

Criminology Assessment Report

Fall 2016

Author: Joseph F. van Gaalen, Ph.D., Director, Academic Assessment

1 INTRODUCTION

Florida SouthWestern State College's Business Department gathers a multitude of data from various courses as assessment tools in support of the Florida Department of Education Curriculum Framework. These courses included in assessment are CCJ 1010 *Introduction to Criminology* and CCJ 1020 *Introduction to Criminal Justice*. 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 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 Academic Assessment, Academic Affairs (jfvangaalen@fsw.edu; x16965).

2 CCJ 1010

2.1 LEARNING OBJECTIVES AND DESCRIPTIVE STATISTICS

The FSW Business faculty defined one area of interest for evaluation in support of the state framework. The outcome and the measure of success related to CCJ 1010 is:

- Outcome 1 – 80% of candidates will earn a grade of 80 or higher on the essay assignments associated with the program outcome “Demonstrate the ability to apply appropriate resources in identifying and addressing the causes, perception, and decision making to solving and analyzing crime patterns.” during AY 2016-2017.

During the fall 2016 semester, 53 scores were tallied from 2 of 3 sections of CCJ 1010. The third section did not include these assessments in the Learning Management System (LMS) in which to be collected. Descriptive statistics for achievement of outcomes are shown in Table 1. The distribution of scores is presented in Table 2 and Figure 1.

<i>Module Essays</i>	<i>% Scoring 80% or Higher</i>	<i>Module Essays</i>	<i>% Scoring 80% or Higher</i>
<i>Module 1 Essay</i>	64%	<i>Module 8 Essay</i>	77%
<i>Module 2 Essay</i>	92%	<i>Module 9 Essay</i>	75%
<i>Module 3 Essay</i>	92%	<i>Module 10 Essay</i>	83%
<i>Module 4 Essay</i>	91%	<i>Module 11 Essay</i>	85%
<i>Module 5 Essay</i>	89%	<i>Module 12 Essay</i>	79%
<i>Module 6 Essay</i>	91%	<i>Module 13 Essay</i>	87%
<i>Module 7 Essay</i>	89%	<i>Module 14 Essay</i>	74%

Table 1. Student achievement level by Essay for CCJ 1010.

Essay #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Maximum score	350	350	350	350	350	350	350	350	350	350	350	350	350	350
n	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Max	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Min	0	163	163	0	0	0	0	0	0	0	0	0	0	0
Median	350	350	320	335	335	320	330	330	320	320	320	320	320	320
Mode	350	350	320	350	350	350	350	350	320	320	350	320	320	320
Mean	281.8	328.3	314.7	311.8	296.6	300.6	306.6	271.3	263.0	284.6	289.7	265.6	283.3	273.7
Standard deviation	99.85	42.22	42.81	80.10	108.69	89.75	90.92	126.84	130.60	106.29	97.26	122.70	112.72	119.11
Skewness	-1.73	-2.85	-2.60	-3.50	-2.37	-2.94	-3.02	-1.64	-1.50	-2.23	-2.56	-1.72	-2.15	-1.83
Kurtosis	2.55	8.47	7.34	11.72	4.03	7.72	8.01	0.96	0.45	3.53	5.36	1.15	2.89	1.70

Table 2. Descriptive statistics for CCJ 1010 module essays.

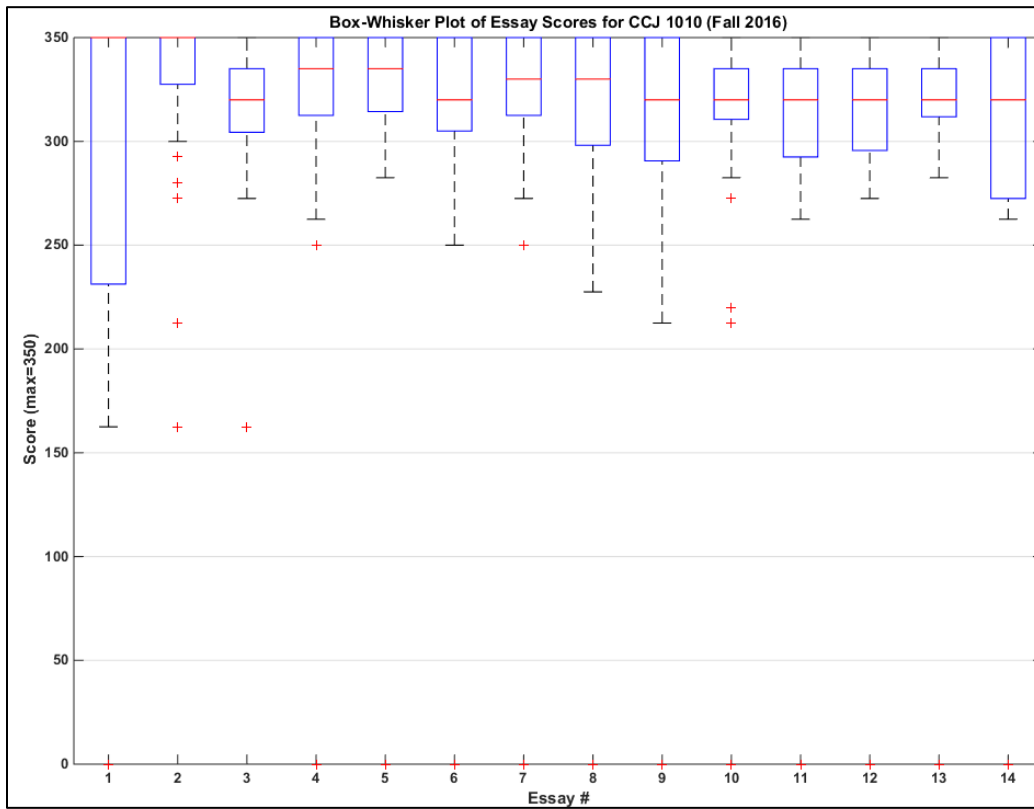


Figure 1. Box-Whisker plot of scores distributed by Essay # for CCJ 1010. Red line depicts median score. Upper and lower box boundaries indicate 75% quartile and 25% quartile (box represents central 50% of the scores). Vertical lines represent remaining scores outside central 50% that are not outliers. Red '+'s denote outliers.

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 to Non-Dual Enrollment Comparison

No dual enrollment sections of the course were run during fall 2016 so no comparison study between dual enrollment and non-dual enrollment could be completed.

2.2.2 Online to Traditional Comparison

During the fall 2016 semester, 27 total online scores were tallied from CCJ 1010 and 26 traditional artifacts were tallied from CCJ 1010. A comparison of basic statistics is provided in Table 3. Online artifacts mean scores are higher for 10 of 14 essay assignments. Differences in the means were tested for significance using a Welch's t-test according to standard methods (Davis, 1973; McDonald, 2009; Wilkinson, 1999). Of the 14 essays, four were found to be statistically significantly different (Essay #s 1, 6, 13, and 14). Therefore, we must reject the null hypothesis that the difference in the means of the online and traditional scores of these essays is equal to 0, and we can conclude this with a 95% confidence that the differences in scores are not solely due to chance.

Essay #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<i>Maximum score</i>	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Traditional														
n	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Mean	335.6	332.5	303.4	309.4	284.6	275.2	283.4	253.5	233.5	258.1	294.0	258.8	244.6	231.2
% above 80	92%	45%	43%	45%	42%	40%	42%	36%	34%	38%	45%	40%	38%	34%
Online														
n	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Mean	230	324.2	325.6	314.1	308.1	325.0	328.9	288.5	291.5	310.1	285.6	272.1	320.6	314.6
% above 80	37%	93%	96%	89%	93%	100%	93%	81%	81%	89%	78%	78%	96%	78%

Table 3. Comparison of basic statistics for essays of traditional sections and online sections. Statistically significant results denoted in bold/italics.

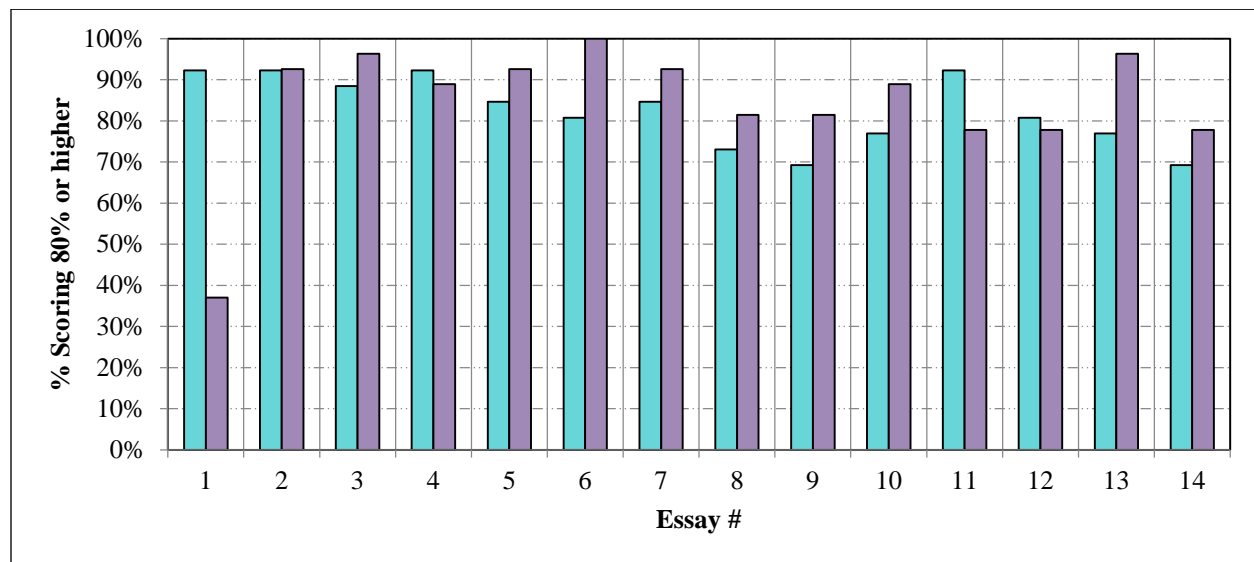


Figure 2. Comparison of percent of scores achieving 80% or higher by modality with Traditional (teal) and Online (purple).

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 a small, medium, and large effect sizes. In

other words, non-overlap score distribution from online artifacts to traditional artifacts is approximately 5% to 99%.

2.2.3 Comparison by Campus/Site

Since the only two sites in which courses were offered was Thomas Edison (Lee) and FSW Online, results of this comparison are exhibited in 2.2.2 (see above).

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.

3 CCJ 1020

3.1 LEARNING OBJECTIVES AND DESCRIPTIVE STATISTICS

The FSW Business faculty defined one area of interest for evaluation in support of the state framework. The outcome and the measure of success related to CCJ 1020 is:

- Outcome 1 – 80% of candidates will earn a grade of 80 or higher on the essay assignments associated with the program outcome “Demonstrate recognition of the three levels of the Criminal Justice System.” during AY 2016-2017.

During the fall 2016 semester, 88 scores were tallied from 4 of 5 sections of CCJ 1020. The fifth section did not include these assessments in the Learning Management System (LMS) in which to be collected. Descriptive statistics for achievement of outcomes are shown in Table 4. The distribution of scores is presented in Table 5 and Figure 3.

<i>Module Essays</i>	<i>% Scoring 80% or Higher</i>	<i>Module Essays</i>	<i>% Scoring 80% or Higher</i>
<i>Module 1 Essay</i>	82%	<i>Module 8 Essay</i>	71%
<i>Module 2 Essay</i>	88%	<i>Module 9 Essay</i>	76%
<i>Module 3 Essay</i>	77%	<i>Module 10 Essay</i>	75%
<i>Module 4 Essay</i>	83%	<i>Module 11 Essay</i>	77%
<i>Module 5 Essay</i>	71%	<i>Module 12 Essay</i>	70%
<i>Module 6 Essay</i>	80%	<i>Module 13 Essay</i>	66%
<i>Module 7 Essay</i>	80%	<i>Module 14 Essay</i>	66%

Table 4. Student achievement level by Essay for CCJ 1020.

Essay #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<i>Maximum score</i>	350	350	350	350	350	350	350	350	350	350	350	350	350	350
<i>n</i>	87	88	88	88	86	88	88	87	87	87	88	88	88	85
<i>Max</i>	350	350	350	350	350	350	350	350	350	350	350	350	350	350
<i>Min</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Median</i>	312.5	320	320	320	312.5	320	320	312.5	320	320	320	320	312.5	310
<i>Mode</i>	350	350	350	335	0	335	350	0	320	335	320	0	0	0
<i>Mean</i>	294.6	301.5	284.8	284.8	249.0	265.7	263.2	254.7	257.8	256.7	256.1	251.8	230.0	214.3
<i>Standard deviation</i>	82.96	79.10	93.14	100.46	131.60	123.29	130.97	124.77	125.97	133.82	136.15	138.89	147.47	155.98
<i>Skewness</i>	-2.68	-2.87	-2.12	-2.16	-1.32	-1.65	-1.50	-1.48	-1.50	-1.37	-1.35	-1.25	-0.90	-0.65
<i>Kurtosis</i>	7.01	7.93	3.72	3.45	-0.09	0.95	0.38	0.45	0.48	0.02	-0.09	-0.34	-1.12	-1.57

Table 5. Descriptive statistics for CCJ 1020 module essays.

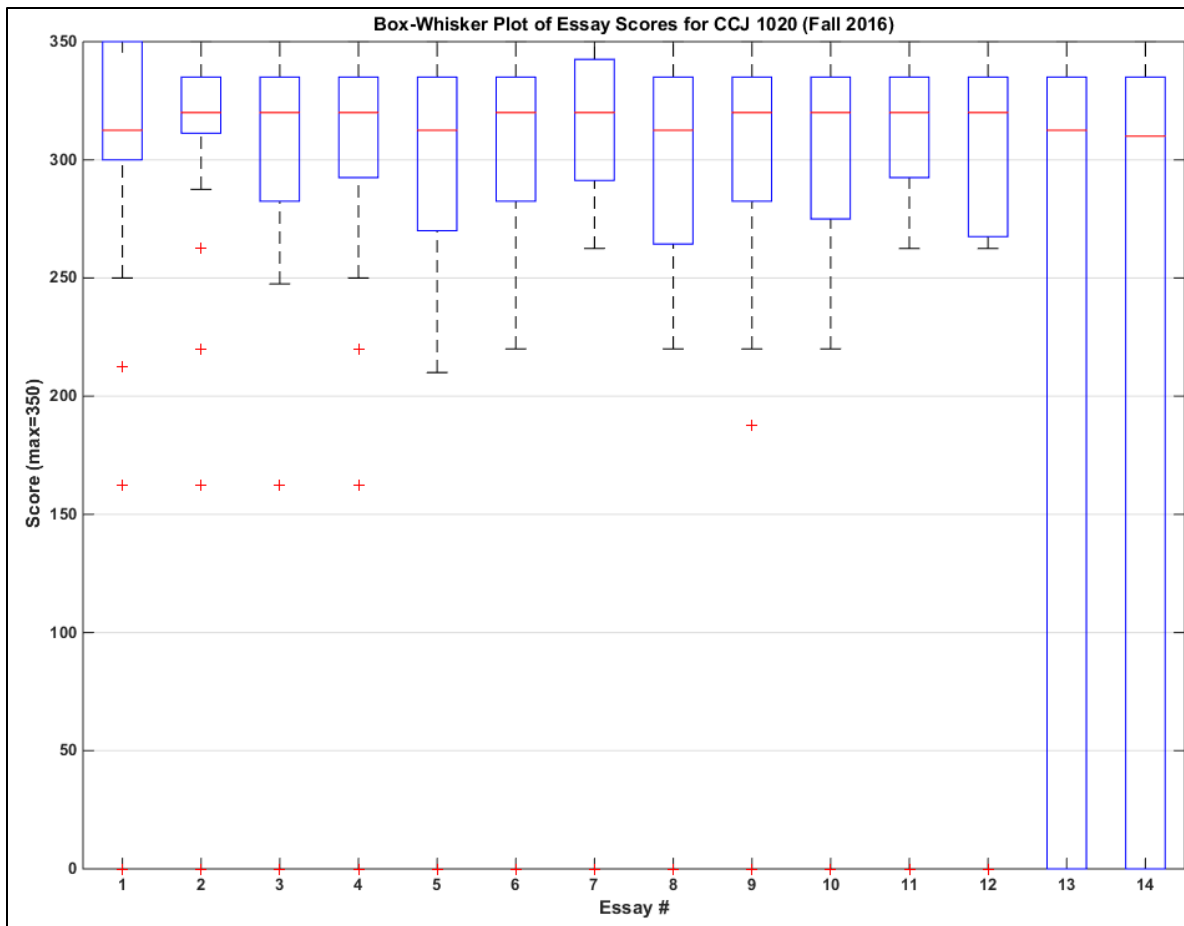


Figure 3. Box-Whisker plot of scores distributed by Essay # for CCJ 1020. Red line depicts median score. Upper and lower box boundaries indicate 75% quartile and 25% quartile (box represents central 50% of the scores). Vertical lines represent remaining scores outside central 50% that are not outliers. Red '+'s denote outliers.

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 to Non-Dual Enrollment Comparison

No dual enrollment sections of the course were run during fall 2016 so no comparison study between dual enrollment and non-dual enrollment could be completed.

3.2.2 Online to Traditional Comparison

During the fall 2016 semester, 28 total online scores were tallied from CCJ 1020 and 54 traditional artifacts were tallied from CCJ 1020. A comparison of basic statistics is provided in Table 6. Online artifacts mean scores are higher for 9 of 14 essay assignments. Differences in the means were tested for significance using a Welch's t-test according to standard methods (Davis, 1973; McDonald, 2009; Wilkinson, 1999). Of the 14 assignments, five were found to be statistically significantly different (Essay

#s 1, 2, 4, 7, and 13). Therefore, we must reject the null hypothesis that the difference in the means of the online and traditional scores of these essays is equal to 0, and we can conclude this with a 95% confidence that the differences in scores are not solely due to chance.

Essay #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<i>Maximum score</i>	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Traditional														
n	54	56	55	55	43	50	47	48	46	45	45	45	43	33
Mean	320.9	306.0	300.5	303.6	311.5	321.5	317.7	307.6	318.5	324.4	323.6	322.4	315.9	327.4
% above 80	93%	88%	82%	89%	86%	94%	98%	81%	96%	96%	98%	93%	91%	100%
Online														
n	28	28	27	25	25	23	24	23	25	24	24	23	20	23
Mean	296.4	335.5	316.3	334.6	320.9	317.5	342.9	321.4	311.0	322.3	332.5	332.5	332.6	322.2
% above 80	75%	100%	85%	96%	96%	100%	100%	100%	88%	92%	100%	87%	95%	100%

Table 6. Comparison of basic statistics for essays of traditional sections and online sections. Statistically significant results denoted in bold/italics.

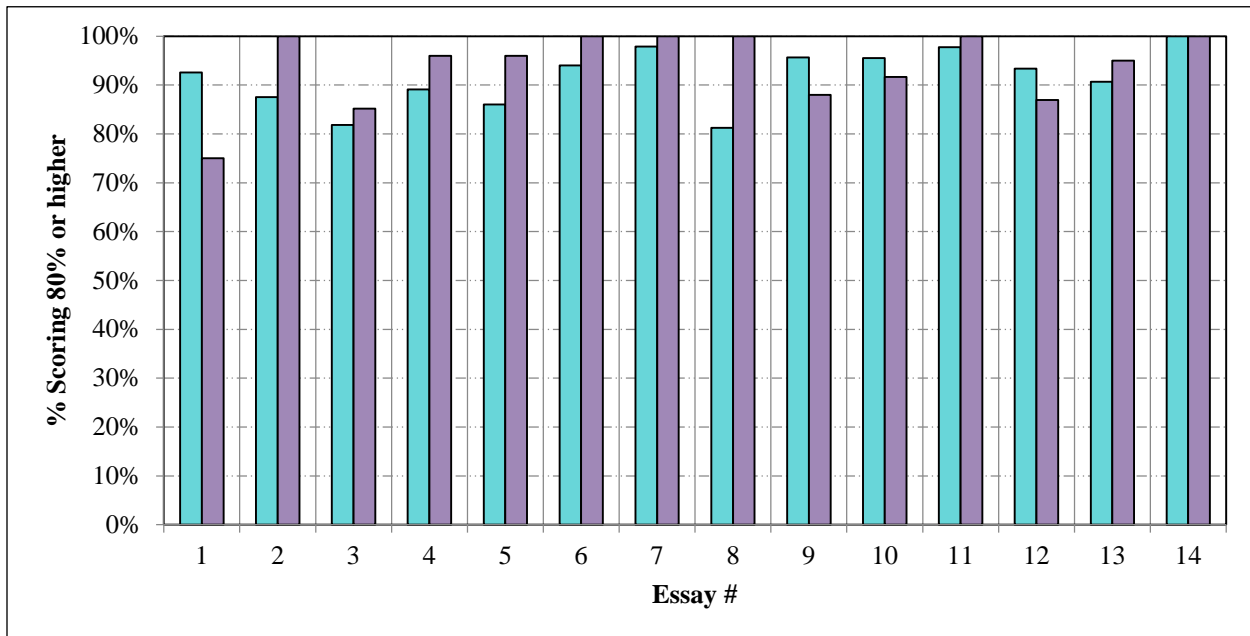


Figure 4. Comparison of percent of scores achieving 80% or higher by modality with Traditional (teal) and Online (purple).

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 a small, medium, and large effect sizes. In other words, non-overlap score distribution from online artifacts to traditional artifacts is approximately 9% to 70%.

3.2.3 Comparison by Campus/Site

Of the artifacts collected from CCJ 1020, 24 originated from Collier campus, 28 from FSW Online, and 7 from the Hendry Glades Center, and 25 from Thomas Edison (Lee) campus. A comparison of % scoring 80% or higher by site is shown in Figure 5. The Thomas Edison campus exhibits the highest number of essays achieving 80% or higher (7). FSW Online exhibits the second highest (6) with Collier and Hendry Glades each having five.

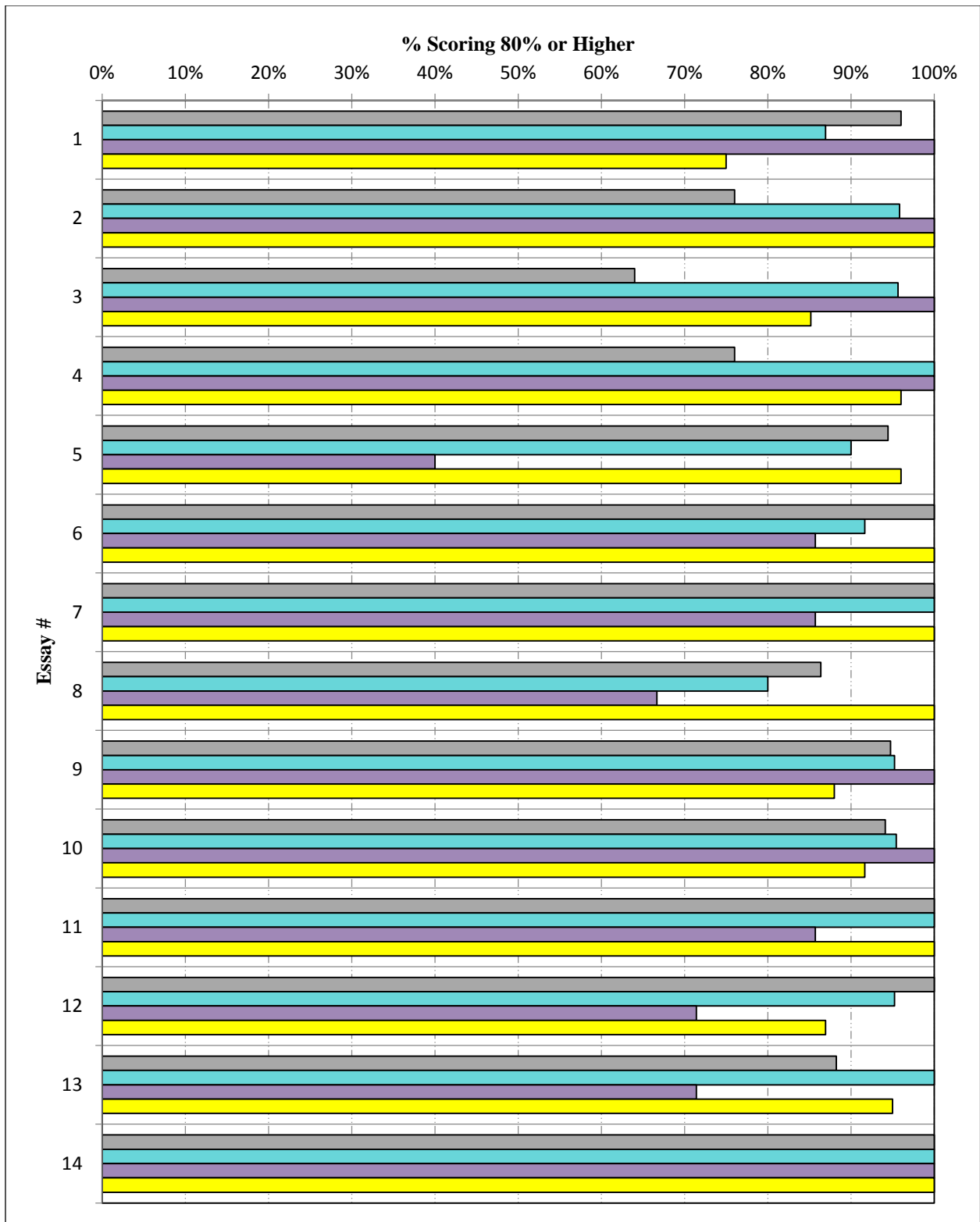


Figure 5. Comparison of percent scoring 80% or higher on module essay assignments for Thomas Edison (gray), Collier (teal), Hendry glades (purple), and FSW Online (yellow).

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.

4 CONCLUSIONS

FSW's Business Department gathers a multitude of data from various courses as assessment tools in support of the Florida Department of Education Curriculum Framework. These courses included in assessment are CCJ 1010 *Introduction to Criminology* and CCJ 1020 *Introduction to Criminal Justice*. 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.

4.1 CCJ 1010

A drill-down of CCJ 1010 results are as follows:

1. In a study of outcome achievement, "80% of candidates will earn a grade of 80 or higher on the essay assignments associated with the program outcome "Demonstrate the ability to apply appropriate resources in identifying and addressing the causes, perception, and decision making to solving and analyzing crime patterns." during AY 2016-2017", 9 of 14 essays exhibit 80% or greater scoring 80%.
2. In a study comparing Online with Traditional course sections, Online artifacts mean scores are higher for 10 of 14 essay assignments. Of the 14 essays, four were found to be statistically significantly different (Essay #s 1, 6, 13, and 14).
3. No cross-campus comparison could be completed because course data was only collected from online and one site, a study completed in #2 above.

4.2 CCJ 1020

A drill-down of CCJ 1020 results are as follows:

1. In a study of outcome achievement, "80% of candidates will earn a grade of 80 or higher on the essay assignments associated with the program outcome "Demonstrate recognition of the three levels of the Criminal Justice System." during AY 2016-2017", 5 of 14 essays exhibit 80% or greater scoring 80%.
2. In a study comparing Online with Traditional course sections, Online artifacts mean scores are higher for 9 of 14 essay assignments. Of the 14 assignments, five were found to be statistically significantly different (Essay #s 1, 2, 4, 7, and 13).
3. In a cross-campus comparison, The Thomas Edison campus exhibits the highest number of essays achieving 80% or higher (7). FSW Online exhibits the second highest (6) with Collier and Hendry Glades each having five.

5 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.
- Wilkinson, L. 1999. APA Task Force on Statistical Inference. *Statistical Methods in Psychology Journals: Guidelines and Explanations*. *American Psychologist* 54 (8), 594–604.