

Construction Procedures Assessment Report

Fall 2018

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1 INTRODUCTION

Florida SouthWestern State College's Business Department developed a new assessment pathway beginning AY 2018-2019 in response to an inability to collect data using previous assessment tools. The course included in assessment in this report is BCN 2710 *Construction Procedures*. 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, Academic Affairs (jfvangaalen@fsw.edu; x16965).

2 BCN 2710

2.1 LEARNING OUTCOMES, OBJECTIVES, AND DESCRIPTIVE STATISTICS

The FSW Business recently began developed a new assessment plan for BCN 2710 (in AY 2018-2019). The Learning Outcomes (LOs) that are the focus of this study are (1) Differentiate concrete, steel, and timber construction; (2) Identify the forces influencing the design of a site in a given scenario; (3) Compare the steps necessary to undertake small construction projects from site surveys to certificates of occupancy; and (4) Distinguish key terms used in the small building construction field in given scenario. To measure these outcomes, the faculty identified a subset of questions from the course midterm exam. The questions and their objectives are identified below:

- LO 1: Differentiate concrete, steel, and timber construction
 - Midterm questions: 33, 34, 42, 45, 49, 52, 57, 58, 59 & 60
 - By end of 2018-2019, students will attain a mean score of 75%. This is a baseline measure to be adjusted once the first set of data is collected.
- LO 2: Identify the forces influencing the design of a site in a given scenario
 - Midterm questions: 6, 7, 8, 9, 19, 20, 21 & 22
 - By end of 2018-2019, students will attain a mean score of 75%. This is a baseline measure to be adjusted once the first set of data is collected.
- LO 3 & 4: Compare the steps necessary to undertake small construction projects from site surveys to certificates of occupancy, and Distinguish key terms used in the small building construction field in given scenario.
 - Final exam

- By end of 2018-2019, students will attain a mean score of 75%. This is a baseline measure to be adjusted once the first set of data is collected.

During the fall 2018 semester, 27 artifacts were collected from 1 of 1 sections of BCN 2710. Descriptive statistics for achievement of outcomes are shown in Table 1. The goal that students will attain a mean score of 75% cannot be calculated in the sense of percentage meeting the goal due to the way the data was recorded. To rectify this problem, the Learning Management System (Canvas) must utilize a non-shuffled question set. In place of these data, the average number of questions correct (means) from the subsets of LO 1 and LO 2 are reported. In both LO 1 and LO 2, mean scores are 78% and 83%, respectively. Utilizing this same measurement, the mean score for LO 3 and LO 4 is 80%. The goal that students will attain a mean score of 75% is met for 85% of students in LO 3 and 4. This is attainable for LO 3 and 4 because overall scores can be utilized rather than specific question sets in LO 1 and LO 2. A graphic representation of achievement by questions encompassing LO 1 and LO 2 is shown in Figure 1. From Figure 1, we can see that the highest performing question is Question 52, part of LO 1, while the lowest is Question 42, also from LO 1.

<i>Outcomes (n=27)</i>	<i>Mean</i>	<i>% Scoring 75%</i>
LO 1	78%	*
LO 2	83%	*
LO 3 & 4	80%	85%

Table 1. Student achievement level by outcome for BCN 2710.

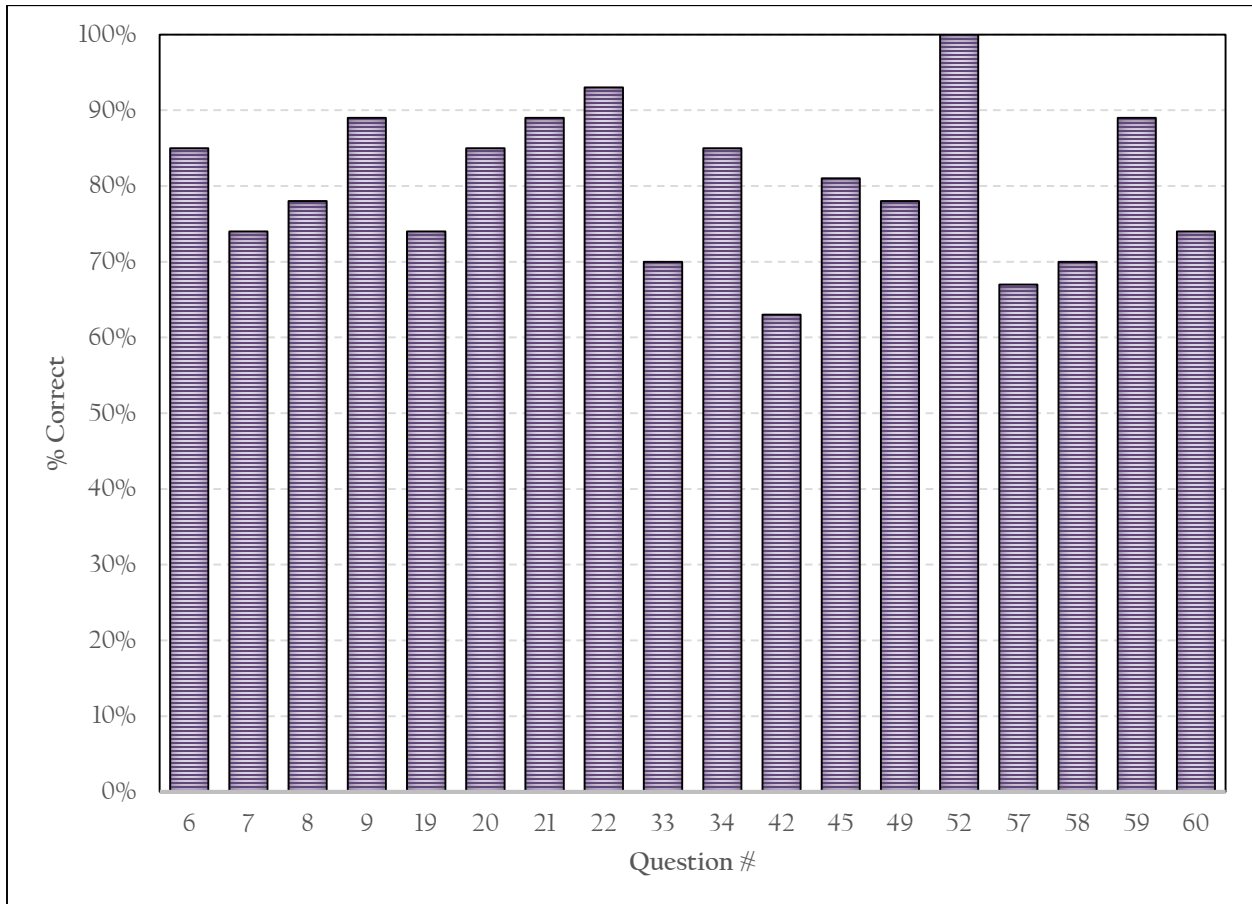


Figure 1. Bar graph of percentage of students correctly answering questions from LO 1 (33-60) and LO 2 (6-22).

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

2.2.2 Online to Traditional Comparison

Only one section of the course was run during fall 2018, so no comparison of online and traditional could be completed.

2.2.3 Comparison by Campus/Site

Only one section of the course was run during fall 2018, so no cross-site comparison could be completed.

2.3 LONGITUDINAL STUDY

Assessment analysis utilizing these rubric criteria began in fall 2018. A longitudinal study will begin with data collection following fall 2019.

3 CONCLUSIONS

FSW's Business Department developed a new assessment pathway beginning AY 2018-2019 in response to an inability to collect data using previous assessment tools. The course included in assessment in this report is BCN 2710 *Construction Procedures*. The assessment outcomes are intended to provide a baseline and measurement of achievement moving forward.

3.1 BCN 2710

A drill-down of BCN 2710 results are as follows:

1. During the fall 2018 semester, 27 artifacts were collected from 1 of 1 sections of BCN 2710.
2. In a study of outcome achievement, the goal that students will attain a mean score of 75% cannot be calculated in the sense of percentage meeting the goal due to the way the data was recorded. To rectify this problem, the Learning Management System (Canvas) must utilize a non-shuffled question set. In place of these data, the average number of questions correct (means) from the subsets of LO 1 and LO 2 are reported. In both LO 1 and LO 2, mean scores are 78% and 83%, respectively. Utilizing this same measurement, the mean score for LO 3 and LO 4 is 80%.
3. In a study of outcome achievement, the goal that students will attain a mean score of 75% is met for 85% of students in LO 3 and 4. This is attainable for LO 3 and 4 because overall scores can be utilized rather than specific question sets in LO 1 and LO 2.
4. No dual enrollment (concurrent) sections of the course were run during fall 2018 so no comparison study between dual enrollment and non-dual enrollment could be completed.

5. Only one section of the course was run during fall 2018, so no comparison of online and traditional could be completed.
6. Only one section of the course was run during fall 2018, so no cross-site comparison could be completed.
7. Assessment analysis utilizing these rubric criteria began in fall 2018. A longitudinal study will begin with data collection following fall 2019.