

The effects of self-evaluation of homework and cooperative quizzes on students in a remedial Algebra 1 class

Andy Jeanson, Sundt Construction and Honeywell,
Campo Verde High School, Algebra 1 and Algebra 2

During my first two years of teaching, students in my remedial Algebra 1 classes did a poor job of self-monitoring their own learning. My goal was to provide an intervention to improve students' academic performance. I observed in the construction industry that subcontractors were responsible for grading themselves on the tasks they had planned to complete during the prior week. This maximized subcontractors' efficiency while on the job.

Intervention I: During the 5th unit of the first semester, I allowed students in one of my remedial Algebra classes to self-evaluate their own homework. On the day the homework assignment was due, I had students write down the answers to five of the problems from the assignment from which I calculated the accuracy. I followed this by going through each assignment with students and had them assign themselves a grade and provide an explanation for the grade. I calculated the quiz and test averages from the first four units and compared this to the unit 5 scores. Students also completed two surveys following the end of the 5th unit to identify their thoughts on the effects of self-evaluating homework.

Results/Findings I: Overall, **students in my remedial Algebra 1 class did a poor job self-evaluating their own homework.** At the same time, **self-evaluation of homework had a minimal effect on student quiz scores while the average class test grade decreased.**

The two surveys that students took asked about their perception on the effects of self-evaluation on homework and assessment performance. **The majority of students said that self-evaluation had a positive effect on academic performance even though the summative assessment average had a significant decrease compared to the prior four units.**

Intervention II: Given that tests were lower in the 5th unit, I introduced a second semester intervention. Each student was assigned a different partner for every quiz. This intervention was due, in part, to my experience in the workplace, where employees frequently collaborate on different projects and assessments. Students were still required to take the summative unit assessment on their own

Results/Findings II: **The use of partner quizzes significantly improved students' average quiz and test grades.**

Conclusion: Students in my remedial Algebra 1 class did a poor job of self-evaluating their own HW, which means they need to be taught how to self-evaluate. Results were inconclusive as to whether this can be an effective form of self-monitoring to improve academic performance. Cooperative quizzes significantly increased assessment performance. Even though I did not perform a more in depth analysis on the reasons behind the increase in academic performance, I think it is possible that students have better recall when they can learn from their peers.

Plan of Action: It is important that students are able to discern how well they have learned the material when going over homework. This is something I will discuss with my classes at the beginning of the year in the hopes that their self-monitoring skills will improve. I also plan on including partner quizzes in every remedial class I teach. I am going to attempt to only allow students who have completed their homework to use a partner on the quizzes.