Computer Science Assessment Report Fall 2020

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1 Introduction

Florida SouthWestern State College's Computer Science Department has embarked upon a new assessment plan beginning in the Fall 2020 term focusing on COP 2360 *C# Programming I*. The new assessment plan utilizes a brand-new rubric to measure student ability to develop code given certain scenarios. The assessment outcome goals are intended to provide a baseline achievement moving forward. Further, the study will investigate the strength and performance of items. 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 COP 2360

2.1 Descriptive Statistics and Learning Objectives

In COP 2360: C# Programming I - Assignment #5 will be to write a C# basic Windows Forms application to meet different specifications using MS Visual Studio IDE utilizing a common rubric for scoring to measure the outcome: Create a basic C# Windows Forms application to meet different specifications.

For the Fall 2020 assessment, 18 artifacts were collected for COP 2360 from 1 of 1 course sections in this pilot assessment. The Documentation dimension exhibits the highest mean score at 25/25. The lowest dimension is Runtime at 16.4/25. Descriptive statistics for achievement overall are shown in Figure 1 and Table 1.

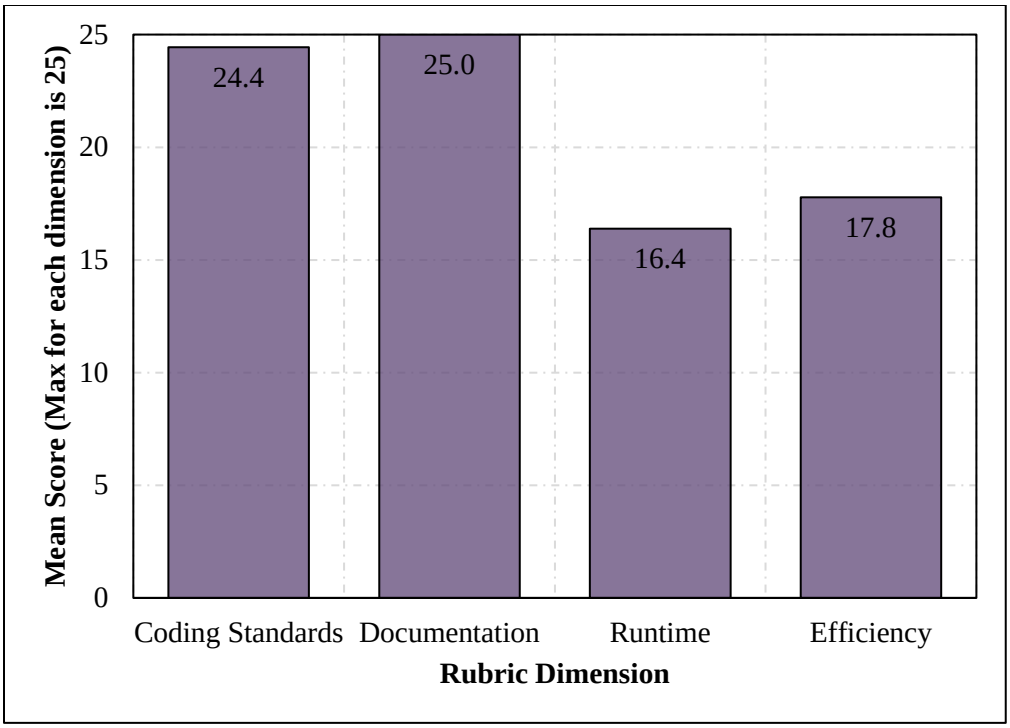

Figure 1. Mean scores by rubric dimension for assessment.

	Coding Standards	Documentation	Runtime	Efficiency
n	18	18	18	18
Max	25	25	25	25
Min	15	25	0	10
Median	25	25	20	20
Mode	25	25	20	20
Mean	24.4	25.0	16.4	17.8
Standard deviation	2.36	0.00	8.37	5.75
Skewness	-4.24		-0.75	-0.28
Kurtosis	18.00		-0.52	-1.34

Table 1. Descriptive statistics for common course assessment.

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 offered in fall 2020 so no comparison study between dual enrollment and traditional sections could be completed.

2.2.2 Modality Comparison

Only one course section was offered during fall 2020, so no comparison across modalities could be completed.

2.2.3 Comparison by Campus/Site

Only one course section was offered during fall 2020, so no comparison across sites could be completed.

2.3 LONGITUDINAL STUDY

A longitudinal study of achievement and data distribution will be completed following the first academic year of data collection in fall 2021.

3 CONCLUSIONS

Florida SouthWestern State College's Computer Science Department has embarked upon a new assessment plan beginning in the Fall 2020 term focusing on COP 2360 *C# Programming I*. The new assessment plan utilizes a brand-new rubric to measure student ability to develop code given certain scenarios. The assessment outcome goals are intended to provide a baseline achievement moving forward.

3.1 COP 2360

A drill-down of COP 2360 results are as follows:

1. For the Fall 2020 assessment, 18 artifacts were collected for COPT 2360 from 1 of 1 course sections in this pilot assessment. The Documentation dimension exhibits the highest mean score at 25/25. The lowest dimension is Runtime at 16.4/25.
2. No dual enrollment sections of the course were offered in fall 2020 so no comparison study between dual enrollment and traditional sections could be completed.
3. Only one course section was offered during fall 2020, so no comparison across modalities could be completed.
4. Only one course section was offered during fall 2020, so no comparison across sites could be completed.
5. A longitudinal study of achievement and data distribution will be completed following the first academic year of data collection in fall 2021.