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EDF 4430

**Task 6: Using Assessment Data to Inform Teaching Practice**

After an analysis of data provided by the student’s performance on multiple formative and summative assessments, I am able to identify areas of strength and potential growth opportunities for students. Cho and Draco are of the highest achieving students in the classroom. Their participation in the unit included perfect scores on homework, classwork, the mini-project and the introductory worksheets. Cho and Draco only missed one question on any of the three quizzes. These student’s exceptional work indicates their academic careers would benefit from more challenging content. Cho and Draco would profit from enrichment with regard to their performance with basic statistics. The educator could accommodate Cho and Draco by allowing them to study statistics concepts with greater depth, breadth and complexity while pursuing areas of their own interests. Acceleration could meet the student’s needs by providing an appropriate pace of instruction for the learner’s unique rates of acquisition. Cho and Draco would be given the opportunity to work with advanced concepts, in-depth topic investigations, and problems with real-world applicability through acceleration in the mathematics content.

On the other end of the spectrum, Goyle and Pansy are showing signs of difficulty with the content. Goyle, in particular, scored lower than all the other students on the assignments. Although Goyle will need individualized review of the mean, mode and range, his greatest area of weakness seems to be with graphing. As indicated by Goyle’s subpar performance on the graphing worksheet and plotting quiz, he will benefit from an increased study of line plots, dot plots, histograms, boxplots and when to use them. Also, Goyle will require additional practice with plotting. The test is next week, so Goyle will have time for the remedial restudy of topics that will appear on the assessment. Assigning the student additional homework may be effective, but he did not complete the previous homework assignment. An interactive, online game and tutorial focusing on basic statistics will provide the extra tutoring Goyle needs. This can be assigned as homework, but it would be most beneficial if Goyle had designated class time to work on the engaging tutorial. Then, the teacher could work with Goyle during lunch or recess to answer his questions, review topics and track his learning. Pansy will also need additional studying of plotting and utilizing various plots to display data. Working with the student during lunch, recess or other free classroom time will allow Pansy to receive individualized attention to meet her learning needs. Pansy should be given the opportunity to make another attempt at her classwork with teacher guidance. Also, the teacher should go over Pansy’s work on the plotting quiz with Pansy to identify the student’s mistake in her thought process and ensure the student can demonstrate understanding prior to the upcoming assessment.

The assignments that are part of the unit address the designated standards. The introduction worksheet should be applied by the educator to guide the student’s progress through the unit. With consideration for the students’, especially Pansy’s, scores on the introduction worksheet and their performance throughout the unit, it would appear that the worksheet should have been more challenging or included more plotting of data to reveal a valid indication of the students’ prior knowledge and potential understanding.

Goyle’s academic performance increased throughout the unit, but he did not complete the homework. In turn, this made rendered him unable to do the classwork that relied on completion of the homework. Pansy and Ron both lost points on the classwork as well, which may imply that there was not enough guidance to promote student understanding. The work being completed in class should not be dependent upon work that is assigned as homework. The homework assignment given required students to survey their neighborhoods, which may not be an option for all students (like Goyle). Factors that exist outside of school as a result of the student’s home background may impede them from surveying their neighbors, if they have any. The students should have had the option to complete a different assignment that did not require surveying strangers in a neighborhood. An alternative could have been to survey the office, janitorial or cafeteria staff at the school. A more challenging homework assignment could have offered more benefit to the learners, as all the other students achieved perfect scores on the homework, even those that struggled with the other assignments. The classwork assignment addresses a highly important standard (MAFS.6.SP.2.AP.5b), plotting data. Therefore, I believe the classwork should be worth more points once it is accessible to all the students. Additional points could be given as the assignment is expanded to offer more opportunities for practice plotting data.

All of the students scored exceptionally well on the Group Survey Project, which does not align to their prior performance in the unit. The project should be reexamined to determine if it is not challenging enough for students, as it lacks reliability. The roles designated in the group project may not have distributed a fair balance of work. The data collection could have been done as a group, but plotting and identifying the mean, mode and range should have been individual tasks. The Group Survey Project is weighted 25 points, which unbalances the student’s grades. One assignment, that is completed by a group, should not account for a quarter of the student’s grades in the unit. The Pamphlet Mini-Project could be adjusted to offer students additional practice in plotting data, as most students indicate a need for further instruction in plotting.

The students’ performances on the assignments in the unit indicate they have gained significant understanding in reporting the mean, mode and range. The students received acceptable scores on the Pamphlet mini-project and the quiz that focused on finding mean, mode and range. However, as a whole, the class would benefit from more study of data plotting and when to use line plots, dot plots, histograms and boxplots. Students like Pansy and Goyle require additional practice before the test, but students like Ron will definitely benefit from a focus on plotting. Before giving students the assessment, the teacher should ensure that every student is comfortable with the material and has the skills to demonstrate their understanding.

While some students, like Goyle, need individual time with a tutor or the educator, other students will benefit from small group situations. The students should be formed into small groups, depending on their level of need. Goyle will need individual intervention with the teacher for statistics. Pansy and Ron could be included in a group of similar performing students to receive individualized instruction and meaningful practice to further their understanding. Draco and Cho could be with other high-performing students to explore advanced statistics concepts. While students are working with their peers in small groups, the teacher should work with each group, and individuals when necessary, to differentiate instruction prior to the test.

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| Assignment | Point Value | Ron | Draco | Pansy | Cho | Goyle |
| Introduction worksheet | **5** | 5 | 5 | 4 | 5 | 2 |
| Vocabulary quiz – data, plots, sample, mean, mode, range | **10** | 7 | 9 | 7 | 10 | 3 |
| Graphing worksheet – when to use line plots, dot plots, histograms, and boxplots | **5** | 4 | 4 | 3 | 5 | 1 |
| Introduction to surveys worksheet | **5** | 4 | 5 | 4 | 5 | 2 |
| Homework – data collection: surveying the neighborhood | **5** | 5 | 5 | 5 | 5 | 0 |
| Classwork – plotting data from collected homework | **5** | 4 | 5 | 3 | 5 | 0 |
| Quiz – choosing the right plots | **10** | 8 | 9 | 5 | 10 | 0 |
| Pamphlet mini-project – reporting mean, mode, and range | **10** | 7 | 10 | 8 | 10 | 6 |
| Quiz – finding mean, mode, and range | **10** | 9 | 10 | 7 | 9 | 6 |
| Review game | **10** | 7 | 9 | 6 | 8 | 5 |
| Group Survey Project – collecting data from another class, choosing the correct way to display the data, and reporting the mean, mode, and range. | **25** | 24 | 20 | 20 | 24 | 20 |
| Total | **100** | **84** | **91** | **72** | **96** | **45** |