

Accounting Assessment Report

Spring 2018

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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*, and ACG 2450 *Accounting Software Applications*. 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, Director of 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 SLO related to ACG 2021 is:

- SLO 1 –The Comprehensive Assignment 1 from Financial Accounting course ACG 2021 will be used for this assessment method where the benchmark of 70% of students will illustrate a proficiency of 70% or higher within this assessment during the 2017/18 academic year; Using the FSW Canvas learning management system gradebook, the assessment will be gathered by selecting the higher of the Comprehensive Assignment 1A or Comprehensive Assignment 2A grade.

During the spring 2018 semester, 141 artifacts were scored tallied from 7 of 9 sections of ACG 2021 with an enrollment of 257, a representation of 55%. Of the 141 artifacts, the mean score is 90.1% (Table 1). The goal that 70% of students will illustrate a proficiency of 70% or higher within this assessment during the 2017/18 academic year was met where 90% of artifacts score 70% or higher. Score distribution (Figure 1) is centered on 98% and exhibits a large negative skew, meaning results are tending heavily towards more positive values (Starkweather, 2010). Note that the assignment is currently administered in some sections as a single attempt while in others with two attempts. This can affect the validity of the results and so this may need to be changed going forward.

	<i>Attempt 1</i>	<i>Attempt 2</i>	<i>Final Score (best attempt if 2 attempts offered)</i>
% Scoring 70% or Higher	75%	88%	90%
n	113	74	141
Median	98.3	98.3	98.3
Mode	98.3	98.3	98.3
Mean	62.5	86.3	90.1
Standard deviation	65.97	25.69	22.19
Skewness	-1.64	-2.46	-3.01
Kurtosis	1.07	5.14	8.34

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

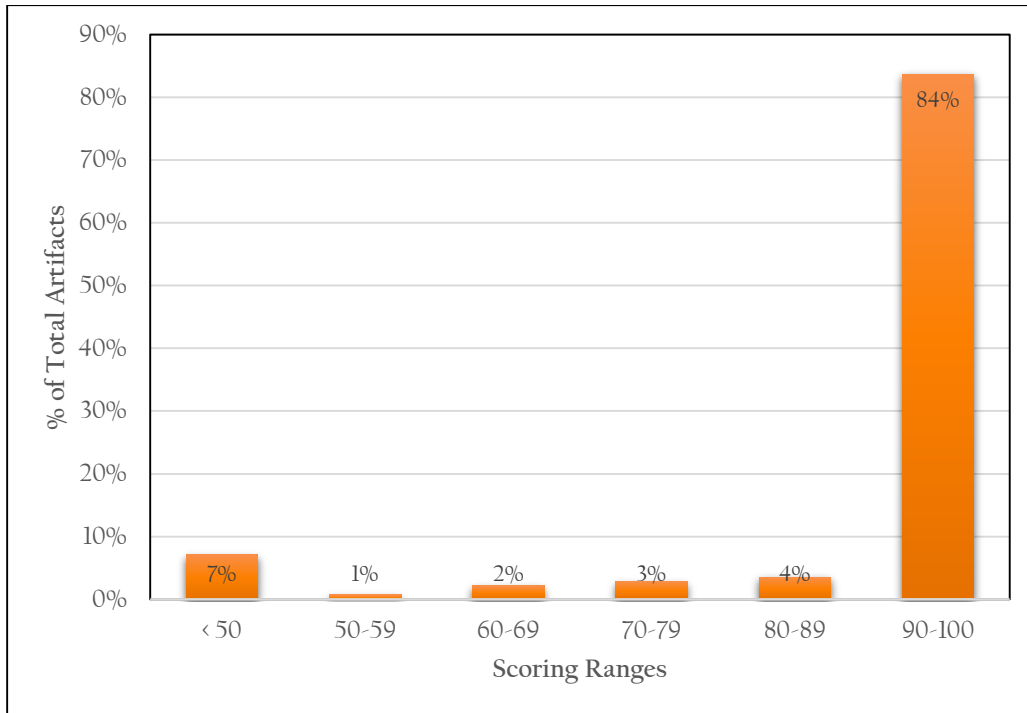


Figure 1. Score distribution of Comprehensive Assignment (best attempt if two attempts offered).

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 spring 2018 so no comparison study between dual enrollment and non-dual enrollment could be completed.

2.2.2 Online to Traditional Comparison

During the spring 2018 semester, 56 total online artifacts were collected from ACG 2021 and 85 traditional artifacts were collected from ACG 2021. A comparison of basic statistics is provided in Table 2. Online artifacts mean scores are 5.4 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 not be statistically significantly different. Therefore, we cannot reject the null hypothesis that the difference in the means of the online and traditional artifacts are equal to 0, and we cannot conclude this with a 95% confidence that the differences in scores are not solely due to chance.

df = 139		
Online mean		86.9
Online standard deviation		25.02
Traditional mean		92.3
Traditional standard deviation		19.98

Effect size		0.23
p-value		0.177

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 small effect size. In other words, non-overlap score distribution from online artifacts to traditional artifacts is approximately 16%. For a graphical representation of this see Figure 2.

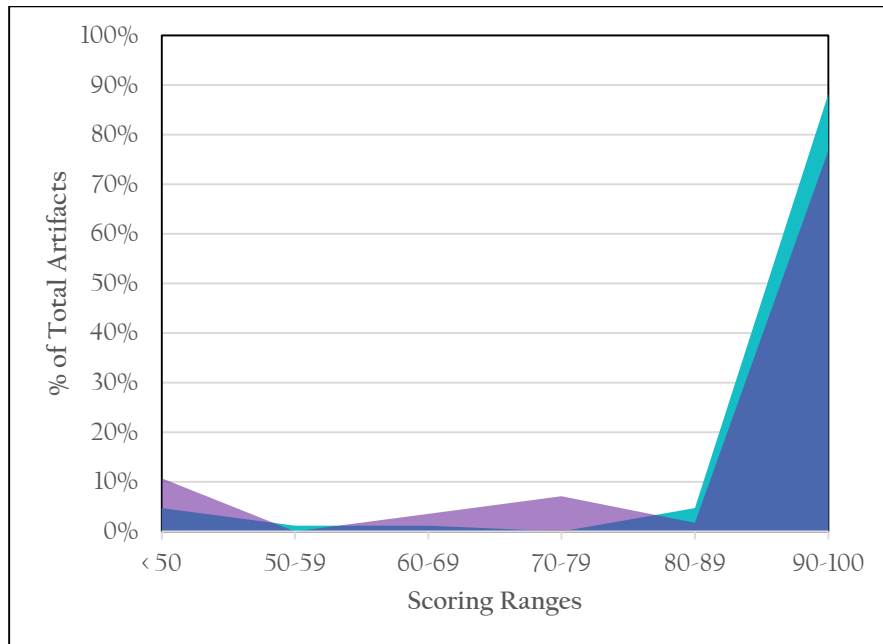


Figure 2. Score distribution for online (purple) and traditional (aqua) artifacts of ACG 2021.

2.2.3 Comparison by Campus/Site

Of the 141 artifacts collected from ACG 2021, 21 originated from the Charlotte Campus, 56 from FSW Online, and 64 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 (94.3%). FSW Online exhibits the lowest mean score (86.9%).

	Mean	Standard Deviation
Charlotte	94.3	21.26
FSW Online	86.9	25.02
Thomas Edison (Lee)	91.7	19.67

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. All sites exhibit similar distributions with large negative skews (scores tending towards higher values) and large peaks centered on 90-100. A one-way analysis of variance was used to compare means at each site. Results of the ANOVA do not exhibit a statistically significant difference between sites (see Table 4). Therefore, we cannot reject the null hypothesis that the mean scores at each site are equal to each other and we cannot conclude with a 95% confidence that the differences in scores are not solely due to chance.

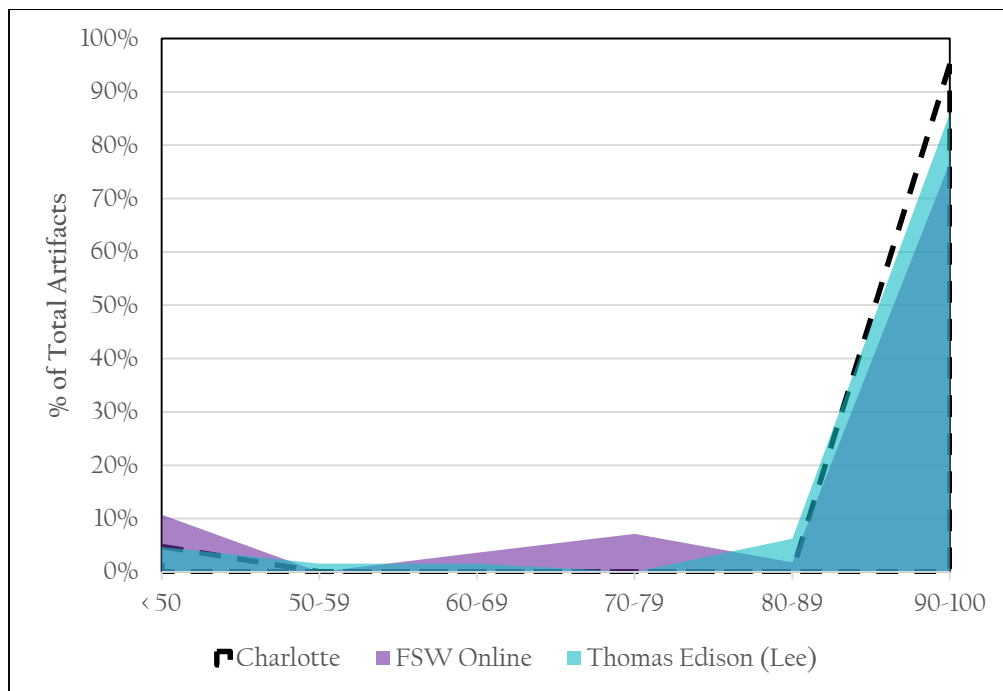


Figure 3. Comparison of score distribution by site.

Source of Variation	Sum of squared differences	df	Mean Squares	F _{obs}	p-value	F _{crit}
Between Sites	1097.4	2	548.7	1.12	0.331	3.06
Within Sites	67,855.8	138	491.7			
Total	68,953.2	140				

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 spring 2019.

3 ACG 2071

3.1 LEARNING OBJECTIVES AND DESCRIPTIVE STATISTICS

Using a common course assessment, the FSW Business faculty defined three areas of interest for Student Learning Objectives (SLOs) for evaluation and established assessment goals based on those areas. The objectives for each SLO are as follows:

- SLO 1 – Comprehensive Problem 2 Part 5 (part f) Evaluation 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 2017-18 academic year.
 - Rubric dimensions:
 - Paper follows the guidelines and covers all of the requirements of the assignment
 - Paper ties in course concepts. Uses information presented in class and/or in the textbook
 - 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.
- SLO 2 – 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 2017-18 academic year.
- SLO 3 – Module 3 Test from Managerial Accounting (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 2017-18 academic year.

For the spring 2018 assessment, a range of 34 to 102 artifacts were collected for ACG 2071 depending on the assessment from ranging from 2 to 5 out of 6 course sections. Descriptive statistics for achievement are shown in Table 5 and Figures 4 and 5. The first and second dimensions from the Comprehensive Problem 2, Part 5(f) assignment exhibit the highest achievement at 91% and 97%, respectively. Module Test 2 exhibits the lowest achievement at 40%. The goal of 70% meeting 70% or higher was met in 4 of 6 cases.

<i>Learning Outcome</i>	<i>% Meeting 70%</i>
<i>Module Test 2</i>	40%
<i>Module Test 3</i>	64%
Comprehensive Problem 2, Part 5(f)	
<i>Rubric dimension 1</i>	91%
<i>Rubric dimension 2</i>	97%
<i>Rubric dimension 3</i>	85%
<i>Overall rubric score</i>	91%

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

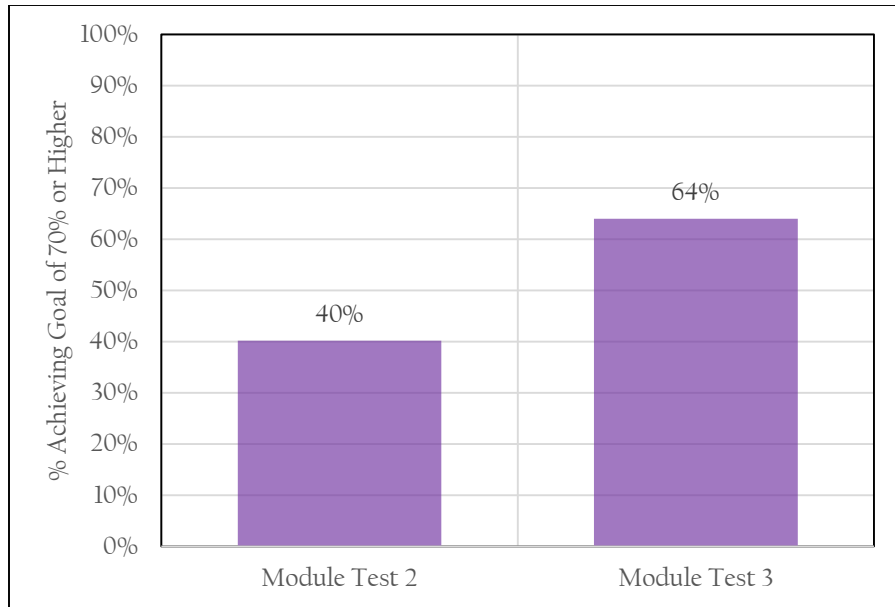


Figure 4. Percentage of goal achievement for Module Tests 2 and 3.

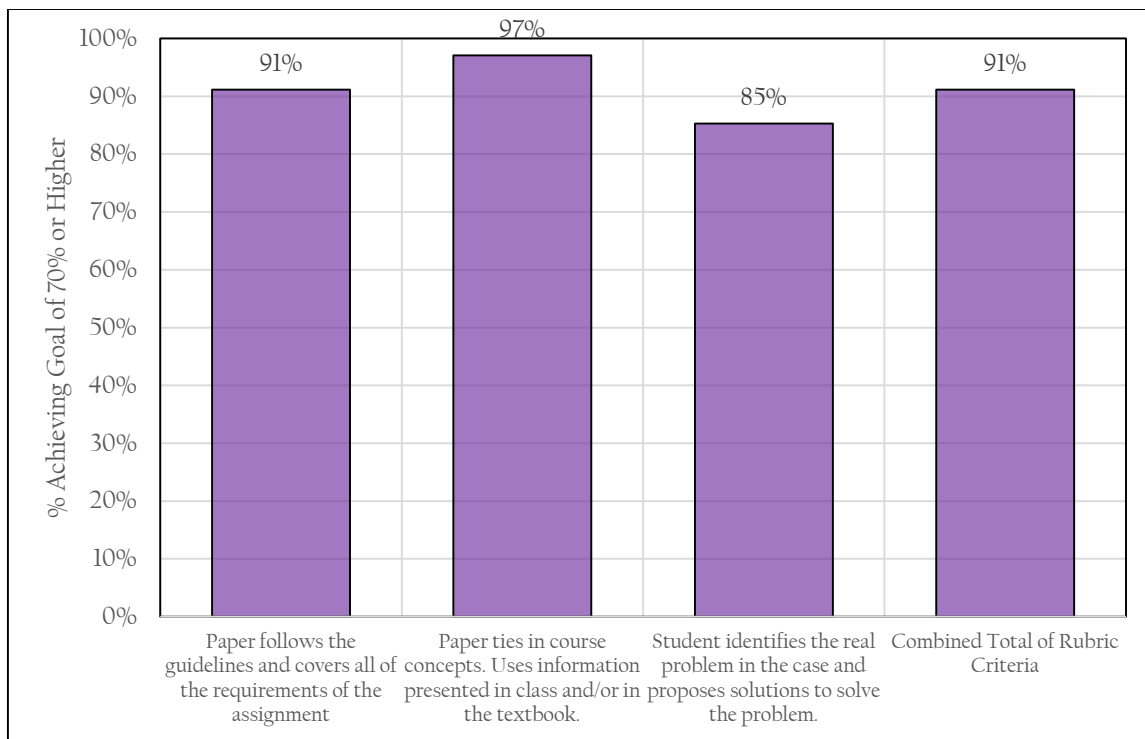


Figure 5. Percentage of goal achievement for Comprehensive Problem 2, Part 5(f).

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 spring 2018 so no comparison study between dual enrollment and non-dual enrollment could be completed.

3.2.2 Online to Traditional Comparison

During the spring 2018 semester, a range of 24 to 33 total online artifacts were collected from ACG 2071 and 10 to 70 traditional artifacts were collected from ACG 2071. Traditional artifacts are higher in 5 of 6 cases (all except the Overall rubric score, which had the same achievement percentage). Module Test 2 is statistically significantly different according to a Fisher's exact test.

<i>Learning Outcome</i>	<i>% Meeting 70% Traditional</i>	<i>% Meeting 70% Online</i>
<i>Module Test 2</i>	49%	22%
<i>Module Test 3</i>	67%	58%
Comprehensive Problem 2, Part 5(f)		
<i>Rubric dimension 1</i>	100%	88%
<i>Rubric dimension 2</i>	100%	96%
<i>Rubric dimension 3</i>	100%	79%
<i>Overall rubric score</i>	100%	100%

Table 6. Student achievement level by SLO for ACG 2071.

3.2.3 Comparison by Campus/Site

Of the range of 34 to 102 artifacts collected from ACG 2071, 0-24 originated from the Charlotte campus, 24-33 from FSW Online, and 24-46 from the Thomas Edison (Lee) campus. A comparison of achievement of the goal is provided in Table 4 and Figure 6. The Thomas Edison campus exhibits the highest achievement in 4 of 6 areas while the Charlotte campus exhibits the highest in the remain two areas, Modules 2 and 3 Tests. Results across sites are statistically significantly different for Module Test 2 only based on a chi-squared test for independence.

	Module 2 Test	Module 3 Test	Rubric Dimension 1	Rubric Dimension 2	Rubric Dimension 3	Overall Rubric Score
Charlotte n=24 (no rubric data)	71%	75%	~	~	~	~
FSW Online n=32/33 (n=24 for rubrics)	22%	58%	88%	96%	79%	100%
Thomas Edison (Lee) n=46 (n=24 for rubrics)	37%	59%	100%	100%	100%	100%

Table 7. Comparison of mean scores by site. Bold denotes highest among all sites.

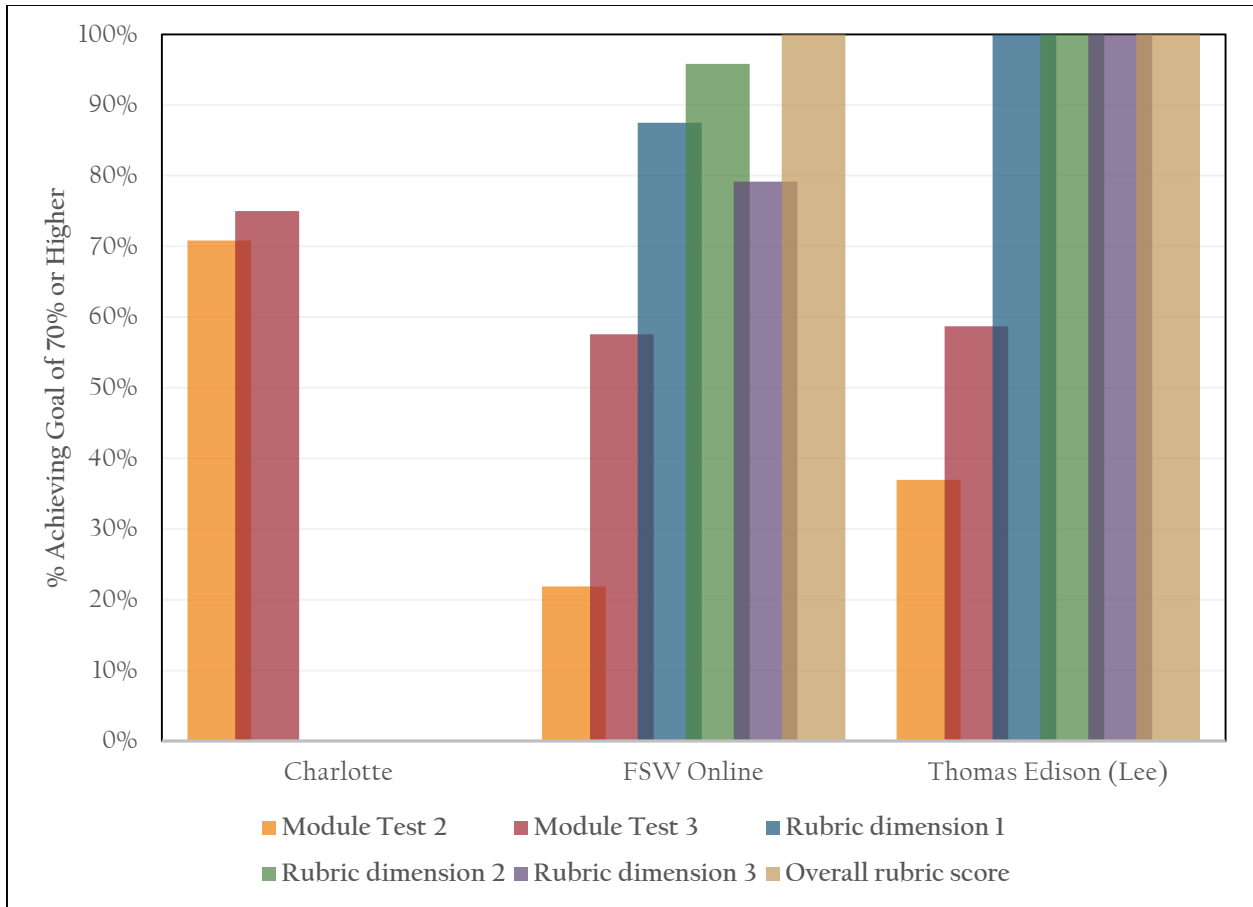


Figure 6. Comparison of achievement on SLO by site.

3.3 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 fall 2018.

4 ACG 2450

4.1 LEARNING OBJECTIVES AND DESCRIPTIVE STATISTICS

The FSW Business faculty defined three areas of interest for evaluation in support of the state framework outcome. Two of the three SLOs related to ACG 2450 are described below. The third, related to the Capital Book Project, is not found in the Learning Management System.

- SLO 1 – Quickbooks Application Chapter 2 (End-of-Chapter Problem, Your Name Landscape and Pool Service) will be used for this assessment method. The benchmark will illustrate a proficiency of 70% or higher within this assessment during the 2017/18 academic year. Using the FSW Canvas learning management system gradebook, the assessment will be gathered by selecting the Quickbooks Application Chapter 2 assignment score.

- SLO 2 – Quickbooks Application Chapter 8 (End-of-Chapter Problem, Your Name’s Pool & Spa) will be used for this assessment method. The benchmark will illustrate a proficiency of 70% or higher within this assessment during the 2017/18 academic year. Using the FSW Canvas learning management system gradebook, the assessment will be gathered by selecting the Quickbooks Application Chapter 8 assignment score.

During the spring 2018 semester, a range of 11 to 16 artifacts were scored tallied from 1 of 1 sections of ACG 2450 with an enrollment of 19, a representation of 58% or 84% depending on the assignment. Mean scores range from 94% to 100% depending on assignment (Table 1). For SLO 1, the goal of proficiency (defined as a passing score) of 70% or higher in the Quickbooks Application Chapter 2 assessment during the 2017/18 academic year was met with 88% of artifacts scoring 70% or higher. For SLO 2, the goal of proficiency of 70% or higher in the Quickbooks Application Chapter 8 assessment during the 2017/18 academic year was met with 100% of artifacts scoring 70% or higher.

	<i>Quickbooks Application Chapter 2</i>	<i>Quickbooks Application Chapter 8</i>
% Scoring 70% or Higher	88%	100%
n	16	11
Median	100	100
Mode	100	100
Mean	94.4	100
Standard deviation	15.20	0.00
Skewness	-2.51	~
Kurtosis	4.90	~

Table 8. Descriptive statistics for ACG 2450 common course assessment.

4.2 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.

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

No dual enrollment (concurrent) sections of the course were run during spring 2018 so no comparison study between dual enrollment and non-dual enrollment could be completed.

4.2.2 Online to Traditional Comparison

Only one section of the course was offered during spring 2018 (an online section) so no comparison between online and traditional could be completed.

4.2.3 Comparison by Campus/Site

Only one section of the course was offered during spring 2018 (an online section) so no comparison between across sites could be completed.

4.3 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 spring 2019.

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. In a study of outcome objective, "SLO 1 –The Comprehensive Assignment 1 from Financial Accounting course ACG 2021 will be used for this assessment method where the benchmark of 70% of students will illustrate a proficiency of 70% or higher within this assessment during the 2017/18 academic year; Using the FSW Canvas learning management system gradebook, the assessment will be gathered by selecting the higher of the Comprehensive Assignment 1A or Comprehensive Assignment 2A grade." the goal that 70% of students will illustrate a proficiency of 70% or higher within this assessment during the 2017/18 academic year was met where 90% of artifacts score 70% or higher.
2. In a study of score distribution, scores are centered on 98% and exhibits a large negative skew, meaning results are tending heavily towards more positive values.
3. No dual enrollment (concurrent) sections of the course were run during spring 2018 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 5.4 lower than traditional artifacts. Differences in the means are found to not be statistically significantly different.
5. In a cross-campus comparison, the Charlotte campus exhibits the highest mean score when compared with other sites (94.3%). FSW Online exhibits the lowest mean score (86.9%). All sites exhibit similar distributions with large negative skews (scores tending towards higher values) and large peaks centered on 90-100. Results are not statistically significantly different.

5.2 ACG 2071

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

1. In a study of outcome objective SLO 1, the goal that 70% of students will illustrate a proficiency of 70% or higher in the Comprehensive Problem 2 Part 5 (part f) was met with achievement at 91%.
2. In a study of outcome objective SLO 2, the goal that 70% of students will illustrate a proficiency of 70% or higher in the Module 2 test was not met with achievement at 40%.
3. In a study of outcome objective SLO 3, the goal that 70% of students will illustrate a proficiency of 70% or higher in the Module 3 test was not met with achievement at 64%.
4. No dual enrollment (concurrent) sections of the course were run during spring 2018 so no comparison study between dual enrollment and non-dual enrollment could be completed.
5. In a comparison of online to traditional artifacts, traditional artifacts are higher in 2 of 3 cases (Module 2 and 3 tests). Module Test 2 is statistically significantly different according to a Fisher's exact test.
6. In a cross-campus comparison, the Thomas Edison campus exhibits the highest achievement in SLO 1, but Charlotte campus exhibits the highest in the remain two areas, Modules 2 and 3 Tests.

Results across sites are statistically significantly different for Module Test 2 only based on a chi-squared test for independence.

5.3 ACG 2450

A drill-down of ACG 2450 results are as follows:

1. In a study of outcome objective SLO 1, the goal that 70% of scores will be 70% or higher for Quickbooks Application Chapter 2 was met with achievement at 88%.
2. In a study of outcome objective SLO 2, the goal that 70% of scores will be 70% or higher for Quickbooks Application Chapter 8 was met with achievement at 100%.
3. No dual enrollment (concurrent) sections of the course were run during spring 2018 so no comparison study between dual enrollment and non-dual enrollment could be completed.
4. Only one section of the course was offered during spring 2018 (an online section) so no comparison between online and traditional could be completed.
5. Only one section of the course was offered during spring 2018 (an online section) so no comparison between across sites could be completed.

6 REFERENCES

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