

Surveying Assessment Report

Fall 2021

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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 SUR 1100 *Surveying*. 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 (jfvingaalen@fsw.edu; x16965).

2 SUR 1100

2.1 LEARNING OUTCOMES, OBJECTIVES, AND DESCRIPTIVE STATISTICS

The FSW Business recently developed a new assessment plan for SUR 1100 (in AY 2018-2019). The Learning Outcomes (LOs) that are the focus of this study are (1) Define basic surveying terms; (2) Apply the concept of differential leveling in a given set of parameters; (3) Apply basic geometry and right triangle trigonometry to solve fundamental surveying problems; and (4) Apply traverse angle measurements in a given set of parameters. 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: Define basic surveying terms
 - Midterm questions: 1, 2, 3, 4, 5, 7, 8, 25, 27 & 28
 - 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: Apply the concept of differential leveling in a given set of parameters
 - Midterm questions: 10, 12, 14, 34, 35, 36, 37, 38, 39, & 40
 - 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: Apply basic geometry and right triangle trigonometry to solve fundamental surveying problems, and Apply traverse angle measurements in a given set of parameters.
 - Final exam
 - By end of 2021-2022, 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 2021 semester, 3 artifacts were collected from 1 of 1 sections of SUR 1100. Descriptive statistics for achievement of outcomes are shown in Table 1. The goal that students will attain a mean score of 75% is measured as a wholistic 75% of the course enrollment, not 75% of the questions by each student. 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 90% and 80%, respectively. No final exam data was recorded, so an analysis for LO 3 and LO 4 could not be completed. 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 a series of questions exhibit 100% correct from students. Note that sample size is limited, n=3.

<i>Outcomes (n=14)</i>	<i>Mean</i>	<i>% Scoring 75%</i>
LO 1	82%	~
LO 2	88%	~
LO 3 & 4	~	~

Table 1. Student achievement level by outcome for SUR 1100.

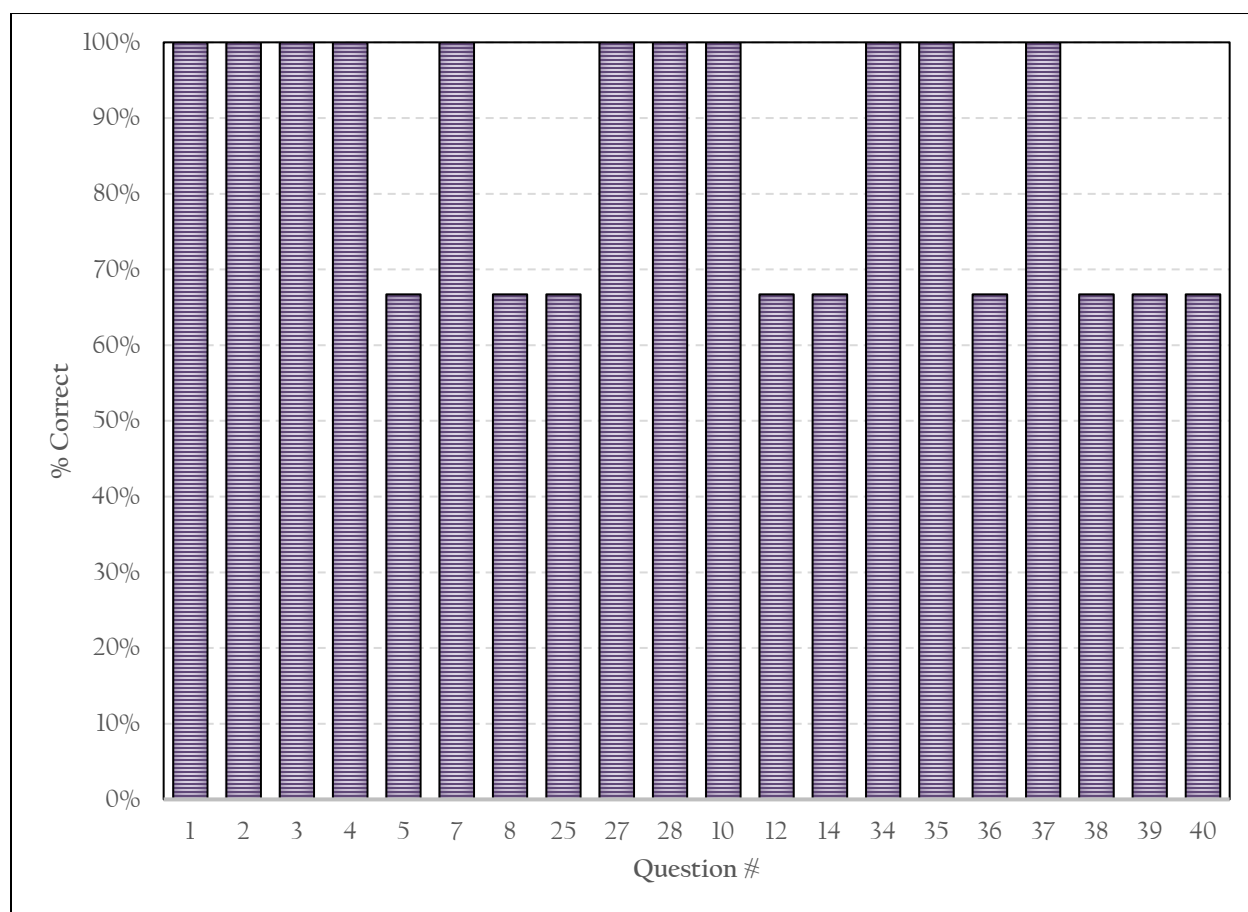


Figure 1. Bar graph of percentage of students correctly answering questions from LO 1 (1-28 subset) and LO 2 (10-40 subset).

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 2021 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 2021, 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 2021, so no cross-site comparison could be completed.

2.3 LONGITUDINAL STUDY

Assessment analysis utilizing these rubric criteria began in fall 2018. A comparison of results over time is shown below in Table 2. Learning outcome goals were met in 7 of 8 cases. Only LO 4 in fall 2019 did not meet the LO goal.

	LO 1 Mean	LO 2 Mean	LO 3 Mean	LO 4 % Scoring 75%
Fall 2018 (n=7)	92%	83%	83%	100%
Fall 2019 (n=14)	82%	88%	77%	69%
Fall 2021 (n=3)	90%	80%	~	~

Table 2. LO achievement over time.

3 CONCLUSIONS

FSW's Business Department developed a new assessment pathway which began in AY 2018-2019 in response to an inability to collect data using previous assessment tools. The course included in assessment in this report is SUR 1100 *Surveying*. The assessment outcomes are intended to provide a baseline and measurement of achievement moving forward.

3.1 SUR 1100

A drill-down of SUR 1100 results are as follows:

1. During the fall 2021 semester, 34 artifacts were collected from 1 of 1 sections of SUR 1100.
2. In a study of outcome achievement, the goal that students will attain a mean score of 75% is measured as a wholistic 75% of the course enrollment, not 75% of the questions by each student. 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 90% and 80%, respectively. No final exam data was recorded, so an analysis for LO 3 and LO 4 could not be completed.
3. No dual enrollment (concurrent) sections of the course were run during fall 2021 so no comparison study between dual enrollment and non-dual enrollment could be completed.
4. Only one section of the course was run during fall 2021, so no comparison of online and traditional could be completed.
5. Only one section of the course was run during fall 2021, so no cross-site comparison could be completed.
6. In a longitudinal study, learning outcome goals were met in 9 of 10 cases.