Correlation Between Workshop Opinion and Quiz Grades

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Introduction

We were interested in finding out how student’s opinion of the workshop changed over time and see how their opinion correlates with their grades.

The workshops provide a more intimate learning environment, so how a student is involved with their workshop could affect their grades more than how much they are involved with the class overall. As students progress through the course, it makes sense that students with a better opinion of the workshop would learn more and understand the material better. Having a better understanding would then cause them to do better on the weekly evaluations given to them in class. Based on this, we predict that there will be a positive correlation between the opinion of the workshops and the grades that the students receive in their evaluations.

The Subjects

The subjects that we would be looking at were students currently taking CSC 171 – The Science of Programming. These students were required to attend weekly workshops and then take a quiz related to workshop material later that same week. We surveyed 30 students from 4 different workshops.

Data Gathering

In one of the later workshops we asked each student to fill out a survey asking what their opinion of workshop was before they took any workshops and what their opinion of workshop was at the time they took the survey. The results of this survey should help us understand how the students opinion of workshop changed throughout the semester.

We looked at grades for the weekly quizzes from the entire semester. The grades helped us understand how well the students understood the material of the course. We did not use the quiz grades from the first week because the students hadn’t started workshops by then, and the material wasn’t related to anything covered in a workshop.

Acknowledgements

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Results

We found that opinion of the workshop went up overall. Based on survey data about their opinions of workshop at the beginning of the semester and the end, we found that there was a statistically significant change in their opinion, with an average of a 3.5 at the beginning of the semester vs. an average of 4.13 at the end, with a significance of p < 0.002. In a self-assessment of opinion change, students also showed that they thought their opinions of workshops went up throughout the semester.

We performed a T-Test on our grade data, and found that the increase in quiz grades from weeks 2 and 3 to weeks 7 and 8 were statistically significant (with p < 0.002). The average quiz grades for the first two weeks (circled in red) was an 81.2, and the average for the last two weeks (circled in green) was a 90.8.

Conclusion

From our data, we see that students had mostly a neutral opinion about workshop when they started. Later on the in the workshop most had a favorable opinion of workshop. We also can see from the graph that quiz grades got better the longer the students participated in workshop. Therefore we conclude that a positive opinion of workshop correlates to a higher quiz grade overall.

One easy improvement on our study would be using a larger sample size of students, to eliminate bias between different workshop groups. Also, we could sample the students’ opinions more often throughout the semester, to correlate it better with the quiz grades. Lastly, we could perform the same study in other years, to see if we find the same results in each year.