The Effectiveness of Cooperative Learning
James Hammond
Wakefield High School
Arlington County (VA) Public Schools
Submitted June 2001

Focus of My Project
The George Mason University Project has afforded me the opportunity to test a theory: Do students learn more from their teachers or from their classmates? It is my experience that students listen more to their classmates than to their teachers. In order to take advantage of that, my goal was to intensively teach SOL topics to groups of four. In addition to intensively teaching the various topics, I also allowed the group of four to help develop the classroom exercises. It was my belief that I could use the conversational nature of kids, in addition to the natural tendency to speak one’s native language whenever possible to sneak in more learning time.

Context Related to My Research Question
My laboratory was Wakefield High. The diverse nature of Wakefield High is evident in any classroom on the campus. Wakefield High School has a very diverse population. Forty percent of the population is of Hispanic descent, thirty percent is of African descent, twenty percent is Caucasian, and the remaining ten percent is other. The truly amazing numerical data that describes Wakefield is that its population represents at least forty different nations and several dozen languages. Educators can hardly learn all the different languages, and student command of the English language is sometimes flawed. With so much diversity among the students, the idea of working with small groups is certainly more appealing than battling the large classrooms of twenty-four plus.

Cooperative learning goes back a long way. Teachers are to this day allowing or encouraging their students to work together to foster the learning process. The methods vary from informal talks to structured directed discussions. After many years of research and practical application by hundreds of thousands of teachers, effective cooperative learning methods now exist for virtually every imaginable instructional purpose. We now know a great deal about the efforts of cooperative learning on students and the conditions necessary to make cooperative learning effective. It was my intention to put these many theories to practice and document the results.

In the beginning of this project, I had a vague idea of what I wanted to do. In today’s world, alternative forms of teaching strategies better serve the students both as individuals and as productive citizens. There are several reasons for this assumption. There is always the hope that students learn beyond the knowledge level. Work situations are changing from competitive to collaborative. Accommodations for variety are becoming ever more present in our pluralistic society. By lecturing only, teachers are not effectively modeling for students the kind of teaching/learning situation they will face in their future work lives.
Under the auspices of the Language Minority Teacher Induction Project at George Mason University, one overriding guideline was presented to me. That guideline was to develop techniques to enhance the performance of ESL students on the Virginia SOL tests. This was a daunting task, but necessary. I say necessary because of the demographics of the school at which I teach.

One way teachers have sought to increase student involvement in learning is through peer teaching. Most research has suggested that peer teaching has positive results. One of the most significant ideas was that learning to teach or instruct others facilitates intrinsic motivational processes that result in greater conceptual learning. Results from prior research showed a higher level of conceptual learning occurred among students preparing to teach or tutor. In my research, the bulk of the positive reports seem to come from process-oriented subjects, such as mathematics, writing, and lab courses of various kinds.

One particular study of special interest was reported in 1988 on mathematics. The researcher sought to learn if same-sex tutors made a difference on that discipline. Using a population of 333, the study showed that students did better with a tutor of the same sex. It was a small jump for me to make the initial assumption that same-language tutors would be especially successful.

I finally decided to use the very conversational nature of my students in conjunction with the idea that you understand more in your native language than in a second. I knew that I could not translate ideas and concepts of my class into so many different tongues. What I could do however was intensively teach to a few and have the few instruct the many. It is a simple idea, and I was sure that it would work. This idea incorporated team accountability, equal opportunity for success, and individual accountability.

Method

The basis of this paper is excerpts from my own journal, students' surveys, and comparative notes from leading experts in the field of education. The first thing was to establish teams. Research presented five possible methods for forming teams from which I might choose. The methods were

- Student Teams Achievement Divisions (STAD)
- Teams Games Tournaments (TGT)
- Cooperative Integrated Reading and Composition (CIRC)
- Team Accelerated Instruction (TAI)
- Jigsaw

The team learning method(s) that best suited my needs was STAD. In STAD, students are assigned to four-member learning teams that are mixed in performance level, gender, and ethnicity. The students' quiz scores are compared to other teams within their class and in others. Because STAD lends itself to all subjects and grade levels, it was the obvious choice.

The main idea behind STAD is to motivate students to encourage and help each other to master skills presented by the teacher. If students want
recognition as the most successful team, they have to learn the topics and disseminate effectively to the rest of the class. Designation of best team is earned by the progress of the class on SOL objective quizzes.

The teams were formed in such a way as to reflect the language diversity of the class. I tried to ensure that all languages were covered. The students then met with me after school to prepare lessons, devise real-world examples, and to discuss the topics of the lesson. I rewarded the participation with extra points.

Findings

The progress was charted formally by comparing the scores of two classes in which student teams were formed, against a third class. The third class was a control group. An informal gauge was in the form of student surveys.

The surveys ask questions such as, “Did you understand the example given during class?” Other questions were, “Was it easier to understand in English or in your own language?” Obviously, I expected the answers to the various questions to be resoundingly positive. I was not proved wrong. The students appreciated the opportunity to be the leading part of the learning process. I also think that they developed a sense of pride in their collective accomplishments.

Final Reflections

The final result of this project is a personal validation of the theories and strategies learned during my preparation to become a teacher, along with a few of my own original ideas that were born from the nature of the projects question. Because of the success of the test groups on their various SOL exams, I plan to continue the practices with all of my classes. Since both of my subjects, geometry and algebra, have SOL exams, I am confident that the students will continue to enjoy success through the STAD/peer-teaching method.

References


Butler, Judy D. (1995). *There’s Got to be a Better Way: Alternatives to Lecture and Discussion*
