

William Paterson University
College of Science and Health - Department of Computer Science

Fall 2018 – Spring 2019 Assessment Cycle
Analysis of the Results of the Evaluations of the Assessment Data
of
the Program Student Outcome

Program Student Outcome:

S5: Demonstrate abilities to locate and make effective use of information.

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Updated On: _____

A. Analysis of the Results of the Evaluations of the Assessment Data

For the assessment period Fall 2018 - Spring 2019, this student outcome was assessed in CS3450, CS3820, and CS4800.

In CS3450, 19 and 9 students took the course respectively in fall 2018 and spring 2019 semesters and only two of them or 7% had a performance level less than adequate. It is also noted that in both semesters the student who performed at a level less than adequate did not return the report.

In CS3820, 16 and 17 students respectively took the course in fall 2018 and spring 2019 semesters and 3 of them or 9% performed at a level less than adequate. It is also noted that in fall 2018 semester, a large number of the students were very motivated and enthusiastic about learning a new language and this motivation and enthusiasm were reflected in the quality of their project reports. The number of students who also returned their lab assignment projects was also very high. It is also noted that in spring 2019, some students worked in groups. However, reports submitted by groups were not necessary better than those submitted by individual students.

In CS4800, 15 and 15 students took the course in fall 2018 and spring 2019 respectively and only one of these students had a performance level below adequate. In fact in spring 2019 semester each student in the class had a performance at least at the level of more than adequate.

B. Suggestions for Improvement:

N/A

C. Improvement Implemented:

N/A

D. List all the “performance level/frequency/percentage” tables and their sources.

a. Faculty Course Assessment Report: CS 3450, Fall 2018

Data Collected: Each student’s level of performance on a written report and program documentation

Method of Collection: Students were required to write a report on “History and Evolution of UNIX, Linux, and Android Operating Systems” and extensive writing effort in nine written homework assignments with questions on OS concepts.

| Performance Levels | Frequency | Percentage |
|--------------------------------|-----------|------------|
| No Ability (F) | 0 | 0% |
| Some Ability (D) | 1 | 6% |
| Adequate Ability (C) | 6 | 33% |
| More than Adequate Ability (B) | 6 | 33% |
| High Ability (A) | 5 | 28% |

Observations: Only one student failed to hand in the written report and the rest of the class wrote well with three very well. All hand in most programs and HWs. The turn-in rates for homework was about 75% for programming projects more than 80%. All students performed well in S5 with 94% demonstrated "Adequate Ability" to "High Ability". The class in general was very motivated and eager to learn as evidenced by completing large amount of various assignments.

b. Faculty Course Assessment Report: CS 3450, Spring 2019

Data Collected: Each student’s level of performance on locating and making effective use of information.

Method of Collection: Each student is required to write a report on one of the following OS topics: Virtualization and the Cloud, Multiple Processor Systems, Security, UNIX, LINUX, and Android, Windows 8, and Operating System Design. He/she then receives a numerical grade on the report based on its contents, the presentation and the clarity of the topics discussed.

| Performance Levels | Frequency | Percentage |
|--|-----------|------------|
| No Ability (level of performance of F) | 0 | 0% |
| Some Ability (level of performance of D) | 1 | 11.1% |
| Adequate Ability (level of performance C) | 2 | 22.2% |

| | | |
|---|---|-------|
| More than Adequate Ability (level of performance of B) | 3 | 33.3% |
| High Ability (level of performance of A) | 3 | 33.3% |

Observations: One student did not return her report. The two students who produced very well written and organized reports also put a lot of efforts in their research. However, it was noticeable that a student just lifted some passages from the only source of reference which was the book. One student did very well in terms of location and using the information. However, his presentation of the concept was not well organized.

c. Faculty Course Assessment Report: CS 3820, Fall 2018

Data Collected: Each student's level of performance on locating and making effective use of information.

Method of Collection: Each student is required to locate information about a programming language that is not taught in the program and to produce a report on it. Reports are written following a template provided by the instructor. Students also have to write three program assignments in this new language. Each student then receives a numerical grade on his/her project report that is based on his knowledge of the implementations of programming language features in that language and a score over 10 on the implementation of each lab assignment.

| Performance Levels | Frequency | Percentage |
|----------------------------|-----------|------------|
| No Ability | 0 | 0% |
| Some Ability | 1 | 6.3 % |
| Adequate Ability | 1 | 6.3 % |
| More than Adequate Ability | 5 | 31.3 % |
| High Ability | 9 | 56.3 % |

Observations: A large number of the students in this class were very motivated and enthusiastic about learning a new language and this motivation and enthusiasm were reflected in the quality of their project reports. A great number of students also returned their lab assignment projects.

d. Faculty Course Assessment Report: CS 3820, Spring 2019

Data Collected: Each student's level of performance on locating and making effective use of information.

Method of Collection: Each student is required to locate information about a programming language that is not taught in the program and to produce a report on it. Reports are written following a template provided by the instructor. Students also have to write three program assignments in this new language. Each student then receives a numerical grade on his/her project report that is based on his knowledge of the implementations of programming language features in that language and a score over 10 on the implementation of each lab assignment.

| Performance Levels | Frequency | Percentage |
|----------------------------|-----------|------------|
| No Ability | 0 | 0% |
| Some Ability | 2 | 11.8 % |
| Adequate Ability | 6 | 35.3 % |
| More than Adequate Ability | 4 | 23.5 % |
| High Ability | 5 | 29.4 % |

Observations: reports were submitted by 5 groups of two students and seven students. Reports submitted by groups were not necessary better than those submitted by individual students. The information was mostly located over the web and two groups and one students did very well in reporting only the most essential information instead of just lifting and copying what they have found on the web as did two other students. The majority of these students also write the required programs in their chosen programming language.

e. Faculty Course Assessment Report: CS 4800, Fall 2018

Data Collected: The overall course grade is used which involves collecting information in Phase I and Phase 2 in the project then use the information to make a viable engineering solution. In addition to the project, the essays were an integral part of collecting information. Also, quizzes and exam were used to asses the students' ability to use information gathered and learned in the class.

Method of Collection: There were four major activities for the team project (40%), exam (20%), 4 quizzes (20%) and 4 essays (20%).

| Performance Levels | Frequency | Percentage |
|---|-----------|------------|
| No Ability (Level of performance of F) | 0 | 0% |
| Some Ability (Level of performance of D) | 1 | 7% |
| Adequate Ability (Level of performance of C) | 2 | 13% |
| More than Adequate Ability (Level of performance of B) | 10 | 67% |
| High Ability (Level of performance of A) | 2 | 13% |

Observations: The project and presentation scores were team-based (all the team members in a team got the same score if there was no dispute among team members) and the essays, quizzes, and exam were of course individual work. The overall performance is considered in the B level. Three projects were presented in the American Society of Engineering Education Conference in April 2019 as posters and presented as papers in the IEEE LISAT conference in May 2019.

f. Faculty Course Assessment Report: CS 4800, Spring 2019

Data Collected: The overall course grade is used which involves collecting information in Phase I and Phase 2 in the project then use the information to make a viable engineering solution. In addition to the project, the class writing tasks were an integral part of collecting information. Also, exams were used to asses the students' ability to use information gathered and learned in the class.

Method of Collection: There were three major activities for the team project (40%), 4 exams (40%), and 8 class writing task (20%).

| Performance Levels | Frequency | Percentage |
|---|------------------|-------------------|
| No Ability (Level of performance of F) | 0 | 0% |
| Some Ability (Level of performance of D) | 0 | 0% |
| Adequate Ability (Level of performance of C) | 0 | 0% |
| More than Adequate Ability (Level of performance of B) | 2 | 13% |
| High Ability (Level of performance of A) | 13 | 87% |

Observations: The project and presentation scores were team-based (all the team members in a team got the same score if there was no dispute among team members) and the class tasks, quizzes, and exam were of course individual work. The overall performance is considered in the A level. I am planning to submit 2-3 of the projects for publication consideration in IEEE conference.