TEACHER TESTIMONIALS ABOUT COOPERATIVE LEARNING

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I would like to start a discussion which focuses on testimonials of encouraging, enlightening and uplifting experiences teachers or administrators have had using group or cooperative learning principles and/or strategies in their classes, committees, departments, at conferences, in their local communities or anywhere else.

1) I will start the discussion by relating an encouraging experience I had recently during an intermediate algebra class. A parent brought her three year, old rather precocious, daughter to class recently since her daycare facility was closed that day. She was very apolegetic and assured me the child was well behaved. She explained that she had been to several classes and was familiar with how to act and accepted being with her mother. However if she got tired and started talking they would leave. Since we were working in groups with lots of discussion going on I didn't see any problem even if she spoke to her mother occasionally. That seemed to reassure both mother and daughter.

During the class I worked with the child's mother individually on word problems. Her daughter, sitting next to us, asked an interesting question, as only 3 year olds can. "Why were we talking in this class when they weren't allowed to in the last class?" With out hesitating her mother responded, in 3 year old talk, "In this class we learn by talking to each other and explaining things to each other." This seemed to be quite a satisfactory answer to the little girl. Her mother went on to tell me that after the last class which was an english class, where the professor lectures, her daughter made the comment "That man talked too much and it was hard to be quiet and listen for so long.". The innocence of children can be so direct and to the point. At the end of our class the litttle girl made one more observation: "Mommy, I like this class better." That seemed sufficient for her and settled a question she had about why the two classes were different.

The mother also mentioned that since starting this class she now talks to her daughter about math and asks her daughter to explain how she does math back to her. She gave me a demonstration. She asked her to get three crayons. This child picked up three and then counted them off to her mother. She then asked her to get five crayons and without hesitation she picked up two more. Her mother asked her to verify that she had 5 whereupon she proudly counted them off. Hewr mother was quite pleased with this new way of interacting with her daughter and the little girl just beamed.

Hearing my student articulate the nature of group learning and seeing her relationship with her daughter absolutely made my day. The collaborative learning that the mother was experiencing through the class was being introduced to her daughter in a very natural and unassuming way. It is these little victories that keep me going and inspire me to pursue interactive learning processes.
Ted panitz
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2) Before my move to a faculty development position at the US Air Force Academy, I taught an upper-level English class, Children's Literature, to adult learners at the University of Maryland University College. A wide variety of students enrolled, many of them taking a course whose content interested them. Thus, few of them were English majors prepared for the rigor I expected. I used CL throughout the course, putting students in heterogeneous learning teams, consciously distributing males (in short supply!) and English majors. One of my favorite students was a very shy Vietnamese day care worker who was taking the course so that she could read more purposely to her charges. In a typical lecture-oriented class, she would have gone under because she lacked both the English language skills and the literature background to handle a junior-level course. However, her teammates were very supportive, and she pulled through with a respectable "C." On the evaluation form at the end of the course I recognized her handwriting with the comment, "In this class I have found true friends."

Barbara J. Millis Associate Director for Faculty Development
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3) I too have had good results in using the collaborative teaching model. I am an adjunct at State Technical Institute at Memphis and teach Psychology. The coop model fits well with this subject. For instance, the class split up into 4 groups and were given the task of coming up with a diagnosis, plan of treatment(appropriate modalities), and prognosis. They were studying deviant behavior, major mental disorders, and treatment for mental disorders. They did remarkably well and all the groups were pretty much on target. Of course they were all very curious to know whom they had diagnosed, since I hinted that this person had once "met" Sigmund Freud. Unfortunantly, modern education had again failed to teach my students about literature. None had ever heard of the Sherlock Holmes story, "The Seven-Percent Solution", referring to Holme's addiction to cocaine. Anyway, small group learning seems to be paying off some in my class.

Bruce Reed BReedQMC@ aol.com
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4) Ted asked for cooperative learning testimonals, and while I have no specific anecdotes to relate, I can attest to the fact that high school students enjoy cooperative group interaction over lecture/discussion and individualized seatwork. I am not about to abandon traditional methods of instruction; rather, I am striving to add cooperative learning to the arsenal of pedagogical approaches available to me. Since our school's initial training in cooperative techniques three years ago, (in tandem with interdisciplinary subject integration), I can say that the students I have encountered have had a higher level of interest, a more positive approach to dealing with the subject matter, and they have gained skills and grown in interpersonal relations in ways that cannot be measured by test scores or grade books. I am the first to recognize that cooperative learning is not without its shortcoming and disadvantages, but its benefits far outweigh its drawbacks.

Bring to this dynamic the technology of the Internet, and one develops an interesting, uncharted fashion of learning. Having students develop "team pages" for the World Wide Web, allowing students to analyze web and internet-based documents, or just allowing groups of students to examine the Internet and its resources: all of these make for learning and teaching methods never seen before in the "factory model" classroom of the 19th and early 20th centuries. Cooperative learning will accelerate the extinction of this model, IMHO.

The effect here is that one begins to recreate in the classroom the atmosphere of the modern workplace. Team work, technology, and traditional methods (3 Ts?) all join together to develop young people into modern workers. Of course, the student must take advantage of the resources being made available to hime or her. Yes, many will assert that coopertive learning is just the "group work" approach of the past two or three decades, but it can be reshaped to emphasize values such as negotiation, participation, and individual responsibility. It is up to the instructor to make sure that this atmosphere of learning is the classroom.

Resource: Spencer Kagan, \_Cooperative Learning,\_ 1993.
(To see an example of "team pages" on the World Wide Web:
http://www.fred.net/nhhs/html/teampage.html)
George Cassutto Teacher of Social Studies North Hagerstown High School (MD) http://www.fred.net/nhhs/nhhs.html
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5) I have developed a cooperative learning unit that I've used in junior high, high school, community college, and lower division university geology classes. It teaches students the principles and strategies geologists must use when working for a mining company to explore for valuable metals. Overall student responses have been very encouraging. I've asked students to evaluate the simulation game in their journals and have included some of their responses below.

"The project itself in my opinion was fun. I felt like all of the material we had been covering in lab came together. Not only did the project help me understand how the material is applicable in reality, but also why learning the material is important. The material once learned seems to expand - I guess that when I was trying to be successful both making money and answering question (sic) correct and complete (sic), I felt like I had learned something and that what I learned may assist me outside the classroom."

"The mining simulation project synthesized the things we learned in lab in a more meaningful way than "typical" lecture or lab questions. It was definately (sic) fun, yet challenging and frustrating at times. The group worked well together, and we all shared ideas, strategies and jobs. The naming of the rocks and minerals was a practical way to test our memories and deductive reasoning. The initial drawing of the maps helped me understand how to plot and draw contour lines much better than the same activity in lab book. Although it wasn't exactly "reality" or "real life", it did give us some idea of the complexities of mining and what some of the considerations are. I was impressed by this project being a future teacher myself.

. . . Definately (sic) the quickest 3 hour class I've been to in a while!"

"I liked this project a lot. I learned what was intended to be learn (sic). It showed the many facets of mining including thegovernments role in the whole deal. I completely agree that learning should be fun and I'm glad to see you're not afraid to make it fun. I don't think this was an elementary school game like someone else said. You can still play learning/ teaching games in college!"

"I really enjoyed the lab this last two weeks. This lab was probably as close as it comes to being in the real world. This was valuable because we had to think when the pressure was on, and we were also learning how to identify rocks. This kind of project also made this class more fun and interesting. Up to this point the labs have been pretty difficult. Since most of us in this class don't know much about geology it was beneficial to work in groups. I had fun in my group. I did not even know Kevin, Trudy, or Amy's [fellow group members] name[s] before this project. This class is becoming so fun that I've told other students about this geology class and how fun it is."

"This was the most exciting lab session that I've ever had! Yes, it was fun! I enjoyed working in a group. I learned alot without feeling too much pressure. I think the game format was helpful. . . . This project was similar to the real world because it helped me think about the environmental damage that occurs when we seek natural resources. . . . We could improve on communication. Stress affected our communication. . . . I enjoyed working in this group. There was a diversity of personalities."

The game is both challenging and fun to teach and has inspired me to

continue to use cooperative learning and simulations in my classroom. P.S. I really liked the 3-year-old girl's reactions, Ted! I find that journals are a place for students to give similar, raw feedback as long as I am supportive with my written comments and create a haven for safe sharing.

From: jwtolhu@univscvm.csd.sc.edu (Jeff Tolhurst)
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6) I work at Thurmont Middle School, Thurmont, Maryland. My faculty often uses the jigsaw strategy to cover new material such as the faculty handbook at faculty meetings. We are first grouped as cross grade/cross discipline teams. Individual team members then report to a particular learning area to find out about a new procudure, policy, school calendar particualars, etc. We then come back as "experts" and share our findings with the original group. It really is nice.

From: "Nancy W. Lewis" <lewis@msmary.edu>
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7) I began my teaching career in the junior high. I used small groups regularly and successfully. The students worked hard and enjoyed sharing their discoveries. I taught seventh and eighth grade. The secret is providing structure for the task and clearly defining the objectives of the group study for the students.

Throughout the years, I have continued to use the techniques I developed working with the junior high students. They loved the group work. My favorite project was the poetry unit. The groups wrote a variety of poems as a group and then had to defend their work in the Poet's Court. The principal thought I was nuts when he heard that my students had been charged with writing bad poetry. Several of the collaborative poems were printed in the literary magazine which was organized by a different instructor and who used outside judges to select the published poems.

In my current classes in the community college, I continue to use collaborative methods. Right now my comp students are working on proposals to be presented to the college administration. The student teams are each working on a solution to a campus wide problem. Throughout the years the students proposals have led to positive results on campus. I look with pride at the elevators, the library renovations, the designated smoking areas, and the healthier food choices in vending machines we have on our campus. Each of those projects were first presented to the administration as a collaborative proposal.

Another sign of collaborative success was seen Wednesday when my two classes had 90 percent of the students in attendance.While other faculty members complained of poor attendance the day before Thanksgiving, my students were there because they have a team project due the Monday after Thanksgiving and they didn't want to let the team down. How do I know this? Several of the students told me so.

A death in my family called me out of town Nov. 14 -18. My classes all met without me. They had collaborative assignments to do and didn't need me, but they did need the instructions I had left for them and the description of the tasks I provided. The substitutes learned from the students. The group presentations when I returned were excellent and I learned from my students. One wag thanked me for being gone because they could finally get some work done without me adding to the assignment or interrupting them.

Collaborative work may not be for everyone, but it works for me and for my students. I've been "doing" small groups successfully since 1968 in junior high, senior high and college English classes. I even used collaborative methods when I spent three years as a substitute teacher in two different school districts.

From: Sylvia Edwards <sedwards@KCMETRO.CC.MO.US> (TCC-L)
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8) There is a little school in Michigan "Dexter" where Government is taught totally in groups. I works and works well. Students and parents fight to get in and work to stay in. They learn and have a better understanding of the "system" than most CC students have after the normal process.

From: Richard Weid <rweid@ORCHARD.WASHTENAW.CC.MI.US>
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9) I think that as long as we are alert enough and care enough to see that our students are learning something of value, each person does best to teach in the style they are most comfortable. Even lecturing has a place if the lecturer really does capture almost everyone's attention.

Personally, I think I do better trying to stimulate discussion and explorative thought when I teach math. Since my students invariably have only had math teachers who have laid down the rules for them to memorize, my approach of questioning assumptions and exploring why things work is a drastic departure from their comfortable norm. On average, about half the class participates to some degree and the other half just takes notes. While the weaker students are more likely to be silent, I also find very strong students in that group who evidently have a need to absorb and think. As a natural-born introvert, I was always that way myself, and have always been uncomfortable in group learning situations with people I didn't know. On the other hand, I now have the maturity to know that being forced into a few of those situations would have been good for me.

Anyway, I seldom do any cooperative learning. When I do, it's mostly in the form of take-home projects that are quite challenging. (Idea for those who teach trigonometry: Have groups of three choose two cities, look up their latitudes and longitudes and the earth's radius, then calculate the "as the crow flies" distance between them. Oh, give them two or three weeks to do it, also.)

I do have a cooperative learning tale from this past week, however! We were working through some word problems that involved solving quadratics. We were slogging through one involving a right triangle, something like one leg was one unit longer than another, and the hypotenuse was three units longer than the shortest leg. The class had no problem mapping out the algebraic expressions for the sides, of course, but drew a large blank when it came to figuring out what to do with the information. All eyes were on me waiting for my pearls of math wisdom that would get them out of their mental jam. This is one of those moments of utter dependence that drives me nuts. I refused to bail them out.

"Look, folks," I said. You have the know-how to do this. Look it up, put your heads together, but do something! I'll check back in a bit."

I ambled down the hall for my morning Mountain Dew, ambled back, and sure enough, they had a break-through, which was simply applying the Pythagorean Theorem. I then had a stroke of uncharacteristic brilliance which hammered home what I had been trying to accomplish this quarter with them.

"Think about it," I told them. "I realize that I'm over-simplifying this a bit, but in the kinds of jobs you can get now you must be told what to do. In the kinds of jobs you can get with a college education, you must figure outwhat to do yourself, sometimes with the help of your friends. Which kind of job do you prefer?"

For a class that has strongly resisted my teaching style, they "got it."

From: Jon Davidson <jdavidso@SOUCC.SOUTHERN.CC.OH.US>
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10) As a senior education major at Pacific Lutheran University in Tacoma, Washington, I am just beginning to really witness the advantage of cooperative learning within the educational system.

Currently, I am observing at a local high school. The class I observe is actually three classes combined--yearbook staff, journalism, and photography/television media. The unique aspect of this class is the fact that it is completely student run. The editors of the respective classes are in control of the students, yet because the students work so well together, control is never really an issue. The instructor is used simply as a guide. The students learn from each other, and what they are learning is much more than how to put a yearbook together, or how to edit a newspaper. These students are learning to work as a team--team players, everyone taking responsibility for their own work, yet learning the value of creating a whole with the help of those around them.

The concept of cooperative learning, as I understand it, abounds at the high school I am observing. Students are constantly working in groups, whether it be to re-write an act of "Taming of the Shrew" to act for the class, or peer edit papers. It is my opinion that students who are given the freedom to interact within the classroom want to come to class, want to learn. Plus, working with others is really what happens after their 13 year of "confinement" is up anyway, so why not start now.

From: sealsjl@PLU.edu
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11) I always enjoy reading your postings on the LRNASST list. I especially liked your "Out of the Mouths of Babes" story. Mine is not nearly so sweet, but it meant a great deal to me when it happened.

Last semester, one of my students was in my office, and he mentioned that my class was his favorite class because we worked in group. The student said, "I learn the most in your class because of the groups. When we work in groups, we discuss what we want to discuss and learn what is important to us, not what the teacher thinks should be important. The funny thing is that I learn more this way. And what's more, I've realized that the other members of the group have a lot to teach me... and I have a lot to teach them, too."

The class is a reading/writing course, and although I give the groups specific tasks, they also have the freedom to generate their own discussion questions. The extra bonus I got from this student's comment was that, through the group activities in my class, he appreciated his own intellect.

An ironic post script: Once every year, we get observed and evaluated by a fellow faculty member. I "lucked" out this year and was assigned to a new faculty member. During the class he observed, I didn't have the students work in groups. It was NOT a lecture, mind you, but the activities were not suited for group work. This rather anal fellow gave me a poor evaluation because I didn't have group work! The fact that students work in groups during almost every class period didn't mean a thing!

Lonna Smith  lsmith@isc.sjsu.edu
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12) I've also had some c success with cooperative learning. I am teaching two Algebra classes at the 11/12 grade level this year; most of the students have had very little success with math (to give you an idea, here's a comment one student made to me at one point: "You're explaining that wrong. I should know -- I've taken this course three times.") I've found that, for the most part, coooperative learning can be a very useful adjunct to the rest of the course. Often, it is more helpful to the class than straight lecture. The challenge when working with teenagers is monitoring the class to make sure that the talk is about the course and not about such items of monumental importance as "how you do you say "the cheese is old and smelly" in Spanish?" (this really did take place one day, which is why one of my students has been nick named Senor Queso. :-) )

Korie Beth Brown                 brownkb@cgs.e
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13) When asked to share a cooperative learning exercise that I felt successful with, there were many different ones that came to mind. One in particular that I believe I enjoyed just as much as the students came at the end of a unit on mythology. The class was a gifted eighth grade english class. After we had studied characteristics of myths and read and discussed myths from around the world, and after students had been tested, their final project was to create a mythological animal and write a short myth explaining how the animal came to be. The students had to actually build or construct the animal and type the story that went with it. We began by getting into groups and then viewing a show off of the Discovery channel that was about animals around the world. We also went to the library to research as well. Each group then began work on its myth and its animal. The results were fantastic!! I had wonderful products and stories built out of all sorts of materials including wood, wire, clay, and toothpicks, just to name a few. A perfect ending came to be when the media center specialist at our school contacted the local cablevision branch and they came out and did a short piece on the students and their animals and myths. This was an exciting cooperative learning exercise for all! and stories.

From: ADDRESS <MOALLEMM@UNCWIL.EDU> UNCW-School of Ed (Megan)
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14) I loved Ted Panitz' story of his student's 3 year old. My story is not as sweet but it cheered me a lot and is a testimonial of another sort of coop learning.

For several years now in my mathematics courses I have taken time in class to help my students set up study groups and have integrated their work into the course by means of assignments etc. Last week I gave an invited talk in a colleague's education course. The discussion turned to the importance of group work and one student jumped to her feet and thanked me publically for setting up study groups in her class 3 years earlier - she said her group had continued to meet until this year when for some reason they had drifted apart. There was another student present from the same former course - he responded by saying that his group still met. At the very least this had been my hope - York is a very large urban commuter university and students can go for years without getting to know other people if we don't put in place structures to assist them in developing the community they need to improve their learning experience.

 progers@EDU.YorkU.CA (Pat Rogers) STLHE-L@unb.ca
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15) Concerning cooperative learning and group experiences, the most exciting project we undertook in a Computer Aided Design and Drafting class was designing an information booth for the college. The Student Programs Director along with the Information Director for the college came to me and asked if I might have a class that might design an information booth for the college. The booth was to be used both on and off campus for distribution of program brochures, catalogs, as well as other information about our college. The booth needed to be portable and light-weight, but large enough for someone to stand inside for counseling purposes.I had an Architectural Drafting class that semester which seemed like a possibility. I approached the class with the idea of doing the design as a class project. The students were most interested.The class being rather large, I divided the class into three design

teams. Each team came up with it's own design and then made a presentation to the class. The whole class voted on which design we would submit to the college. The information booth was built by our very capable maintenance department and served the campus for several years both on and off campus.

From: Mike Hutchins <MEH4564@dcccd.edu>
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16) I am a professor of Russian, a specialist in language acquisition, so I often teach beginning and intermediate language classes. Mine is a subject where I know the right answers, and my students must learn them. And there is a large amount of subject matter to "cover" to fit into the next class syllabus. Like beginning science and math, mine is not an area that lends itself to small group work where students share their feelings about the instrumental case or their reaction to the subjunctive mood. One could argue, as do many of my colleagues in the sciences and engineering, for lecturing a good share of the time if not all the time. There is so much to get across to them.

However, I never lecture except to answer student questions, and then only when no other student can answer the question. The students have extensive homework assignments, using carefully prepared materials, and they understand early that I expect them to be prepared when they come to class, because they will surely be called on. We do massive amounts of pair work and group work, practicing what they have learned, and finding out where their problems are. Students perform, speak, read aloud, and answer questions. We try to do things in class that they cannot do out of class--like speaking with my coaching. I encourage them to ask me anything about the homework or classwork, and they do. This encourages a habit of forming and asking questions, which is the sine qua non of real scholarship. And about half the time, some >other student can answer the question, often explaining the answer >more simply than I could have.

The results? I wish we had national, standardized tests with which to evaluate our students, but ETS dicontinued theirs some time ago. I suspect that students taught our way would outperform any lecturer's students. In any case, when former students talk about their language experience at our university and how they are doing now, they often express the need for more practice. They never say they need (or needed) more lectures.

>From: Don Jarvis <JARVISD@jkhbhrc.byu.edu>
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17) I use cooperative learning exclusively in my classroom. Most of Our work is in groups. First and foremost all groups are exactly 3 students. All groups must do many preplanning sheets. I guide the direction the "activity" or research will follow and then I can "drop the ball" and facilitate all the good stuff that comes of it. I have had wonderful results, little or no discipline problems etc. Attitude of the teacher is everything. Students even go through self awareness inventories beforehand to find strengths to share with the group. All grades are individual....... with group responsibility.

From: Bonnie Pollack <bpollack@umd5.umd.edu>
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18) I don't think I have ever learned a single mathematical truth well except through a) being "forced" to figure it out by its appearance on a test b) proving it, proving something with it, or proving something like it c) explaining it to someone else or d) through informal, hey-did-you-ever-hear-about-this discussions.

I guess it doesn't count as a testimonial, since it is basically the total of my mathematics experiences, but I figured out in grad school that explaining things to other people was not only a good way to learn things well, it was almost the only way I had ever learned things well. Something almost magical happens when I start trying to break it down into its components to explain it to someone else, and all of a sudden insight floods in. For some reason I don't seem to do this in "explaining things to myself", but if one of my classmates is struggling with it, something automatic kicks in and other ways of looking at the problem, or simpler steps to arriving at the conclusion come unbidden. Also, the questions that people ask you when you are explaining things are often excellent tools for enhancing your own understanding.

Finally, it is interesting to point out that all of a-d are essentially communicative methods, and I don't mean to act like cooperative learning is all explanation to others. That just happens to be the end I found myself on, not necessarily because I was the smartest, but I tend to thrive on communicative experiences (read, "he just never shuts up").

From: msouth@shodor.org (Michael J South)
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19) Just a note on Coop learning activities.

Hey, I walked into class on Monday, there they were -- 6 of the students were gathered around a table cooperating to work on their final exam questions!! They think that the questions are preparation for the final. In fact, these questions ARE the final. So, I let them. Scrapped the lecture/demonstration and worked with a smaller group of 3 students in a tutorial mode.

One Wednesday, the coop group was even bigger!

Just when you think they aren't ever going to work together ...

From: Andrew Petto <AJPETTO@MACC.WISC.EDU>
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20) The best description of my teaching methodology is "whatever works". If the seventh period boys in '92-93 worked better with group activities and games (I made my own "bingo cards" with vocabulary words on them using a spreadsheet template with formulae to insure that each game card was different than the others), that's what we did .... even tho the boys in 4th period that year, or even the 7th period boys in a different year, did better with a very different approach.

One of the most interesting uses of group learning that I used was in helping my students learn to write. Since there just one computer in the room (and later just one of the computer had a modem), the GROUP typically read and replied to email, listserv discussions, and later Internet activities of all kinds. As described in my chapter of the CMC Book (ed. Zane Berge), it was fascinating to watch my 7th period boys argue over where to place the commas in their responses in the Far Star discussion, when not a one had EVER used a comma in hand-written work before and I didn't even know that some of them knew what a commas was! Of course, not ALL the fellows in that group knew what a comma was, but as they discussed the use or non-use, those who couldn't remember ever hearing the word, got a glimmer of the use .... In subsequent years, some of those fellows began using commas in hand-written and individual writings, but some just got better about commas in group work.

Anne Pemberton apembert@pen.k12.va.us
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20) Here's a late response to the request for testimonials on the value of learning together. It comes from the 5 Dec, 1995 issue of the Straits Times, a Singapore English language newspaper. To understand the excerpt, you need to know that secondary schools in Singapore are streamed and the Normal stream is a lower one. At the end of Secondary Four, about 16 years of age, students in the Normal stream take the

N (Normal)-Level exam.

"Janis Tan Shai Wei failed Mathematics in Primary 6, Secondary 1 and most of her Secodnary 2. But yesterday, she scored an A1 (the top score) in the subject and was also the top N-Level student in Singapore.

Janis, 16, said she did many assessment exercises to improve her Mathematics. A peer-tutoring programme, in which she was asked to help two students who were weaker than she was in Mathematics, also spurred her on. `I had to understand the formulas well before I could teach them to my friends,' she said."

From: "George M. Jacobs" <gmjacobs@technet.sg>
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21) I did my student teaching last spring. Having had a couple of professors whom I greatly admired that believed strongly in the concepts of cooperative learning, I was eager to attempt many cooperative learning activities. I was going to teach in a high school that the media had nicknamed "Little Beirut". Thus, I thought the best means of success was extremely careful planning of the activities. My cooperating teacher was in her second year of teaching, approximately my age (I was 42), graduated from my university, and we had the same supervisor. She warned me that cooperative learning was a nice theory, but in practice was "crap". But she also told me that I was welcome to try whatever I wanted. I tried several activities (with some mild success with my freshman classes, but little with my junior classes). I finally came to the conclusion that, unlike my cooperating teacher and my supervisor (who asked my CT where I had learned "all of that cooperative crap"), cooperative learning needs to be practiced at the lower levels so that the kids grow up with the idea of helping one another learn, that the second semester of school is NOT the time to introduce cooperative learning and expect a great deal of success, and that cooperative learning IS a wonderful method to use to facilitate learning. The kids frankly had no idea what to have discussions about, or even HOW to have discussions even with guidelines, because they had so little opportunity to sit and discuss their own opinions. I had a 6th hour freshman class that had about a 50% attendance rate. There were so many problems kids in that particular class that there is no way I can believe it was random selection. Administration had problems getting subs for this particular class because of their reputation. Our final unit was "The Outsiders". I had the kids sit in cirlces with me. We discussed the gangs of the 1960s and the gangs of today. They had the opportunity to share and I learned. I won't quit trying cooperative learning, but I will definately take every opportunity I can to get more training and learn additional skills to successfully implement it.

Ingrid Rose   From: Wildercat@aol.com
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22) I teach an intro to leisure studies class at out university. this past quarter one of the chapters that we covered was gender, sex, sexuality, and leisure. A number of controversial issues were raised in this chapter. I selected three different issues and passed out sheets with those issues on them. they involved women in sports, the activities of fraternities, and the leisure of gays and lesbians. each student was to select one area to write about. their names weren not to be placed on the papers. then they were folded in half, placed in a bag and each person picked one. students had to present the issue being discussed from the perspective of the person whose paper they had whether they were in agreement with the individual or not. the discussions on all three topics were lively. however, when we got to the topic of gays and lesbians, one of the students wrote about wanting to bash gays and lesbians and knock their teeth out and how they felt as if gay bashing was a leisure activity in and of itself. several of the other papers presented on this issue took a different stance and wrote about how people should not have to have separate clubs or places to go to just because they are gay or lesbian. that discussion generated a series of entries in one students journal. this student shared with me that after class that day he was telling a friend of his about our discussion in class and espousing his position on gays and lesbians. his friend, who he told me he had known for three years, asked him if that is how he felt about him. he shared with me that he was shocked that this friend of his who had appeared so normal could be gay. over the last several weeks, he has asked a number of questions about gays in his journal. He has also shared with me some of the conversations that he has been having with his friend as he is developing a friendship with this individual at another level. through his journaling, the ongoing conversations with his friend, and his openness, this student has considerably changed his position. most recently he wrote in his journal, "I have always known what it was like to be discriminated against. I have been picked up by police just because I am black, it is late, and I am out. they never saw me as an individual. they just say me as a black male. I guess I have seen gay people the same way -- all the same, just a group, not as people. I wonder how many more people that I know are gay? How many of them are afraid to tell me because I have made them afraid that I would hurt them?"

From: Sharon Jacobson <JACOBSON@uga.cc.uga.edu>
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23) Having recently expeienced my first class using many of the cooperative
learning techniques you describe, I have thoroughly enjoyed your posts
articulating exactly what the professor was doing. It was a graduate class
in advanced statistics given by Dr. Karen Swoope in the Ed Psych dept. here
at WSU. It was a shock at first to find myself dependent on putting my own
head together with a group of strangers (much younger than myself) to solve
difficult problems and figure out (what we thought were) the principles
behind them that we then had to articulate in letter format as if writing to
a patient, intelligent "Aunt Hilda," who, assumedly was at first clueless as
to why we would elect to stay in a program that required two semesters of
statistics. Since I work full time and have been working on my Ph.D. one
class at a time, slipping away from the office for a few hours to attend
class, or attending after hours, it has frequently been a problem for me to
remain attentive (and awake) in lectures. Not so in my Advanced Stats
class! The time flew by as we talked among ourselves with our books open to
the reading that had not made much sense to me even reading it twice or
three timesat home, provided lame attempts at explaining principles,
refining each other's lame attempts, until they seemed robust enough to
offer to Dr. Swoope as she arrived at our group with a friendly (not
received by us as so friendly at first), "So how are we doing here?" and
later to the class as one of us would have a time at the chalkboard to make
an explanation or offer an example. The real test in understanding was, of
course the letters to Aunt Hilda (we had to do four in the course of the
semester). No grades were given, just comments, which we had to incorporate
in our rewrites. I rewrote the first one five times, the second three or
four. The third was acceptable on first submission, and what a boost to my
ego it was to see the three words scrawled across the top: "You got it!"
The subject matter was so difficult to me, in empathizing with Aunt Hilda,
who I assumed as a blood relation, might be having just as much difficulty,
I described the principles and their progression in pretty much detail,
using analogies and examples as if I were writing an exposition for an
English class. Often these letters, then, and their rewrites, turned out to
be 7-10 pages, which is no small assignment! I am well used to getting A's
and rarely discuss my grades, but when this one came in the mail, I posted
it on our bulletin board and wrote home about it to my parents and my
children. I felt it was an A well-earned, but more important, I felt I had
never learned a difficult topic so well.

Just thought I would offer my comments on cooperative learning from a
seasoned student's perspective (I am 53).

Kathleen J. Warren,   warren@eecs.wsu.edu - (509) 335-6456

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24) People interested in this topic should contact Susan Millar for her report on
the Wisconsin Emerging Scholars Program <smillar@engr.wisc.edu>. IN this they
took a subset of "at risk" students (those you usually dropped out of calculus
and therefore effectively cut off a wide variety of courses of study and majors)
and put them through an intensive, collaborative learning program in which they
had experiences much like what Ted Panitz described in his post.
WES was wildly successful in that students who would have been very likely to
drop out or fail the course, were in the top 10th percentile at the end of the
semester. Why/How? because the colalborative process of peer teaching and
problem solving for understanding really helped them do more than memorize
solutions to specific problems. It helped them to generalize their learning, it
helped them to learn how to learn the material, and it gave them confidence that
they could learn it.

Andrew Petto     ajpetto@macc.wisc.edu Voice:608/262-2866 Fax:608/265-4216
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25) I am currently completing my Master's Thesis in Human Factors, focusing on
HCI. For the project, I assessed a collaborative, constructivist mathematics
curriculum at Rowland High School.

Students were enrolled in a math class where they always worked in groups and
were relied on deriving answers for themselves, often focusing on figuring out
the relationships between algebraic and visual representations to determine
what concept they were dealing with.

Students were also enrolled in an Animation course, where they produced
cartoons that had the potential of teaching math to each other.
Student impr related research which was gathered during the latter part
of the year was only developed in portfolios and preseanted with their movies
during an open house they held at year's end.

Had they used software like Director, which made animation simple, and
focused on stick figures, rather than beautifully animated graphics, they
could have produced 3 or 4 cartoons, or rather interactive presentations
about mathematics throughout they year. They could have created products
about how their ideas about one concept changed during the year, or about
several concepts.

From: Balazs Schreil <BalazsSch@aol.com>
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26) >I had a few mixed thoughts on the recent postings regarding collaborative
learning. The following two courses which I am currently teaching illustrate
the pros and cons of the collaborative learning style approach.

>On the one hand I think group type learning is great. In my second year
deviance class with 80 students the week is divided so that on Tuesdays the
class works in groups preparing an analysis of the weeks' readings. They
have 20 minutes to prepare, leaving us 60 minutes to hear from the groups.
The group members receive participation points for this and each member of
the group is expected to act as the spokesperson for the group at least once
in the term for an additional point.. In addition the majority of the exam
questions are taken from these discussion questions. Therefore the students
listen very attentively to the other group presentations as this is the only
way for them to learn this material. On the Thursday class I lecture and
organize discussion on a key issue arising out of the readings. These
discussions benefit greatly from the students all now having done the
readings and already critically analyzed them. I find the level of debate is
very high and the students are happy; they like the group work, they are
prepared for most of the exam questions etc.

>On the other hand I worry that fun' activities in the classroom promotes
"the teacher as entertainer" attitude that the MTV generation of students
are increasingly expecting. My other second year class is Gender Studies. It
is unusually small this year with only 35 students. It meets three times a
week and at least once a week I arrange for group projects of various types.
Because of the smaller numbers, these have been alot of 'fun'; internet
explorations, raucous debates, etc. The other days are based on lectures and
class discussion. But after a few weeks of this the students were less and
less interested in the other two days of the class and were not coming
prepared or participating in class discussions. Upon inquiry they complained
that they wanted the class to be more fun, more of the group type activities.

>This concerns me for a number of reasons. Learning sophisticated theories
is not always fun, I am am not always fun, there are only so many topics
that can be done in a fun way. Family violence, rape and human rights abuses
require serious investigation, reflection and analysis. The students are
uncomfortable with these issues and are in some ways trying to avoid dealing
with them through the distraction of other class activities.

>Thus, I worry that by too much emphasis on the 'fun' and active nature of
group learning, the other side of education; the concentrated, listening,
thinking, reflecting side is being devalued and treated as old fashioned and
boring. This would be a great loss.

>Erin Steuter    From: Erin Steuter< esteuter@MAILSERV.MTA.CA>
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27) Loretta Jones and Lynn Geiger in the Chemistry Department at the
University of Northern Colorado successfully use cooperative learning
techniques in large Chemistry classes. Their research shows that
students perform better and are more satisfied with their learning
experiences when they learn using cooperative approaches. You could
contact thtem at University of Northern Colorado, Department of
Chemistry, Greeley, CO 80639.

From: Carolyn Cody <ccody@pgate.UnivNorthCo.EDU>
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28) Last fall we ran a test with the same prof in 2 sections. In one we
introduced four coop gp exercises. First of all we have found
significantly better scores on a standard test for the group with the coop
gp ex. Secondly the prof noticed a decidedly better atmosphere in the
class with the ex. The "untreated" class was "dead" whearas students in
the class with the "treatment" were costantly asking questions. Many
students in that class commented that they had never thought that they
"would enjoy a physics class", but were surprised to find that they had
enjoyed this one.

 H3essions of the curriculum were mixed. Those who performed well,
favored the curriculum in comparison to the traditional math environment,
because they came to understand the underlying concepts and not just how to
perform the calculations. On the other hand a few students could not derive
the connections for themselves, and felt lost throughout the year. Some
were upset, because the constructivist environment did not prepare them for
the AP-Calculus test.

Overall, the group environment did seem to be accepted favorably by the
students. Yet, in this situation, they were not only expected to derive
their own solutions in groups, they also collaborated to produce the
cartoons. The cooperative experience of creating a project with real world
significance about mathematics seemed to be really satisfying to them,
although it took extraordinary time and effort on the students' and teacher's
part.

The teacher had to preplan what projects would be possible for the upcoming
year, and develop packets of information about certain topics, then the
students researced the packets and came up with their own impressions of the
math on which their cartoons were based.

Unfortunately, since they used outdated software for animation, their
carttons only included information they researched during the first part of
the Fall semester,

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29) My experience with such a comparison amounts to anecdotal data, but it's com-
pelling. During the five years of the Pew Faculty Fellowship in International
Affairs, about 120 faculty, who had been selected partly for teaching profi-
ciency in the first place, incorporated case teaching into varied social
science courses in quite diverse settings. Overwhelmingly, they found that
case teaching made a positive contribution to both their own effectiveness
and their students' learning. In addition, the common experience among these
faculty was that, despite their relative inexperience with this teaching method
and the increased demand it placed on students, to prepare for and participate
in class discussion, their students responded very postively. Student ratings
of these faculty not only held, but frequently improved, and a surprising
number have reported receiving "highest ever" ratings for courses they've begun
to teach with cases.

Two things seem to be going on here, which, in fact, makes the situation harder
to sort out. One is the application of an innovative method. According to
the very articulate commentary of both teachers and students, that has had a
positive impact on learning, e.g., on the capacity to connect theory with
practice. At the same time, the teachers report, again overwhelmingly, that
applying this method has increased their enthusiasm for teaching significantly,
with noticeable impact on their classroom behavior and their interaction with
students. So, once again, we're left to wonder, at least partly, about the
relative contributions of teacher and method to the outcome.

John Boehrer
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30) I was a teaching assistant in graduate school, (some years ago) when a student who had missed two weeks of class due to an illness stopped in my office. He wanted to have my notes to copy. I told him that my notes were far too sketchy to be useful to him, and that he should ask another student in class. He said that he didn't know anyone!! I was shocked, and wondered how this could be after twelve weeks of classes. Then I remembered my own undergraduate experience at a large urban, commuter school - I also sat nameless and friendless in most of my classes. This was my initial motivation to begin using CL.

A second incident, also in grad school, gave me the incentive to use CL activities to have students work on discovering math. I was in my office, listening to the Talking Heads - the song, My Girlfriend's Better was playing and a student was asking for help.

She said (and I had heard this often before) that she can follow what I do in class perfectly, but when it gets to the homework, it doesn't make any sense. At that moment the music is echoing "stop making sense, making sense". I realized then

that I made perfect sense, and did flawless mathematics. But I wasn't learning it, and I wasn't showing my students how to do math. I was reinforcing the myth that to do math, you know each step and solve problems quickly. My students needed to experience starting a problem in an unproductive fashion, and then retrace the steps to find where another method may work better. They needed to construct math, to be mathematicians. So then, instead of merely having groups work through problems after I lectured, I began to start using group activities for them to develop the math.

It wasn't until I had a faculty position and began attending workshops and conferences about teaching that I could name what I was doing as collaborative learning, and learn more about how to design activities and assess them.

Sherrie Nicol <nicols@uwplatt.edu>
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30) What Dr. Nicol notes is too often true--college shouldn't be such a cold experience. A fast way to overcome this is to make a class directory the first week of class. Obtain students names & phone numbers first day on a 3x5 card. (Tell your
intent of making the directory so those with unlisted numbers can opt out of supplying their phone if they want.) At a commuter university, ask for home zip code as well. Spreadsheets are excellent to use to make a list sorted by name & zip code. Zip codes reveal to students the class members who live closest to them. The list gives permission for students to phone one another for help, missing notes, etc.. It also helps to assign "resource groups" of 4 or 5 students that literally guarantees everyone an outside support group. I hear of groups who formed in my classes in this way are still contacting one another years later. Even if you are die-hard lecturer, this simple list will do wonders for the attitude of those in your classroom.

> It wasn't until I had a faculty position and began attending
> workshops and conferences about teaching that I could name what
> I was doing as collaborative learning, and learn more about
> how to design activities and assess them.

A lot of excellent teachers have discovered cooperative/collaborative/team learning on their own. Some of them actually DO it better than those who know more of the educational jargon. This is particularly true in lab and field sciences, which lend themselves to learning a science by doing it. The nice thing about workshops and conferences, is that it shortcuts the time for discovery that otherwise usually takes years to occur as result of the awareness gained by careful reflection on experience.

Ed Nuhfer <enuhfer@CARBON.CUDENVER.EDU>
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31) I was in my last semester at Purdue in grad school (chemistry). My
major professor asked me to TA the graduate Thermo course with him. He had
decided based on good results in another chemistry course to try CL one day
a week. I ended up using the experience to write a paper for JRST. The
bottom line was that the students really felt like they learned something-- they owned it.
They did not memorize meaningless islands of information. Instead, many of them
tried to build a coherent framework of knowledge.

The experience changed the way I thought about teaching and learning
forever. Although I still get carried away lecturing (and who wouldn't
when they derive Maxwell's equations) every now and then, I am sure that my
students learn much more by digging into the material.

I am very lucky to be in an institution that values student learning
and innovations in teaching. We have used CL in p. chem. for the past 10
years (I've been here 2). During that entire time we have given a national
standardized exam in chemistry. We can show that our students score 1 to 2
std. dev. above the mean on the p. chem. portion of the exam. Thus, we can
quiet much of the rumbling from colleagues who ask "Do they learn anything?"
Finally, my husband is a manager--a department head at a
pharmaceutical company where he manages about 50 people in 5 different
research groups. He also earned his Ph. D. in chemistry. I see from his
eyes the importance of working in a team, solid interpersonal skills, and
effective oral and written comm skills. I transmit that in no uncertain
terms to my students. I talk about salaries in industry and about the
skills industry values in new hires beyond technical competence. I could
put a few references in here, but I will restrain myself (if you'd like
them email me personally) :\*). I also talk about stock options (Its rather
entertaining, my students eyes get very large.). People in industry who
have interpersonal competence married to technical competence do very well.

Finally, I think that I get to know my students better and I have more
opportunites to provide mentoring and coaching. I think that I come across
as caring about how my students learn, and that makes me more approachable
(I hope). I also can write better recommendations I think--something other
than academic performance at any rate.

Marcy Hamby Towns
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32) I really appreciate the comments about using Collaborative Learning in classes. For years I doubted my ability to teach because I dread lecturing. The CL concept offers a different approach, suggesting that successful teaching can take a variety of forms.

My background in Medieval Studies at the University of Toronto led me to expect to teach at a large research university, but something inside was telling me that I would be very uncomfortable in such a setting. Later I found out why: undergraduate humanities classes are often set up for lecturing, followed by group tutorials. At heart, I am a writer, not a public speaker. I would like to get to know my students and their work closely. Lecturing makes me the peformer, with the students in the audience. I would like it the other way around.

In 1989 I started teaching medieval literature, composition, and linguistics at a small college, Lynchburg College, which I love, as it allows for small group interaction in classes. Evaluations from my students suggest that we agree: they prefer activities and group interaction over straight lecture in my classes. However, I believe that collaborative learning is not necessarily better than other teaching methods, as long as teachers and students take into account what works best for them as people and accommodate different learning styles in the classroom. Also, it is important for

students and teachers to stretch their skills: those who are strong lecturers might want to try CL and those who find group work and seminar teaching most comfortable might wish to work on their public speaking, something which I keep putting off.

At heart, I am not a public speaker, which is probably why CL works for me. When I lecture, which is necessary at times to transmit information, I notice that people tune out, talk, do other things. But when they are engaged in performing or talking about a text, or discussing material online in computer sessions, with questions and guidance from me and others in the group, then everyone is attentive. Therefore, I am experimenting with ways to keep lectures as short as possible, so that most class time involves CL.

However, it is important for the instructor to make sure that information which the students are using is a) accurate and b) understood, so I have learned to function as a guide, editor, director, coach or whatever, but the class as a team is responsible

for success.

Last term I used CL entirely in a graduate course, Teaching Composition, including student presentations and workshops set up by the teachers taking the course. I designed the assignments and guided discussions. Some students wanted more direction from me about the readings, so I began posting questions on the computer network for them to answer in the class journal (entries due weekly, available for everyone to read, via Norton Textra Connect software)

Students presented their research on composition teaching methods and illustrated them on the class, sometimes incorporating collaborative learning activities within the collaborative learning already going on. It was a wonderful experience and the students loved the course, though one or two asked for more lecture in the evaluations.

I also use CL in writing workshops in Freshman English, in class book production in Freshman English and in Writing Center tutor training (where tutors train one another in the weekly seminar, and work together to design a website writing guide). These activites have produced wonderful results!

I truly enjoy collaborative learning classes, though I am inwardly shy as a speaker and forever worried about my ability a) to get material across and b) to be taken seriously. I love to explore new ideas, get excited about creative ways to approach material, and leave doors open for students to go off and explore, which

approaches do not always appeal to students seeking structure and authority figures in the instructors.

The response from those students is resistance. However, the use of CL has helped me to overcome the teacher/student barriers, plus the massive stage fright that precedes every class in which I know that I have to do some lecturing. I have heard faculty who lecture brilliantly, and as an auditory learner, I remember most of what I

hear. I admire these lecturers, but CL is best for me! Student results, improvement in writing, support this approach.

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