</i>	<i>NV-Physical</i>	<i>Presentation Media</i>	<i>Attire</i>	<i>Conclusion</i>
n	695	693	645	693	693	694	646	694	693	693
Max	10	10	10	10	10	10	10	10	10	10
Min	0	0	0	0	0	0	0	0	0	0
Mode	8	8	10	8	10	8	8	8	10	8
Mean	10	10	10	8	10	8	8	10	10	10
Standard deviation	8.3	8.7	8.8	7.4	9.1	8.2	8.0	8.1	8.9	8.2

Table 4. Descriptive statistics for SPC 1017 Informative Speech.

Rubric Score	<i>Introduction</i>	<i>Organization</i>	<i>Support</i>	<i>Oral Documentation</i>	<i>Conclusion</i>
n	515	515	515	515	514
Max	10	10	10	10	10
Min	0	0	0	0	0
Mode	10	10	10	10	10
Mean	8.5	9.0	8.0	6.6	8.5
Standard deviation	2.08	1.82	2.28	3.45	2.03

Table 5. Descriptive statistics for SPC 1017 Outline.

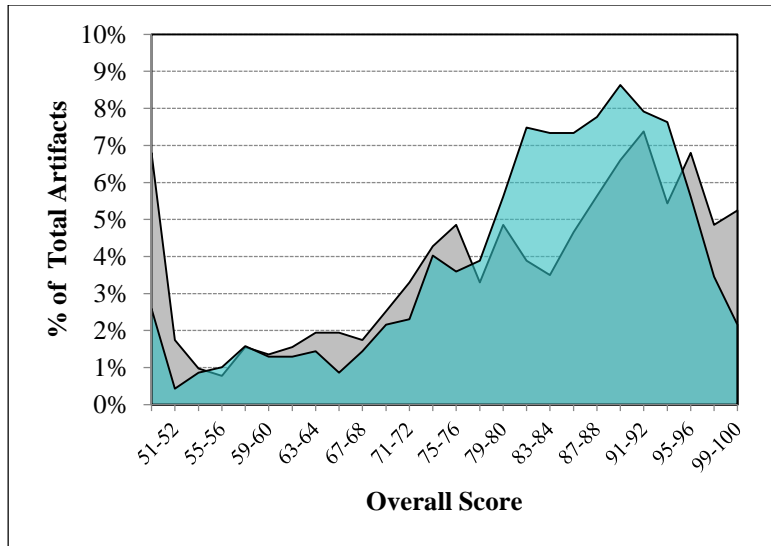


Figure 3. Overall score distribution for Outline (gray) and Speech (aqua) (fall 2017 term).

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.

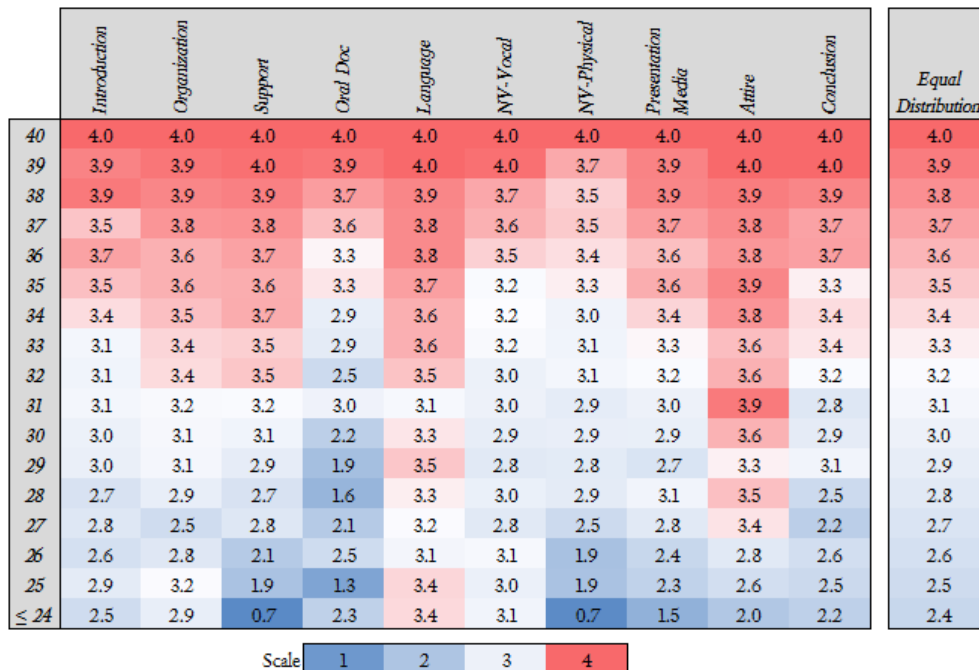


Figure 4. Colormap of mean scores for each rubric dimension (range: 0-4) based on overall rubric score (combined rubric score of all dimensions, max=40) for SPC 1017. (Right Sidebar) Comparison rubric dimension if dimension score is the same as overall (i.e. artifact overall score is equally distributed 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 36/40 and above (average rubric score of 3.6 or higher) all dimensions fair relatively equally (hot colors fairly evenly distributed). This is fairly similar to historical results dating back to fall 2015 although this even distribution typically extended down to 34/40. When overall rubric scores range from 32-35, the “Organization”, “Support”, “Language”, and “Attire” dimensions exhibit strong scores even when the overall score is somewhat lower (previous years excluded “Organization” in this attribute. For example, at an overall score of 32, those four dimensions exhibit average scores ranging from 3.4 to 3.6, while other dimensions range from 2.5 to 3.2. Moreover, the “Language” attribute remain high even at very low overall scores. At an overall score of 25, for example, “Language” exhibits an average of 3.4 while all other categories range from 0.7 to 3.1. When overall rubric scores range 30 or below, “Oral Documentation” is exceptionally weaker than the others. Lastly, at the very lowest overall scores, “Support” and “NV-Physical” exhibit exceptionally low scores compared with others. Both dimensions exhibit an average score of 0.7 at overall scores of 24 and below while other dimensions range from 1.5 to 3.4. From a student performance perspective, over achieving students tend to be equally strong in all dimensions, moderate students tend to excel in “Organization”, “Support”, “Language”, and “Attire”, while beginning to lag in other dimensions, and under achieving students tend to be exceedingly lagging in “Oral Documentation”, and in exceptionally under achieving students tend to be extremely lagging in “Support” and “NV-Physical.”

A comparison of fall 2017 Informative Speech results with past results is shown in Figure 5 below. Results exhibit a few attributes. First, there appears to be a slight but consistent decline in the “Oral Documentation” dimension from 7.8 in fall 2014 down to 7.4 in fall 2017. Second, “Oral Documentation” is consistently the lowest performing dimension averaging approximately 0.5 lower than the next lowest. And finally, “Attire”, followed by “Language”, and “Support” consistently remain the first, second, and third highest performing dimensions.

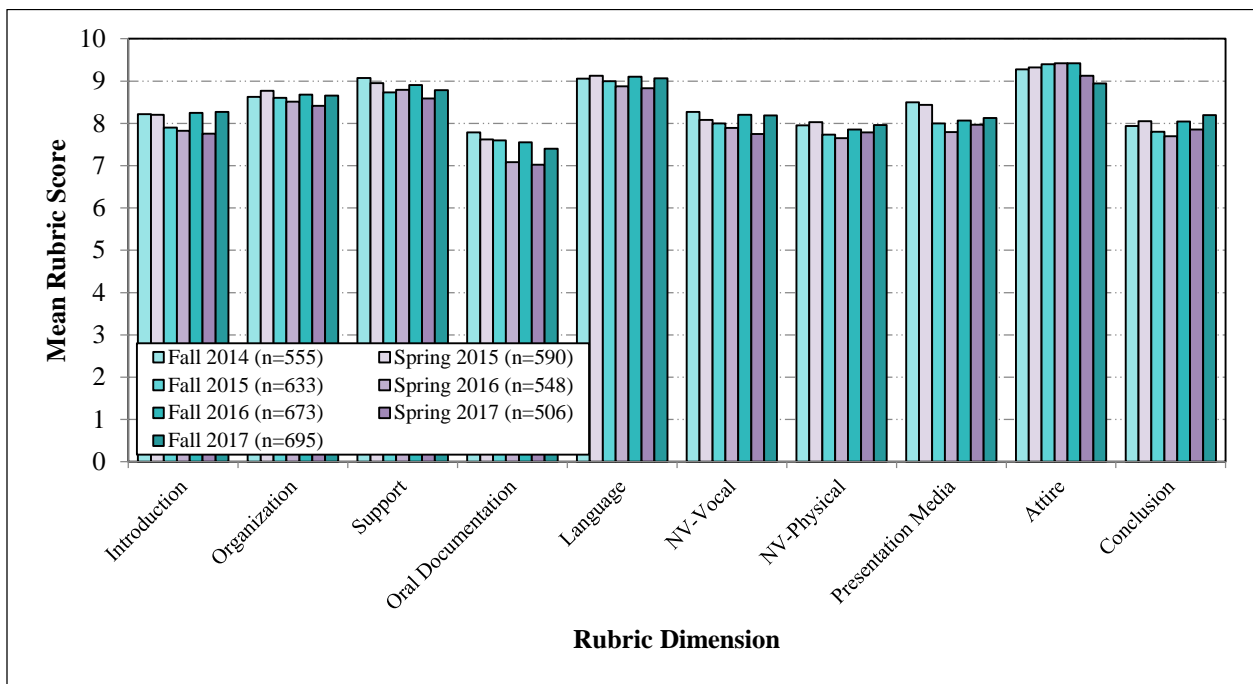


Figure 5. Comparison of mean scores for Informative Speech through time beginning fall 2014 through the present. *The “Support”, “NV-Physical”, “Presentation Media”, and “Attire” dimensions maximum rubric score was altered beginning fall 2017. The results from previous terms have been normalized to the new dimension maximum for comparative purposes.

2.2 SPC 2608

2.2.1 Learning Objectives

For the fall 2017 assessment, 136 artifacts were collected for SPC 2608 from 7 of 12 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. Fall 2017 artifacts exhibit 75% 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 “Conclusion” for 70% of the students was met. Fall 2017 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 “Presentation Media” for 70% of the students was met. Fall 2017 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%	99%	75%	100%	98%	96%	98%	99%	98%
4	64.0%	68.9%	68.9%	41.5%	62.2%	33.3%	31.1%	66.7%	88.9%	73.3%
3	19.9%	21.5%	22.2%	12.6%	31.1%	37.0%	27.4%	22.2%	8.1%	20.0%
2	13.2%	8.9%	8.1%	20.7%	6.7%	27.4%	37.0%	8.9%	2.2%	4.4%
1	2.9%	0.7%	0.7%	18.5%	0.0%	2.2%	4.4%	0.7%	0.7%	2.2%
0	0.0%	0.0%	0.0%	6.7%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%

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	96%	96%	94%	69%	96%
4	60.4%	81.3%	61.9%	40.3%	71.6%
3	29.1%	9.0%	17.2%	10.4%	18.7%
2	6.7%	6.0%	14.9%	18.7%	6.0%
1	3.0%	2.2%	5.2%	11.9%	3.0%
0	0.7%	1.5%	0.7%	18.7%	0.7%

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 3 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 compares improvement/decline percentages and excludes those scoring 4s on the Outline score (bottom row, Table 8). Based on these results, improvement is exhibited in all dimensions and overall score.

Rubric Score	Introduction	Organization	Support	Oral Documentation	Conclusion	OVERALL
<i>All artifacts</i>						
Outline Mean	8.9	9.3	8.6	6.3	9.1	80.5
Informative Speech Mean	8.8	9.2	9.1	6.9	9.2	84.9
<i>Change from Outline to Speech</i>	<i>-0.1</i>	<i>-0.1</i>	<i>0.5</i>	<i>0.6</i>	<i>0.1</i>	<i>4.4</i>
<i>Only artifacts that did not score 4/4 on outline</i>						
Outline Mean	7.1	6.1	6.4	3.9	6.8	78.2
Informative Speech Mean	7.4	7.7	7.6	6.0	7.5	80.7
<i>Change from Outline to Speech</i>	<i>0.3</i>	<i>1.6</i>	<i>1.2</i>	<i>2.1</i>	<i>0.7</i>	<i>2.5</i>

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, two of the same three dimensions which exhibited positive changes in mean scores also exhibit net improvements by students. The “Support” dimension exhibits net improvement in 21.4% of the artifacts (e.g., Speech = 4 compared to Outline = 3, or 3 to 2, etc.), compared with 12.2% decline while “Oral Documentation” exhibits 37.4% net improvement compared with 21.4% decline. 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 61% in “Oral Documentation”.

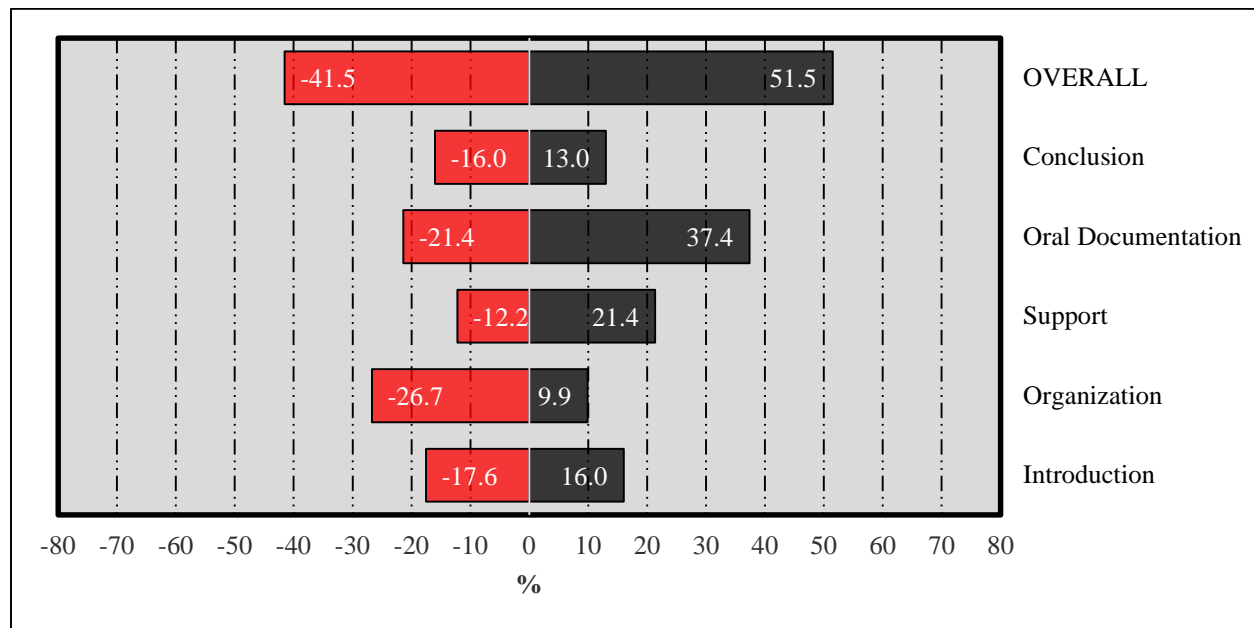


Figure 6. Percent increase/decrease from Outline to Speech by common rubric dimension for fall 2017. Note that no change was exhibited by 66% for “Introduction”, 63% for “Organization”, 66% for “Support”, 41% for “Oral Documentation”, and 71% for “Conclusion”.

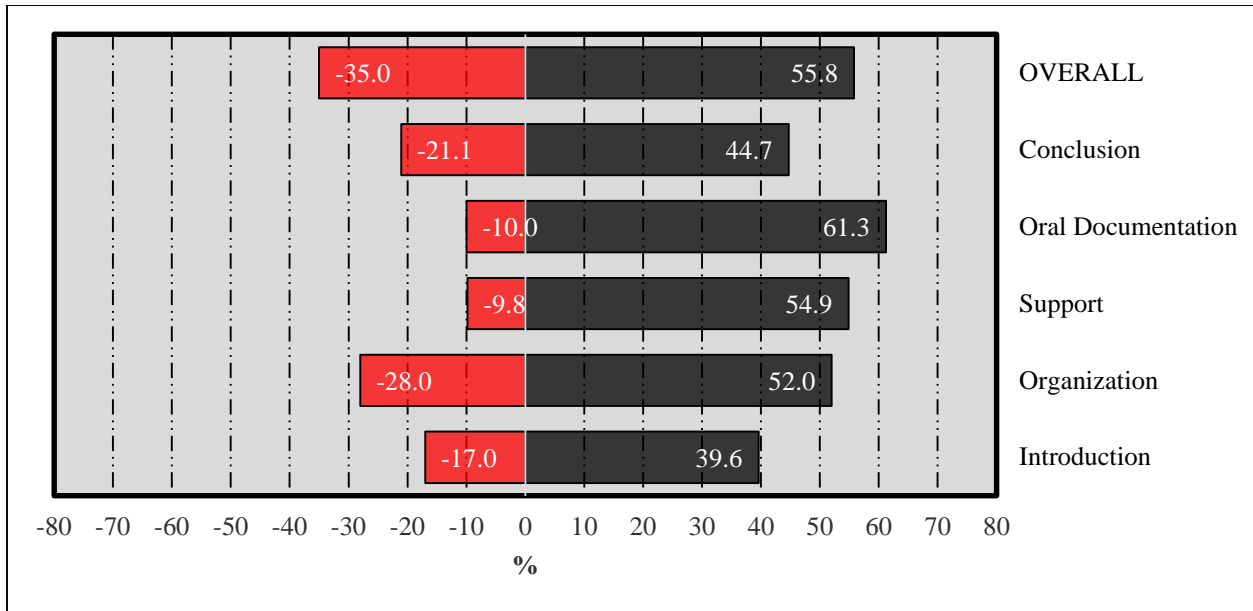


Figure 7. Percent increase/decrease from Outline to Speech by common rubric dimension for fall 2016 excluding those artifacts scoring perfect 4/4 on Outline. Note that no change was exhibited by 43% for "Introduction", 20% for "Organization", 29% for "Support", 29% for "Oral Documentation", and 34% for "Conclusion".

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. The Speed data distribution exhibits a large kurtosis centered in the upper 80s scoring range whereas the Outline has a small kurtosis (no major peak) with substantial scoring spanning in the low 70s and below.

	<i>Introduction</i>	<i>Organization</i>	<i>Support</i>	<i>Oral Documentation</i>	<i>Language</i>	<i>NV-Vocal</i>	<i>NV-Physical</i>	<i>Presentation Media</i>	<i>Attire</i>	<i>Conclusion</i>
n	136	135	135	135	135	135	135	135	135	135
Max	10	10	10	10	10	10	10	10	10	10
Min	3	3	3	0	6	3	3	0	3	3
Mode	10	10	10	10	10	8	6	10	10	10
Mean	8.9	9.2	9.2	7.0	9.1	8.0	7.7	9.0	9.7	9.3
Standard deviation	1.76	1.40	1.38	3.22	1.24	1.73	1.94	1.78	0.98	1.44

Table 9. Descriptive statistics for SPC 2608.

Rubric Score	<i>Introduction</i>	<i>Organization</i>	<i>Support</i>	<i>Oral Documentation</i>	<i>Conclusion</i>
n	134	134	134	134	134
Max	10	10	10	10	10
Min	0	0	0	0	0
Mode	10	10	10	10	10
Mean	8.9	9.3	8.6	6.3	9.1
Standard deviation	1.78	1.85	2.12	3.83	1.77

Table 10. Descriptive statistics for SPC 2608 Outline.

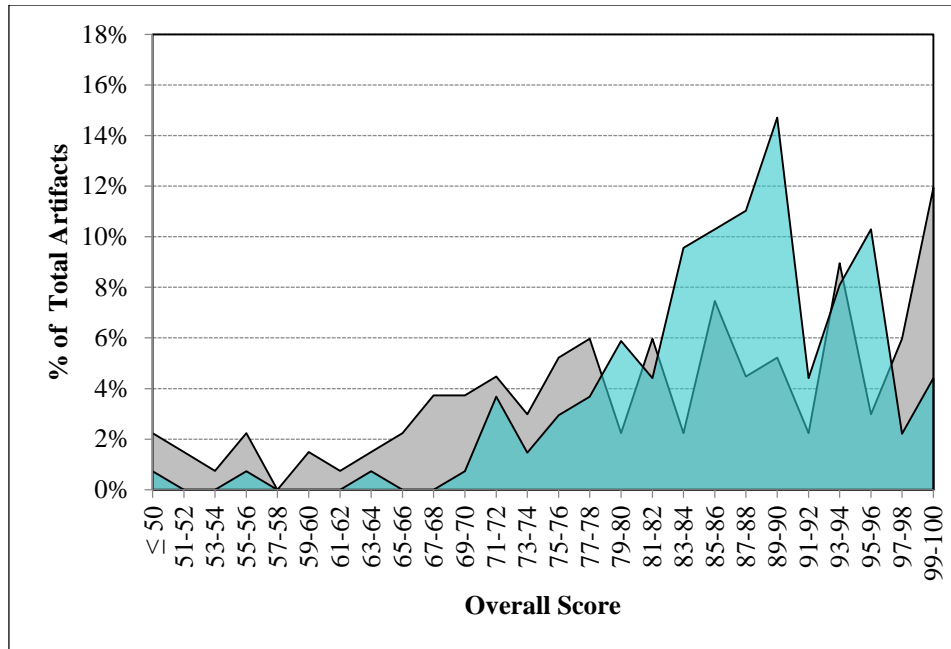


Figure 8. Overall score distribution for Outline (gray) and Speech (aqua) (fall 2017 term).

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.

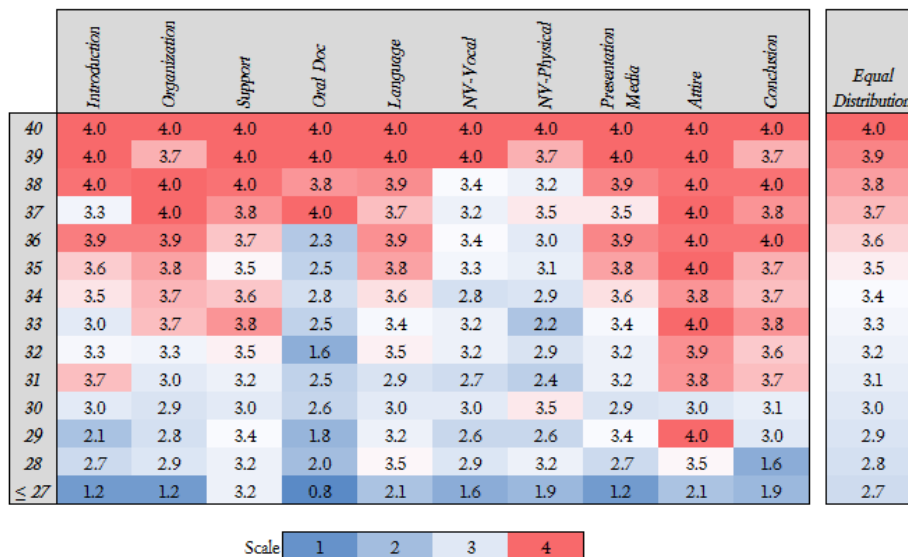


Figure 9. Colormap of mean scores for each rubric dimension (range: 0-4) based on overall rubric score (combined rubric score of all dimensions, max=40) for SPC 1017. (Right Sidebar) Comparison rubric dimension if dimension score is the same as overall (i.e. artifact overall score is equally distributed 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 at 37/40 and above (average rubric score of 3.7 or higher) all dimensions fair relatively equally (hot colors fairly evenly distributed), which is quite similar to colormap results of fall 2015, spring 2016, and fall 2016. When overall rubric scores range below 37, “Oral Documentation” is somewhat weaker than the others, which is also fairly similar to that of fall 2015, spring 2016, and fall 2016. In mid-range, “Attire” and “Conclusion” is substantially higher scoring than other dimensions. From a student performance perspective, strong students tend to be equally strong in all dimensions. Meanwhile, weaker students tend to be exceedingly lagging in “Oral Documentation” while exceedingly strong in “Attire” and “Conclusion.”

A comparison of fall 2017 results with past results is shown in Figure 10 below. Results exhibit consistency among all rubric dimensions with the exception of “Support” which exhibits a steady incline. The “Support” dimension exhibits a steady increase over time from 8.7/10 in fall 2014 to 9.2/10 in fall 2017.

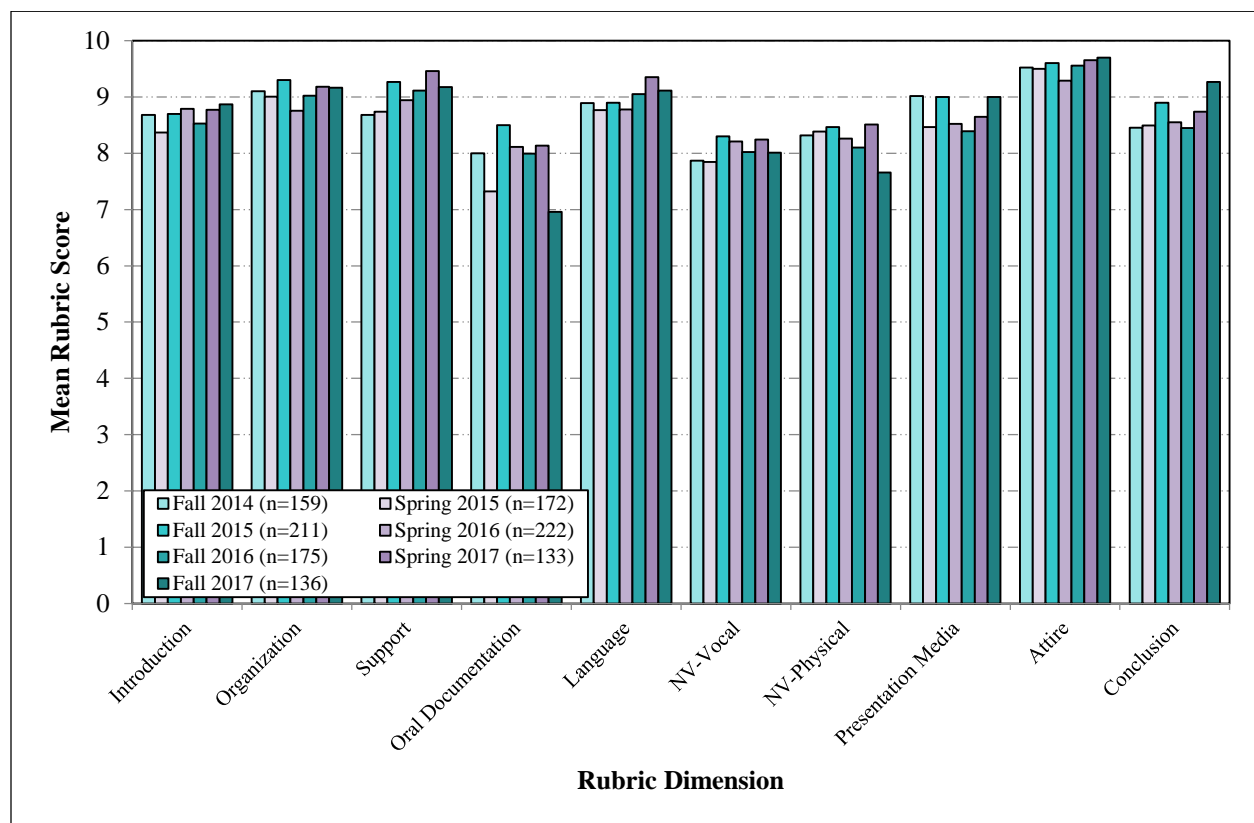


Figure 10. Comparison of mean scores for Informative Speech through time.

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 to non-Dual Enrollment Comparison

No dual enrollment sections of SPC 1017 were offered during fall 2017 so no comparison study could be completed.

3.1.2 Online to Traditional Comparison

During the fall 2017 semester, 212 total online artifacts and 483 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 lower for online courses in five of 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, “Language”, “NV-Vocal”, “NV-Physical”, “Presentation Media”, and “Attire” 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. However, based on the work of Johnson (2013), there is a 17-25% chance that the marginally significant result (denoted in Table 11 as *) may be false positives (i.e. Type I errors).

	<i>Introduction</i>	<i>Organization</i>	<i>Support</i>	<i>Oral Documentation</i>	<i>Language</i>	<i>NV-Vocal</i>	<i>NV-Physical</i>	<i>Presentation Media</i>	<i>Attire</i>	<i>Conclusion</i>	<i>Combined Score</i>
<i>Rubric Max</i>	10	10	10	10	10	10	10	10	10	10	100
Online mean	8.3	8.6	8.6	7.5	8.9	8.4	8.3	7.1	7.7	8.4	78.0
Traditional mean	8.3	8.7	8.8	7.4	9.1	8.1	7.8	8.6	9.5	8.1	84.1
Effect Size	-0.01	0.06	0.10	-0.05	0.15	-0.20	-0.26	0.50	0.71	-0.14	0.39
p-value	0.849	0.227	0.131	0.065	0.003	0.016*	0.003	5.99x10⁻¹²	6.38x10⁻¹⁹	0.999	3.99x10⁻⁷

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. *Denote marginal significance as defined by 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 what Cohen (1988) would consider ranges of small-to-large effect sizes ranging from 0.01 to 0.71 (Table 11). In other words, non-overlap from online artifacts to traditional artifacts range from approximately 0% to 44%.

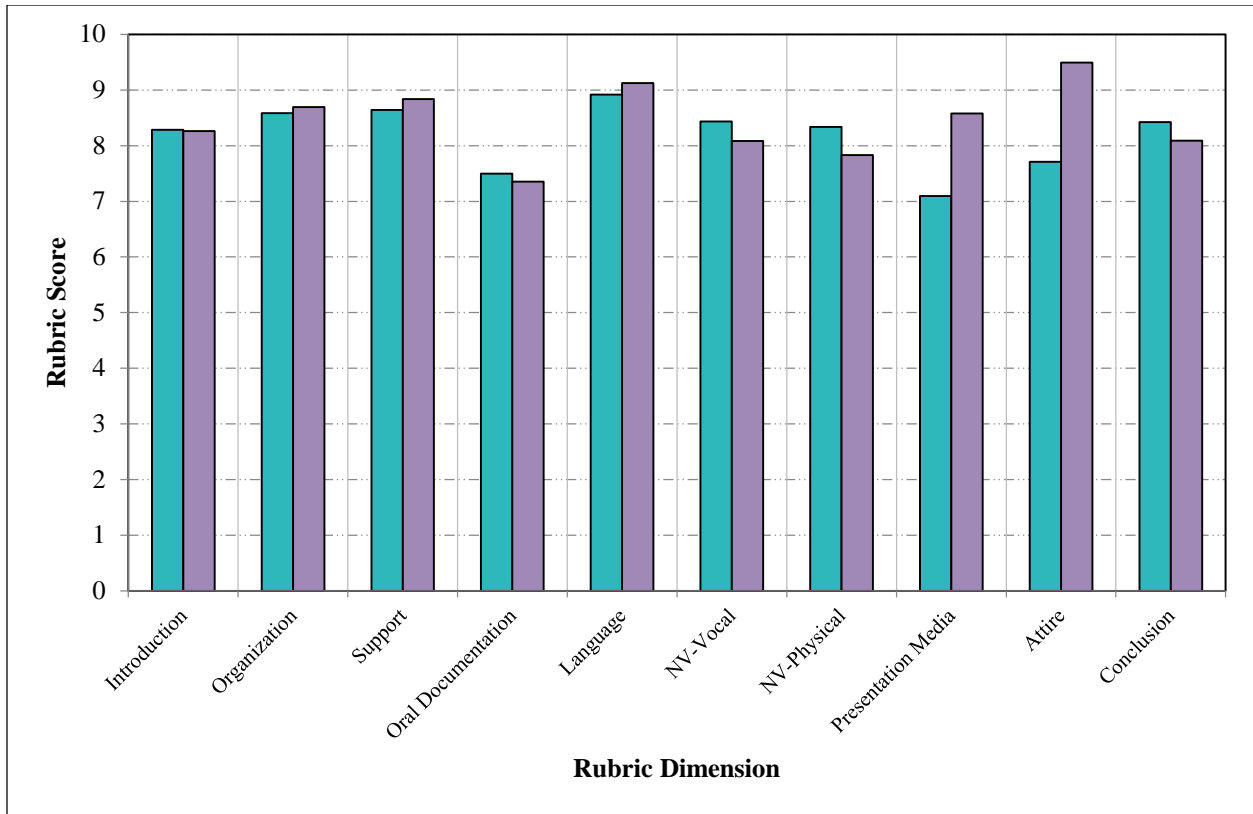


Figure 11. Comparison of mean scores for online (aqua) and traditional (purple) scores for SPC 1017 (fall 2017 term).

3.1.3 Comparison by Campus/Site

Of the 695 artifacts collected from SPC 1017, 82 originated from the Charlotte campus, 157 from the Collier campus, 212 from FSW Online, and 244 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.

	<i>Introduction</i>	<i>Organization</i>	<i>Support</i>	<i>Oral Documentation</i>	<i>Language</i>	<i>NV-Vocal</i>	<i>NV-Physical</i>	<i>Presentation Media</i>	<i>Attire</i>	<i>Conclusion</i>	<i>Combined Score</i>
<i>Rubric Max</i>	10	10	10	10	10	10	10	10	10	10	100
Charlotte	8.5	9.4	9.9	8.0	9.8	9.3	8.0	9.5	9.8	9.7	92.0
Collier	8.1	8.6	9.1	7.7	9.5	7.2	7.4	8.2	9.5	7.8	82.5
FSW Online	8.3	8.6	8.6	7.5	8.9	8.4	8.3	7.1	7.7	8.4	78.0
Thomas Edison (Lee)	8.3	8.5	8.3	6.9	8.7	8.2	8.0	8.5	9.4	7.7	82.3

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.

Charlotte campus exhibits higher scores in 9/10 dimensions, down from 10 in spring 2017, and up from 6/10 in fall 2016, 8/10 in spring 2016, and 5/10 in fall 2015. Charlotte also exhibits the highest overall score. FSW Online exhibits the highest mean score in the 10th dimension, “NV-Physical” at 8.3. A plot comparing score distribution of the combined (overall) scores by site is presented in Figure 12. There is extensive overlap between sites. However, Charlotte exhibits a distribution on the upper end of that

overlap with progressively negatively shifted modes (central tendencies) for Collier, FSW Online, and finally FSW Online which exhibits a very low kurtosis (central peakedness). For example, over 80% of Charlotte’s scores range from 89 or higher. Meanwhile, in that same range, no other site exceeds 32%.

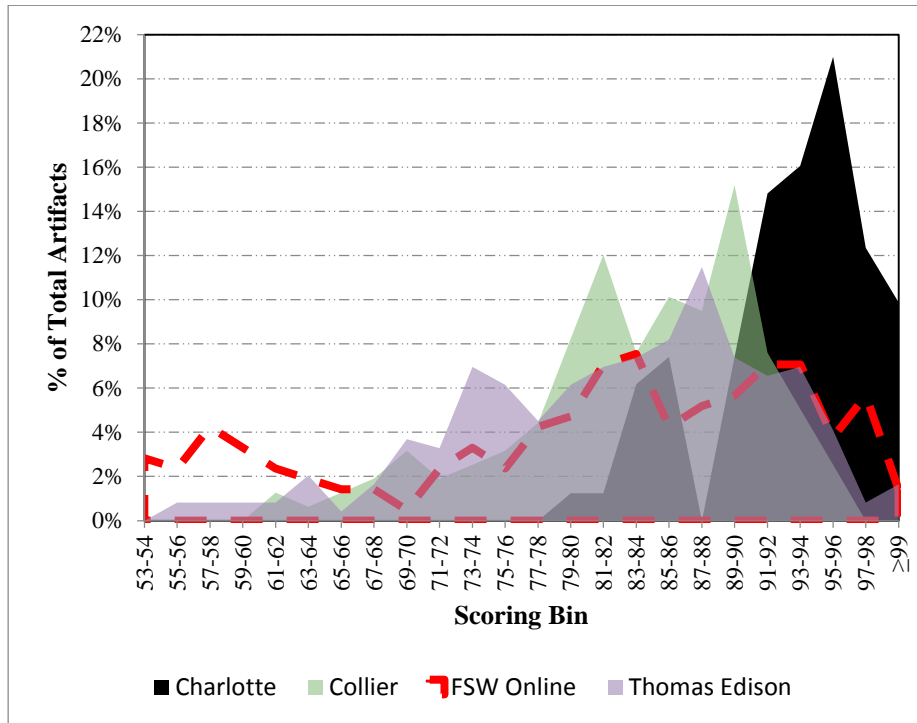


Figure 12. Comparison of artifact score distribution by site.

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	11,663.0	3	3887.7	25.38	1.39x10 ⁻¹⁵	2.62
Within Sites	108,846.4	691	153.2			
Total	117,509.4	694				

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 to non-Dual Enrollment Comparison

No dual enrollment sections were offered in fall 2017 and so no comparison study could be completed.

3.2.2 Online to Traditional Comparison

During the fall 2017 semester, 13 total online artifacts and 123 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 7 of 10

dimensions, the same as spring 2017 but reverse from fall 2016. 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 the dimensions in which online sections exhibit a lower mean, “Oral Documentation”, “Language”, and “NV-Physical” are statistically significantly different. Of the dimensions in which online sections exhibit a higher mean, “Attire” is 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 “Organization” dimension 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 0.03 to 0.95 (Table 14). In other words, non-overlap from online artifacts to traditional artifacts range from approximately 1% to 53%.

	<i>Introduction</i>	<i>Organization</i>	<i>Support</i>	<i>Oral Documentation</i>	<i>Language</i>	<i>NV-Vocal</i>	<i>NV-Physical</i>	<i>Presentation Media</i>	<i>Attire</i>	<i>Conclusion</i>	<i>Combined Score</i>
<i>Rubric Max</i>	10	10	10	10	10	10	10	10	10	10	100
Online mean	8.5	8.3	8.3	7.6	7.8	7.6	6.3	9.1	10.0	9.1	
Traditional mean	8.9	9.3	9.3	6.9	9.2	8.0	7.8	9.0	9.7	9.3	
Effect Size	0.18	0.36	0.50	-0.18	0.66	0.14	0.95	-0.03	-0.63	0.11	0.31
p-value	0.315	0.059	0.010*	0.795	0.002	0.422	4.33x10⁻⁶	0.887	4.31x10⁻⁴	0.517	0.098

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).

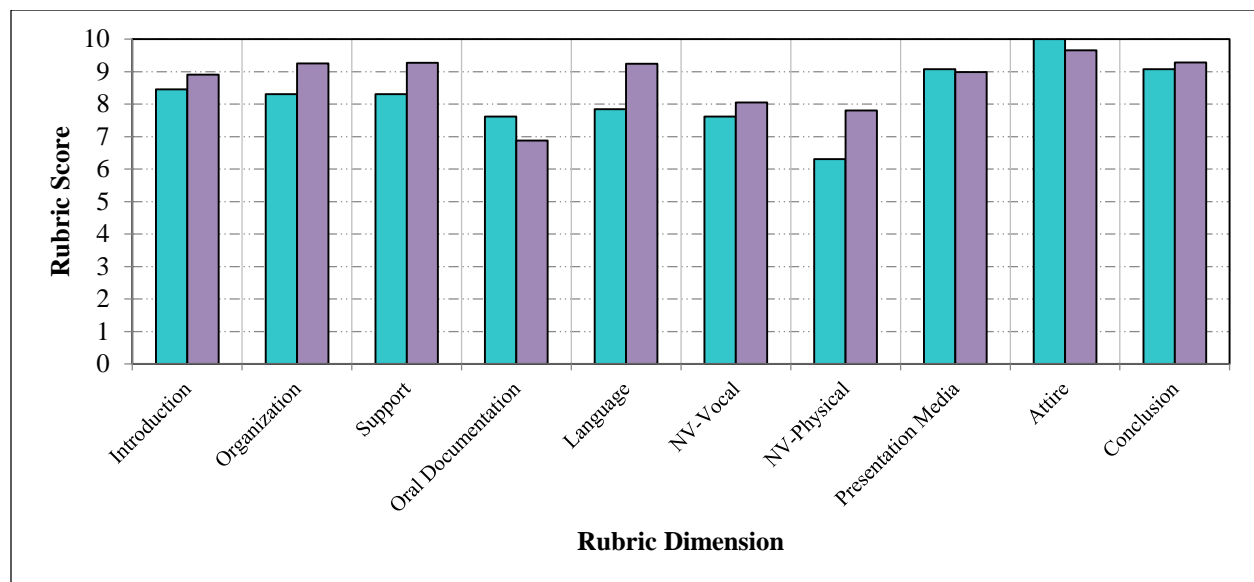


Figure 13. Comparison of mean scores for online (aqua) and traditional (purple) scores for SPC 2608 (fall 2017 term).

3.2.3 Comparison by Campus/Site

Of the 136 artifacts collected from SPC 2608, 55 originated from the Charlotte campus, 13 from FSW Online, and 68 from the Thomas Edison (Lee) campus. The Charlotte campus exhibits higher scores in 8/10 dimensions. The Charlotte campus also exhibits the highest overall score. The remaining 2/10 highest score is shared by FSW Online and Thomas Edison campus, each with one. A comparison of mean scores by rubric dimension is provided in Table 15. A plot comparing descriptive statistics of the combined scores by site is presented in Figure 14. Charlotte and Thomas Edison sites exhibit very similar distributions, if slightly shifted from one another. FSW Online, however, exhibit results shifted more towards lower scores. A one-way analysis of variance was used to compare means of the overall scores at each site. Results of the ANOVA exhibit a statistically significant difference between sites largely as a result of the shifts exhibited by FSW Online. 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.

	<i>Introduction</i>	<i>Organization</i>	<i>Support</i>	<i>Oral Documentation</i>	<i>Language</i>	<i>NV-Vocal</i>	<i>NV-Physical</i>	<i>Presentation Media</i>	<i>Attire</i>	<i>Conclusion</i>	<i>Combined Score</i>
<i>Rubric Max</i>	10	10	10	10	10	10	10	10	10	10	100
Charlotte	9.0	9.5	9.6	6.4	9.4	8.8	7.6	9.6	10.0	9.8	89.8
FSW Online	8.5	8.3	8.3	7.6	7.8	7.6	6.3	9.1	10.0	9.1	76.8
Thomas Edison (Lee)	8.9	9.1	9.0	7.3	9.1	7.4	8.0	8.5	9.4	8.9	85.3

Table 15. Comparison of mean scores by site for SPC 2608. Bold denotes highest mean score in that dimension among all sites. Rubric dimensions identified in SLOs in blue.

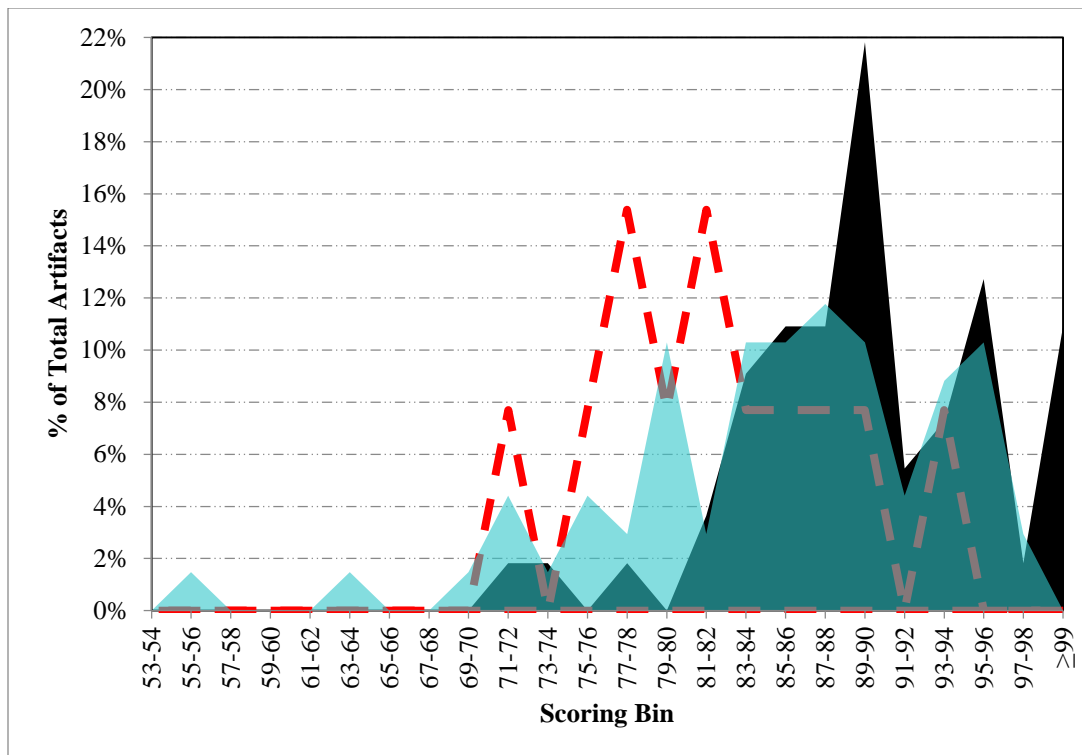


Figure 14. Comparison of artifact score distribution for Charlotte (black), FSW Online (outlined in red), and Thomas Edison (aqua).

Source of Variation	Sum of squared differences	df	Mean Squares	F _{obs}	p-value	F _{crit}
Between Sites	1898.4	2	949.2	10.15	7.87x10 ⁻⁵	3.06
Within Sites	12,431.7	133	93.5			
Total	14,330.1	135				

Table 16. Results of one-way ANOVA of combined rubric scores at each site for SPC 2608.

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, Presentation Media, and Conclusion, and comparisons between dual enrollment 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 “Conclusion” for 70% of the students was met.
3. SLO 3 – Achievement of “Developing” or higher (≥ 2) in the Informative Speech rubric dimension “Presentation Media” 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, over achieving students tend to be equally strong in all dimensions, moderate students tend to excel in “Organization”, “Support”, “Language”, and “Attire”, while beginning to lag in other dimensions, and under achieving students tend to be exceedingly lagging in “Oral Documentation”, and in exceptionally under achieving students tend to be extremely lagging in “Support” and “NV-Physical.”
6. In a longitudinal study, results exhibit a few attributes. First, there appears to be a slight but consistent decline in the “Oral Documentation” dimension from 7.8 in fall 2014 down to 7.4 in fall 2017. Second, “Oral Documentation” is consistently the lowest performing dimension averaging approximately 0.5 lower than the next lowest. And finally, “Attire”, followed by “Language”, and “Support” consistently remain the first, second, and third highest performing dimensions.
7. No comparison between dual enrollment sections and traditional sections could be made because no dual enrollment sections were offered during fall 2017.
8. In a comparison of online to traditional artifacts mean scores are lower for online courses in five of ten dimensions. Of these, “Language”, “NV-Vocal”, “NV-Physical”, “Presentation Media”, and “Attire” are statistically significantly different.
9. In a cross-campus comparison, Charlotte campus exhibits higher scores in 9/10 dimensions, down from 10 in spring 2017, and up from 6/10 in fall 2016, 8/10 in spring 2016, and 5/10 in fall 2015. Charlotte also exhibits the highest overall score. FSW Online exhibits the highest mean score in the 10th dimension, “NV-Physical” at 8.3. 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 “Conclusion” for 70% of the students was met.
3. SLO 3 – Achievement of “Developing” or higher (≥ 2) in the Informative Speech rubric dimension “Presentation Media” 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 3 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, strong students tend to be equally strong in all dimensions. Meanwhile, weaker students tend to be exceedingly lagging in “Oral Documentation” while exceedingly strong in “Attire” and “Conclusion.”
6. In a longitudinal study, results exhibit consistency among all rubric dimensions with the exception of “Support” which exhibits a steady incline. The “Support” dimension exhibits a steady increase over time from 8.7/10 in fall 2014 to 9.2/10 in fall 2017.
7. No comparison between dual enrollment sections and traditional sections could be made because no dual enrollment sections were offered during fall 2017.
8. In a comparison of online to traditional artifacts mean scores are lower for online courses in 7 of 10 dimensions, a reverse of previous terms, although only online sample is smaller than normal. Of the dimensions in which online sections exhibit a lower mean, “Oral Documentation”, “Language”, and “NV-Physical” are statistically significantly different. Of the dimensions in which online sections exhibit a higher mean, “Attire” is statistically significantly different.
9. In a cross-campus comparison, the Charlotte campus exhibits higher scores in 8/10 dimensions. The Charlotte campus also exhibits the highest overall score. The remaining 2/10 highest score is shared by FSW Online and Thomas Edison campus, each with one. Results of the ANOVA exhibit a statistically significant difference between sites.

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