

The Effect of Cooperative Learning Strategies on the Intrinsic Motivation of my High School Chemistry Students

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Introduction: Students in high school chemistry generally lack motivation to complete homework assignments, participate in activities, and to learn difficult concepts in general. Students generally work alone in class and struggle. In the STEM workplace, employees are always placed into teams to complete projects and learn to solve problems. Employees are often motivated to work and complete tasks in groups. They do not want to let their group members down and therefore work harder to ensure that the group succeeds.

I decided to integrate consistent cooperative learning groups throughout the school year to model this practice from industry. Students were placed into groups and worked with that group on every aspect of the class throughout the 2nd-4th quarters of the school year. During the 1st quarter, class was taught using traditional methods in order to collect baseline data. After the 1st quarter, I implemented a new cooperative learning intervention each quarter. Once implemented, the intervention was continued for the rest of the year. During 2nd quarter I implemented homework discussion groups. The day a homework assignment was due students got into their groups and went through the homework assignment. The goal was to increase the students' motivation to complete homework assignments on time, as well as increase their understanding of the material. During the 3rd quarter, students received a group grade on tests and quizzes based on their group's average score on the assessment. Finally, during 4th quarter the group with highest average on the test received an award of donuts.

Findings: I gained many insights into my teaching practices and student motivation through this investigation. The first major finding was that students preferred working in cooperative learning groups rather than working independently in the classroom. This was reported by all students. The homework discussion groups were beneficial to student learning, but did not have an effect on student motivation to complete assignments. Student content learning increased after the implementation of the groups; however, the percentage of students turning in homework assignments did not increase.

The cooperative learning groups also had a positive motivational effect on students in this study. Most of the students indicated that they felt more motivated to learn while part of the group. The 3rd quarter intervention of a group grade on the test provided the most motivation by increasing the students' desire to perform well and making them feel more responsible for the success of their group members.

Lastly, the students who participated in this cooperative learning study performed better on assessments than students in other sections of the same class that did not participate in the cooperative learning interventions.

Plan of Action: This project has shown that cooperative learning groups are a successful motivational tool and lead to better academic performance in the classroom. In my teaching practice, I have occasionally provided opportunities for students to work together, but this study helped me realize the importance of continuous group work in the classroom. I have also learned that consistent groups are important to the success of cooperative learning. When students are in consistent groups, they become comfortable with one another and are able to communicate better.

In the future, I will implement cooperative learning groups in all of my classes and keep the groups consistent for long periods of time. I will increase the amount of time that students spend in these groups during class to maximize the positive effects. These actions will allow my students to become more familiar with the collaborative environment commonly found in industry. This will help them be more prepared for a career beyond high school.

