Accounting Assessment Report
Fall 2019

Author: Joseph F. van Gaalen, Ph.D., Asst. VP, IR, Assessment & Effectiveness

1 INTRODUCTION

Florida SouthWestern State College's Business Department gathers a multitude of data from various courses as assessment tools. The three courses included in this assessment report are ACG 2021 *Financial Accounting*, ACG 2071 *Managerial Accounting*, ACG 2450 *Accounting Software Applications*, and ACG 2930 Special Topics / Capstone-Accounting. The assessment outcomes are intended to provide a baseline and measurement of achievement moving forward as well as investigate the strength and performance of items in the exam. The assessment plan also provides comparisons between dual enrollment (concurrent) and non-dual enrollment students, online versus traditional students, and by site, where possible. Where data is sufficient, additional analyses are provided including distribution studies and longitudinal studies.

For additional detail or further analysis not provided in this report, please contact Dr. Joseph F. van Gaalen, Asst. VP, IR, Assessment & Effectiveness (jfvangaalen@fsw.edu; x16965).

2 ACG 2021

2.1 LEARNING OBJECTIVES AND DESCRIPTIVE STATISTICS

The FSW Business faculty defined one area of interest for evaluation in support of the state framework outcome. The Ethics in the Movies from Financial Accounting course ACG 2021 will be used for this assessment method. The benchmark of 70% of students will illustrate a proficiency of 70% or higher within this assessment during the 2019-2020 academic year.

During the fall 2019 semester, 117 artifacts were scored tallied from 10 of 12 sections of ACG 2021 with an enrollment of 275, a representation of 43%. The other two sections did not record the assessment within the Learning Management System (Canvas). Of the 117 artifacts, the mean score is 86.8% (Table 1). The goal that 70% of students will illustrate a proficiency of 70% or higher within this assessment during the 2019-2020 academic year was met where 87% of artifacts score 70% or higher. Score distribution (Figure 1) is centered on 100% and exhibits a large negative skew, meaning results are tending heavily towards more positive values (Starkweather, 2010).

	Ethics in the Movies Assignment
% Scoring 70% or Higher	***87%***
n	117
Median	89
Mode	100
Mean	86.8
Standard deviation	12.75
Skewness	-1.02
Kurtosis	0.63

Table 1. Descriptive statistics for ACG 2021 common course assessment.

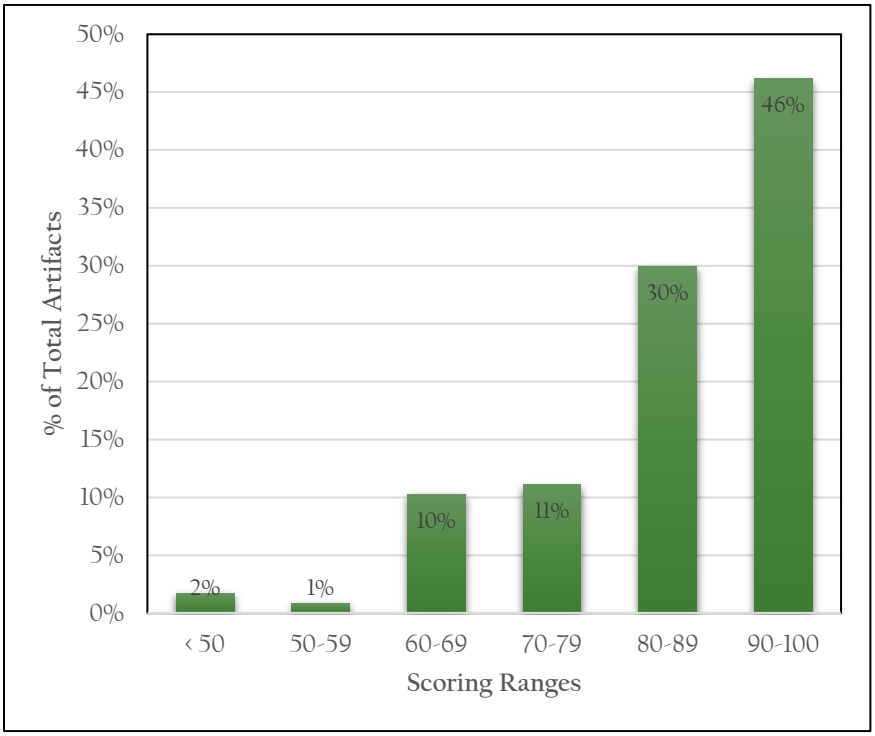

Figure 1. Score distribution of the "Ethics in the Movies" assignment.

2.2 Exploratory Analysis and Significance Testing

Multiple comparisons of artifact scores across varying formats, campuses, and student types were made, where possible, in order to add depth to the causes of the distribution of the artifacts. Each course was divided into the appropriate subgroups to perform the analysis. In cases where a subgroup is not represented in the course comparisons were not conducted and are noted for comprehensiveness.

2.2.1 Dual Enrollment (Concurrent) to Non-Dual Enrollment Comparison

No dual enrollment (concurrent) sections of the course were run during fall 2019 so no comparison study between dual enrollment and non-dual enrollment could be completed.

2.2.2 Online to Traditional Comparison

During the fall 2019 semester, 27 total online artifacts were collected from ACG 2021 and 90 traditional artifacts were collected from ACG 2021. A comparison of basic statistics is provided in Table 2. Online artifacts mean scores are 15.8 lower than traditional artifacts. Differences in the means were tested for

significance using a Welch's t-test according to standard methods (Davis, 1973; McDonald, 2009; Wilkinson, 1999) and were found to be statistically significantly different. Therefore, we can reject the null hypothesis that the difference in the means of the online and traditional artifacts are equal to 0, and we can conclude this with a 95% confidence that the differences in scores are not solely due to chance.

df = 115	
Online mean	74.6
Online standard deviation	13.39
Traditional mean	90.4
Traditional standard deviation	10.06
Effect size	1.06
p-value	2.02×10^{-6}

Table 2. Comparison of mean scores for online and traditional artifacts. 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 results exhibit what Cohen (1988) would consider a large effect size. In other words, non-overlap score distribution from online artifacts to traditional artifacts is approximately 57%. For a graphical representation of this see Figure 2.

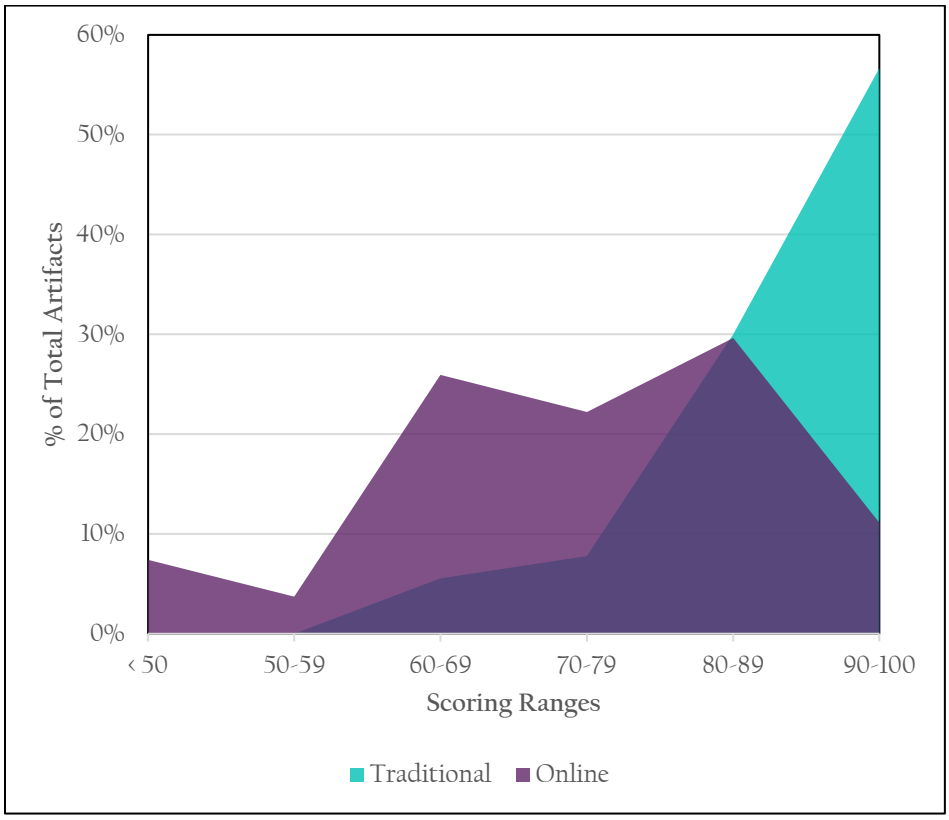

Figure 2. Score distribution for online (purple) and traditional (aqua) artifacts of ACG 2021.

2.2.3 Comparison by Campus/Site

Of the 117 artifacts collected from ACG 2021, 21 originated from the Charlotte Campus, 27 from FSW Online, and 69 from the Thomas Edison (Lee) Campus. A comparison of mean scores is provided in

Table 3. The Charlotte campus exhibits the highest mean score when compared with other sites (97.2%). FSW Online exhibits the lowest mean score (74.6%).

	Mean	Standard Deviation
Charlotte	**97.2**	3.70
FSW Online	74.6	**13.39**
Thomas Edison (Lee)	88.3	10.47

Table 3. Comparison of mean scores by site. Bold denotes highest among all sites.

A plot comparing score distributions by site is presented in Figure 3. The differences in mean scores between sites is clearly visible in varying distributions by site. Charlotte exhibits a large peak at 90-100 (nearly all artifacts score in this range). By comparison, that same range for the Thomas Edison campus is 45% and is only 10% for FSW Online. A one-way analysis of variance was used to compare means at each site. Results of the ANOVA exhibit a statistically significant difference between sites (see Table 4). Therefore, we can reject the null hypothesis that the mean 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.

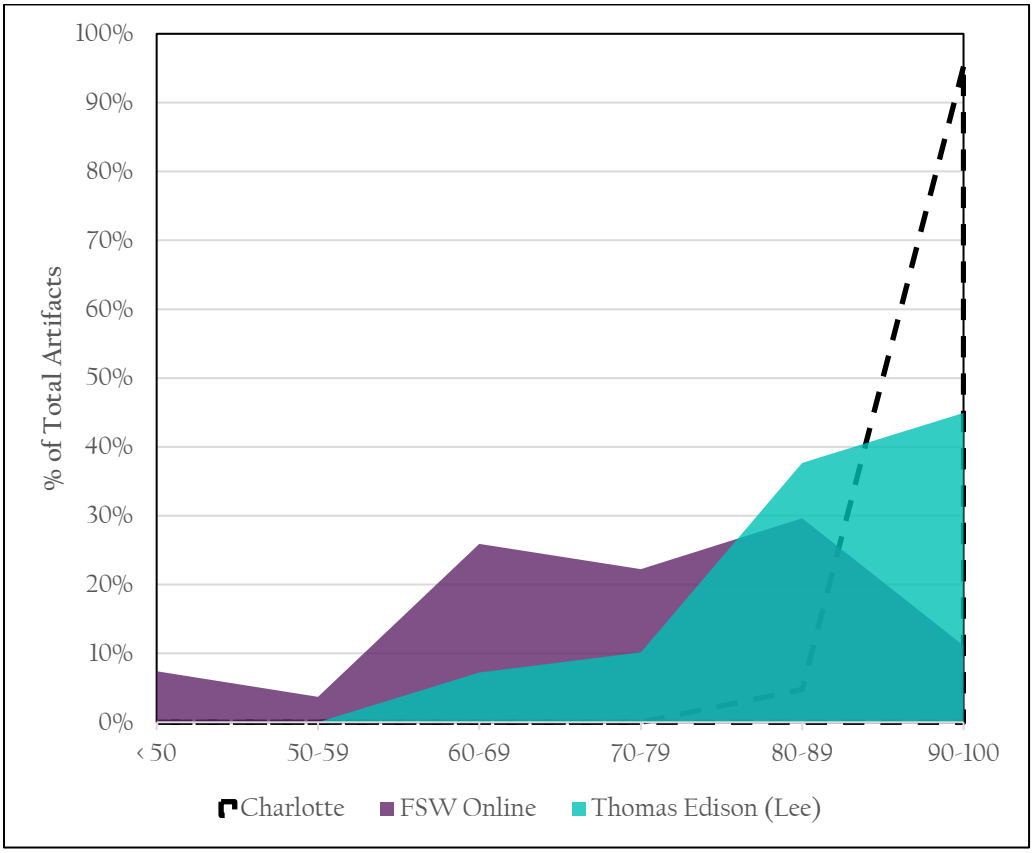

Figure 3. Comparison of score distribution by site.

Source of Variation	Sum of squared differences	df	Mean Squares	F_{obs}	p-value	F_{crit}
Between Sites	6473.5	2	3236.7	29.79	3.91×10^{-11}	3.08
Within Sites	12,385.7	114	108.6			
Total	18,859.2					

Table 4. Results of one-way ANOVA of mean scores at each site for ACG 2021.

2.3 LONGITUDINAL STUDY

As further data is collected in coming terms, this section will track achievement through time and highlight strengths, weaknesses and any long-term trends beginning with fall 2020 data.

3 ACG 2071

3.1 LEARNING OBJECTIVES AND DESCRIPTIVE STATISTICS

Using a common course assessment, the FSW Business faculty defined a rubric to be utilized in the assessment. This assessment will be made using the Comprehensive Problem 2 Part 5 (part f) Evaluation rubric items; specifically, rubric items:

- Paper follows the guidelines and covers all of the requirements of the assignment (first rubric item)
- Paper ties in course concepts. uses information presented in class and/or in the textbook (third rubric item)
- Student identifies the real problem in the case and proposes solution to solve the problem (fourth rubric item).

Each of these rubric items are a maximum 20 points each for a total of 60 points. Students must earn a minimum of 42 points (70%) to show proficiency. The benchmark of 70% of students will illustrate a proficiency of 70% or higher within this assessment during the 2019 - 2020 academic year. A secondary assessment will also be used. The Module 2 Test from Managerial Accounting course (ACG 2071) will be used for this assessment method. The benchmark of 70% of students will illustrate a proficiency of 70% or higher within this assessment during the 2019-2020 academic year.

For the fall 2019 assessment, 17 artifacts were collected for ACG 2071 from 1 of 4 course sections. Descriptive statistics for achievement are shown in Table 5 and Figure 4. The goal that 70% of students will illustrate a proficiency of 70% or higher within this assessment was met. Achievement percentages for the three focus areas are 88%, 94%, and 88%. However, it is interesting to note that a rubric dimension not in focus for this year's study on APA format exhibits achievement of only 53%. Additionally, the goal that 70% of students will illustrate a proficiency of 70% or higher within Module Test 2 was not met. Only 59% of students met that achievement.

Learning Outcome	***% Meeting 70%***
Paper follows the guidelines & covers all of the requirements of the assignment	**88%**
Topic supports the required amount of reliable research using proper APA format	**53%**
Paper ties in course concepts. Uses information presented in class and/or in the textbook.	**94%**
Student identifies the real problem in the case and proposes solutions to solve the problem.	**88%**
Writing quality	**88%**
TOTAL	**82%**

Table 5. Student achievement level by SLO for ACG 2071.

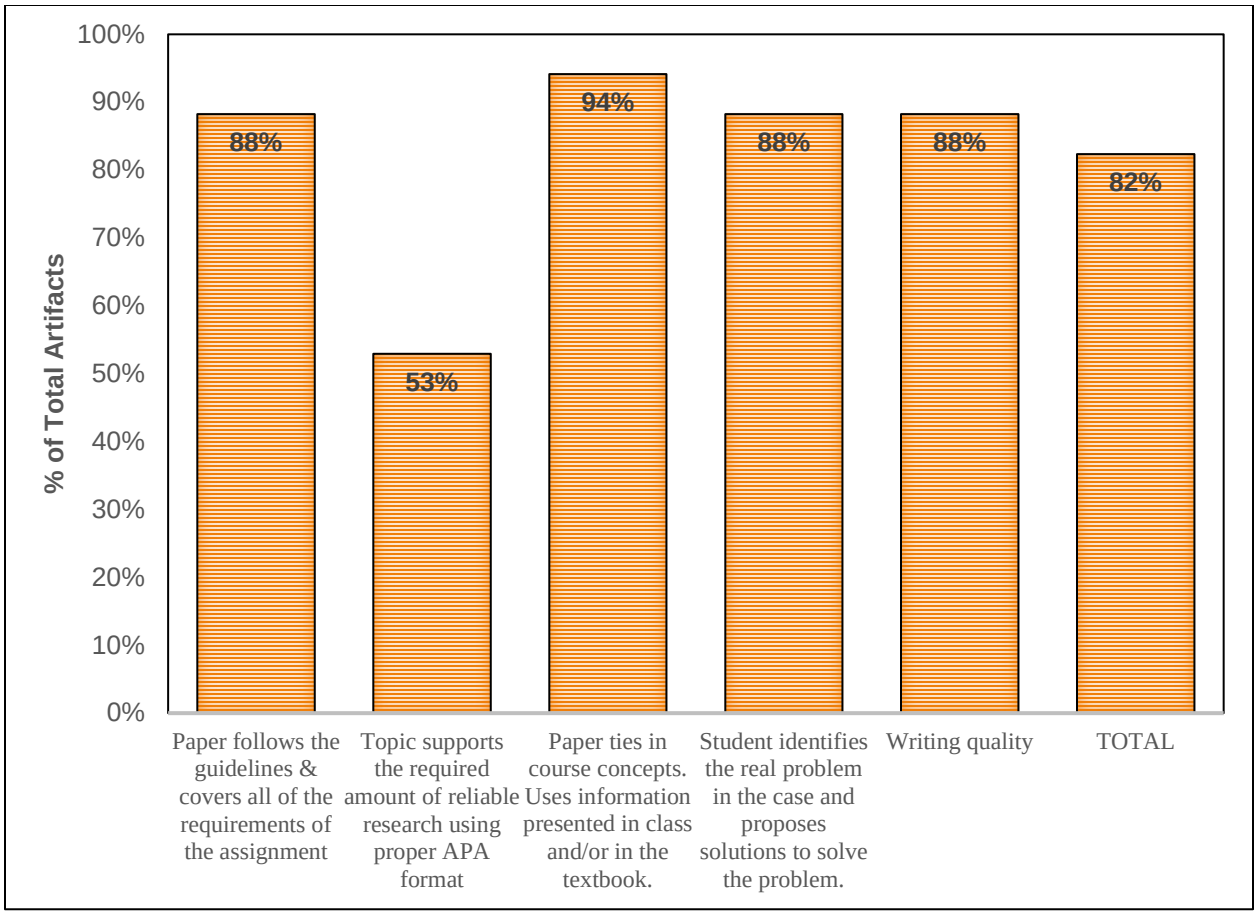

Figure 4. Percentage of goal achievement for assessment.

3.2 Exploratory Analysis and Significance Testing

Multiple comparisons of artifact scores across varying formats, campuses, and student types were made, where possible, in order to add depth to the causes of the distribution of the artifacts. Each course was divided into the appropriate subgroups to perform the analysis. In cases where a subgroup is not represented in the course comparisons were not conducted and are noted for comprehensiveness.

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

No dual enrollment (concurrent) sections of the course were run during fall 2019 so no comparison study between dual enrollment and non-dual enrollment could be completed.

3.2.2 Online to Traditional Comparison

While online sections were run, data for the assessment was not reported so no analysis could be completed.

3.2.3 Comparison by Campus/Site

While sections from multiple campuses were run, data was only collected from one site so comparison by site could not be completed.

3.3 LONGITUDINAL STUDY

Description of achievement over time in ACG 2071 is provided in Figure 5. Five of seven performance measures consistently achieve 80% or higher over time. The Module Test 2 and APA format portion of the other assessment are the two lowest performing measures over time. Note that comparison from fall terms to spring terms is less useful as assessment reports across multiple course level and program level assessments at Florida SouthWestern State College typically exhibit substantial differences from fall to spring term and are better interpreted from fall-to-fall and spring-to-spring (see http://www.fsw.edu/facultystaff/assessment/history for further details).

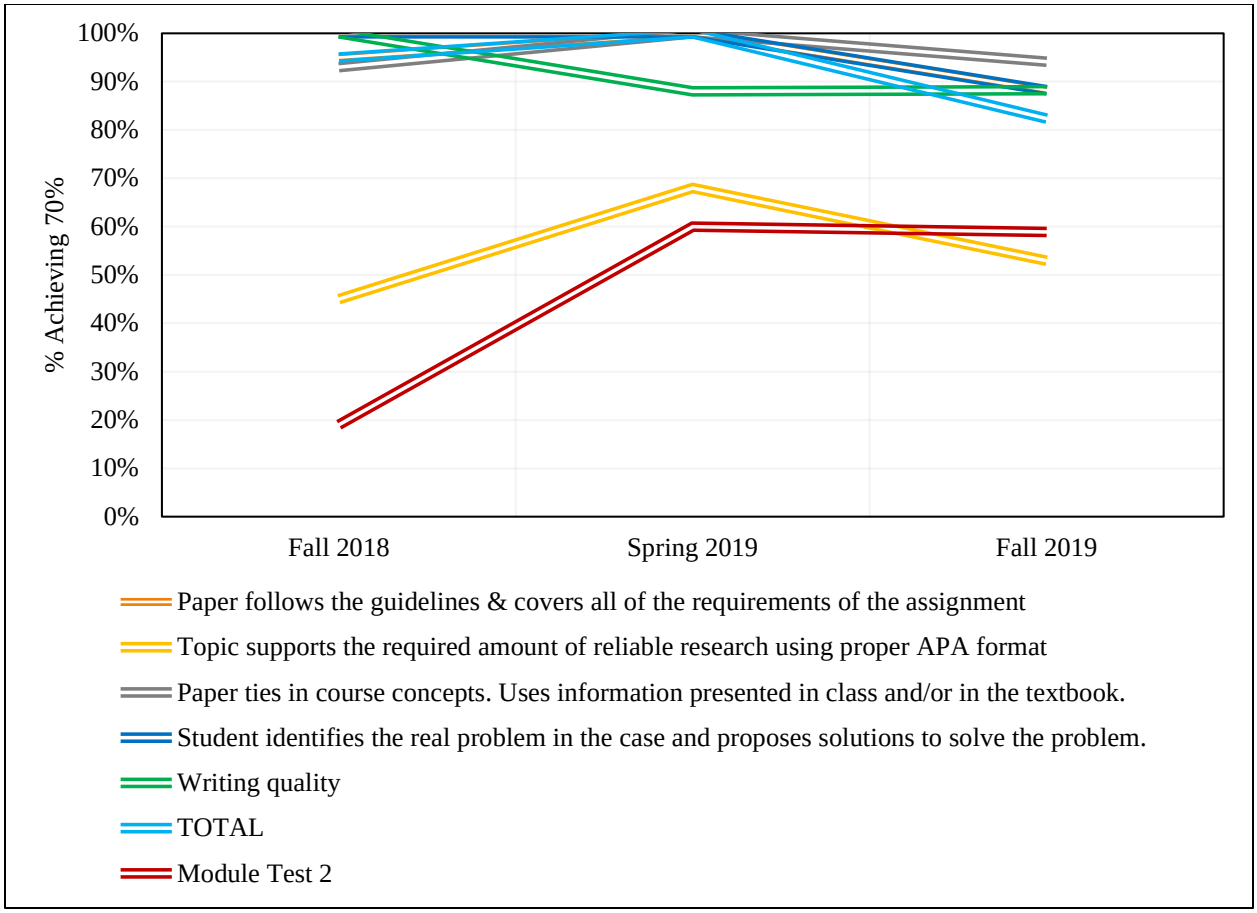

Figure 5. Comparison of achievement over time for ACG 2071 assessment.

4 ACG 2450

The course was not run in fall 2019 and so no study could be completed.

5 CONCLUSIONS

FSW's Business Department has employed a common assignment for courses as assessment tools. The three courses included in this assessment report are ACG 2021 *Financial Accounting*, ACG 2071

Managerial Accounting, and ACG 2450 *Accounting Software Applications*. The results are intended to provide a baseline achievement moving forward.

5.1 ACG 2021

A drill-down of ACG 2021 results are as follows:

1. During the fall 2019 semester, 117 artifacts were scored tallied from 10 of 12 sections of ACG 2021 with an enrollment of 275, a representation of 43%. The other two sections did not record the assessment within the Learning Management System (Canvas). Of the 117 artifacts, the mean score is 86.8%.
2. The goal that 70% of students will illustrate a proficiency of 70% or higher within this assessment during the 2019-2020 academic year was met where 87% of artifacts score 70% or higher.
3. No dual enrollment (concurrent) sections of the course were run during fall 2019 so no comparison study between dual enrollment and non-dual enrollment could be completed.
4. In a comparison of online to traditional artifacts, online artifacts mean scores are 15.8 lower than traditional artifacts. Differences in the means are found to be statistically significantly different.
5. In a cross-campus comparison, the Charlotte campus exhibits the highest mean score when compared with other sites (97.2%). FSW Online exhibits the lowest mean score (74.6%). Results are statistically significantly different.

5.2 ACG 2071

A drill-down of ACG 2071 results are as follows:

1. For the fall 2019 assessment, 17 artifacts were collected for ACG 2071 from 1 of 4 course sections.
2. The goal that 70% of students will illustrate a proficiency of 70% or higher within this assessment was met. Achievement percentages for the three focus areas are 88%, 94%, and 88%. However, it is interesting to note that a rubric dimension not in focus for this year's study on APA format exhibits achievement of only 53%. Additionally, the goal that 70% of students will illustrate a proficiency of 70% or higher within Module Test 2 was not met. Only 59% of students met that achievement.
3. No dual enrollment (concurrent) sections of the course were run during fall 2019 so no comparison study between dual enrollment and non-dual enrollment could be completed.
4. While online sections were run, data for the assessment was not reported so no analysis could be completed.
5. While sections from multiple campuses were run, data was only collected from one site so comparison by site could not be completed.
6. In a longitudinal study, five of seven performance measures consistently achieve 80% or higher over time. The Module Test 2 and APA format portion of the other assessment are the two lowest performing measures over time.

5.3 ACG 2450

The course was not run in fall 2019 and so no study could be completed.

6 REFERENCES

Cohen, J. 1988. Statistical power analysis for the behavioral sciences (2nd ed.). Lawrence Earlbaum Associates, Hillsdale, NJ.

Davis, J.C. 1973. Statistics and Data Analysis in Geology. John Wiley & Sons, New York, New York, 564 pp.

Lipsey, M.W. and Wilson, D.B. 1993. The efficacy of psychological, educational, and behavioral treatment: Confirmation from meta-analysis. American Psychologist, 48, 1181-1209.

McDonald, J.H. 2009. Handbook of Biological Statistics (2nd ed.). Sparky House Publishing, Baltimore, Maryland.

Rosenthal, R. and Rosnow, R.L. 1991. Essentials of behavioral research: Methods and data analysis (2nd ed.). McGraw Hill, New York, NY.

Starkweather, J. D. 2010. Introduction to Statistics for the Social Sciences. In: Research and Statistical Support. Retrieved from http://www.unt.edu/rss/class/Jon/ISSS_SC/.

Wilkinson, L. 1999. APA Task Force on Statistical Inference. Statistical Methods in Psychology Journals: Guidelines and Explanations. American Psychologist 54 (8), 594–604.