

Marshall Memo 294

A Weekly Round-up of Important Ideas and Research in K-12 Education
July 13, 2009

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Quotes of the Week (including three oldies)

“In cooperative situations, conflicts occur over how best to achieve mutual goals. In competitive situations, conflicts occur over who will win and who will lose.”

David and Roger Johnson (see item #1)

“If schools wish to prevent bullying and increase prosocial behaviors, the use of cooperative learning and efforts to help students become more predisposed to engage in cooperation seem to be important strategies.”

David and Roger Johnson (*ibid.*)

“I had 90 seconds to get to a teacher evaluation. Then I needed to be on the playground. After that, I could perhaps sneak into the bathroom for half a minute before my walkie-talkie reminded me that I had an 11 o'clock meeting with a parent (and her attorney) who wanted to sue the district and remove some of my body parts.”

Elementary principal Autumn Tooms (see item #2)

“Secretaries can be town criers, spreading information or misinformation to your community.”

Autumn Tooms (*ibid.*)

“The biggest obstacle to learning is the belief that one cannot learn.”

Seymour Papert and Daniel Dennot, *Newsweek*, March 11, 1996

“The purpose of leadership is the improvement of teaching practice and student performance.”

Richard Elmore, 2000

“Smart is not something that you just are. Smart is something that you can get!”

Jeffrey Howard, 1993

“Calm is strength. Upset is weakness.”

Fred Jones, *Tools for Teaching*, 2000

1. Cooperative Learning's Strengths – and What It Takes to Make It Work

In this thorough and helpful article in *Educational Researcher*, University of Minnesota professors David Johnson and Roger Johnson (who are brothers) trace the origins of cooperative learning and what the research says about its effects on teaching and learning. “Cooperative learning is an unusually strong psychological success story,” they say. “Cooperative learning has been used by so many different teachers, in so many different subject areas and settings, in preschool through adult education, with so many varied tasks and students, and in so many different countries and cultures that its effectiveness is almost taken for granted.” In recent years, cooperative learning has gained even more traction because of the push to include students with disabilities and English language learners in regular classrooms and bring all students to high levels of achievement.

The Johnsons cite more than 1,200 studies comparing cooperative, competitive, and individualistic learning structures, with cooperation emerging the clear winner. The average person in a cooperative learning situation performs two-thirds of a standard deviation better than someone in a competitive setting (effect size = 0.67) and the effect size over a person working solo is 0.64.

The theoretical roots of cooperative learning come from research on the conditions under which people learn best. Here are some logical possibilities:

- Social independence – One student’s achievement is unaffected by what other students do.
- Social dependence – One student’s achievement depends on what another student does.
- Social helplessness – Neither student can influence goal achievement, nor can anyone else.
- Negative interdependence – Individual group members’ actions obstruct achieving mutual goals.
- Positive interdependence – Individual group members’ actions promote the achievement of mutual goals.

Before cooperative learning was introduced in the late 1960s, *social independence* or rugged individualism was most Americans’ model for how children learned best; kids needed to get used to working alone because it was a dog-eat-dog world out there and only the fittest would survive and prosper. But slowly, the idea of *positive interdependence* – that students could learn better working in cooperative groups – caught on, helped along by the fact that most workplaces placed a high value on employees’ ability to work well with their colleagues. By

the 1990s, most schools from primary to college and adult education were using cooperative learning to some degree, and the idea had spread around the world.

Three formats

The Johnsons break cooperative learning into three types: formal, informal, and cooperative base groups:

- *Formal cooperative learning* means students working together for one class period or several weeks to solve a problem, conduct an experiment, have a discussion about a particular text, or complete a curriculum unit. For this mode to be successful, the teacher needs to:

- Decide on the objectives (academic and social skills), the size of the groups, how students will be assigned to groups, students' roles within the groups, the materials needed, and the way the room will be arranged.
- Explain the task to students and teach the required concepts and strategies, explain how cooperation will work, and clarify the criteria for success.
- Monitor students' learning and intervene when necessary, teaching interpersonal and other skills on the fly.
- Evaluate students' learning and help them self-assess how well they are working together.

- *Informal cooperative learning* is when students work together in temporary, *ad hoc* groups that last from a few minutes to one class period, engaging in quick dialogues or activities in response to a limited number of questions posed by the teacher. For example, a teacher might have students engage in a 3- to 5-minute focused discussion before and after a lecture and 2- to 3-minute turn-to-your-partner discussions every 10 or 15 minutes during a lecture. This kind of quickie cooperative learning can help set expectations for what is about to be covered, help students cognitively process new material, and provide closure for a lesson or unit.

- *Cooperative base groups* are long-term relationships that provide support, encouragement, and assistance for academic and social support. Base groups are usually heterogeneous, meet daily or weekly, and last for a semester, for a school year, or all the way till graduation. Students check each others' work, help each other with areas of difficulty, and encourage each other to excel.

Keys to successful implementation of cooperative learning

The Johnsons say that cooperative learning has benefited from trial and error and continuous research, making it possible to identify the factors that make it successful and those that produce disappointing results. It's clear that putting students in groups is not enough; teachers need to structure the learning experiences very deliberately. Giving students shared goals is an essential starting point, followed by these five key elements:

- *Structuring cooperative tasks so team members need each other to succeed* – If teams aren't knitted together in a positive way, outcomes will be similar to those of students working solo. "Knowing that one's performance affects the success of group mates seems to create *responsibility forces* that increase one's efforts to achieve," say the Johnsons. There are three

ways that teachers can foster positive interdependence in groups: (a) By *outcomes* – that is, the whole group gets some kind of reward when its work is completed successfully; (b) By *means* – that is, each team member is assigned a role (facilitator, timekeeper, summarizer, etc.) or the task is divvied up jigsaw-style and each group member depends on the knowledge of others to complete the task successfully; and (c) By *boundaries* – that is, group members are roped together by commonalities, such as color of shirt, past history together, where they sit, etc.

- *Individual accountability* – The danger in cooperative groups is “social loafing” – some members coasting on the work of others. To counteract this, cooperative learning tasks need to be structured so that each member is personally accountable for contributing to the group’s tasks and outcomes. Ideally all members contribute, pull their weight, and help their teammates out. “Failing oneself is bad, but failing others as well as oneself is worse,” say the Johnsons. Positive relationships help. “The more a person is liked and respected by group mates... the more responsibility he or she will feel toward group mates.” One thing that works against personal responsibility is when cooperative groups are too large.

- *An ethos of supporting each other* – This is when group members encourage and facilitate each other’s efforts to accomplish the group’s goals. They act in trusting and trustworthy ways, exchange needed information and materials, encourage their team mates, give each other feedback, challenge processes that aren’t producing the best results, are able to take the perspective of others to explore different points of view, and maintain a climate of low anxiety and stress.

- *Appropriate use of social skills* – “Effective cooperation is based on skilled teamwork as well as on task work,” say the Johnsons and cite research that this is one of the most important factors in successful learning outcomes. “Unskilled group members cannot cooperate effectively,” they say. So teachers need to explicitly teach the interpersonal skills and motivate students to use them, including: getting to know and trust one another, communicating unambiguously, accepting and supporting one another, resolving conflicts constructively, and reflecting on their work after the fact to see how the group’s processes could be improved.

- *Effective training of teachers* – The Johnsons say that the classroom methodology of cooperative learning needs to be explicitly and systematically taught. Both John Dewey (in the early 20th century) and Frances Parker (in the late 19th century) advocated cooperative classroom structures, but the Johnsons say that their approach was basically, “Watch me and do likewise” and their teaching didn’t stick. It’s vital to give teachers specific skills and tools to implement cooperative learning properly. Training also needs to give teachers a good conceptual understanding of how and why cooperative learning works. “Although many teachers like take-and-use sessions, developing a mental model of the cause-and-effect relationships inherent in the use of cooperative learning increases retention of what is learned, improves transfer to the classroom, and supports long-term maintenance of the use of cooperative learning,” say the Johnsons.

Can competition ever be helpful to learning?

For more than 40 years, the Johnson brothers have made the case for cooperation and believe strongly that it produces far better results than other classroom structures. Here are

some of the reasons they believe *competitive* classrooms and workplaces produce less-impressive results:

- Competition teaches the values of getting more than others, beating and defeating others, seeing winning as vital to self-esteem, and believing that opposing and obstructing the success of others is appropriate. These dynamics aren't conducive to high productivity.
- In competition, people tend to try to engage in self-protective strategies such as self-worth protection (withholding effort so failure can be blamed on not trying rather than lack of ability), self-handicapping (procrastinating or setting unreasonably high expectations to provide a ready excuse for failure), and defensive pessimism (setting unreasonably low expectations to reduce anxiety about failure).
- When winning is very important and your team loses, you tend to see your performance as a failure and develop competition-learned helplessness. Winning, on the other hand, can produce psychological burnout.
- If you believe you don't have a real chance of winning, you won't try as hard, will be tempted to cheat, and will tend to avoid challenges, use superficial and effort-minimizing strategies, engage in impaired problem solving, use other self-handicapping strategies, and have less interest in and enjoyment of the experience.
- When the rules in a competition are ambiguous, you don't try as hard and your energy is diverted to worrying about what is fair and unfair.
- Both competition and cooperation can produce conflict, but there is a basic difference: "In cooperative situations, conflicts occur over how best to achieve mutual goals," say the Johnsons. "In competitive situations, conflicts occur over who will win and who will lose."

But competition isn't always bad, concede the Johnsons. Here are circumstances under which competition *can* produce good results:

- When winning is relatively unimportant.
- When all participants have a reasonable chance to win.
- When there are clear and specific rules, procedures, and criteria for winning.

The Johnsons report on studies of competition in the business world that found the key variables were "the fairness of the rules, the motivation to compete and win, the perception that one's chances of winning are good, a strong positive relationship among competitors, competitors acting fairly during the competition, and a history of confirming each other's competence."

When is an individualistic approach appropriate?

The Johnsons did a similar analysis of circumstances where students working on their own could be better than those working in cooperative teams. In general, individualistic structures tend to get people thinking about their own self-interest and viewing others' interests as irrelevant. But sometimes working solo is the best approach, including when:

- Cooperation is too costly, difficult, or cumbersome.
- The goal of the individual work assignment is important and relevant.

- Students expect to reach their goals successfully working alone.
- The tasks to be completed are simple, unitary, and non-divisible, for example, learning specific facts or skills.
- The directions for completing the task are clear and specific and students don't require further clarification.
- What is learned will subsequently be used in a cooperative learning situation.

Social-emotional benefits

The Johnsons close with two more benefits of cooperative learning structures in the classroom:

- *Positive relationships and support* – Numerous studies have shown that cooperative learning promotes better connections among people than competition or individual work, and these positive relationships seem to last beyond the time and place where students engaged in cooperative learning. “If schools wish to prevent bullying and increase prosocial behaviors,” say the Johnsons, “the use of cooperative learning and efforts to help students become more predisposed to engage in cooperation seem to be important strategies.”
- *Psychological health and self-esteem* – Studies have also shown benefits from cooperative learning in emotional maturity, well-adjusted relationships, strong personal identity, the ability to cope with adversity, basic trust and optimism about others, self-confidence, independence and autonomy, higher self-esteem, and increased perspective-taking skills.

“An Educational Psychology Success Story: Social Interdependence Theory and Cooperative Learning” by David Johnson and Roger Johnson in *Educational Researcher*, June/July 2009 (Vol. 38, #5, p. 365-379), no e-link available; the authors can be reached at johns010@umn.edu and johns009@umn.edu.

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2. An “Oldie but Goodie” Article – Advice to a Rookie Principal: *Stroll!*

In this excerpt from a 2003 *Kappan* article, Kent State University professor Autumn Tooms shares some surprising advice she received from a mentor who shadowed her for several days when she was an elementary school principal: *Walk slower in the halls*. “Walk slower?” thought Tooms. “What did she mean walk slower? I had 90 seconds to get to a teacher evaluation. Then I needed to be on the playground. After that, I could perhaps sneak into the bathroom for half a minute before my walkie-talkie reminded me that I had an 11 o’clock meeting with a parent (and her attorney) who wanted to sue the district and remove some of my body parts. I walked down those halls with purpose simply because I was always on a mission. I tried to do my job so that the school would run smoothly.”

But the mentor insisted that *strolling* down the hall was exactly what she needed to do. It turned out that some of the staff inferred from her purposeful stride that she was angry. “Had I told anyone I was angry?” she asked herself. “No. Did it matter than my assistant principal walked the same way when she was on a mission? Again, no.

“My mistake,” says Tooms, “was that I forgot my frontstage behavior. Whenever I had a break from a task in the office, I would stroll the halls and manage by walking around. I would chat with folks, enjoy the outdoors, or get involved with a project that students were working on. I was thinking about being there to communicate and connect with people on my campus. When I was problem-solving and checking off projects on the day’s to-do list, I walked differently. I had a harder look on my face because I was concentrating on the tasks at hand rather than on my frontstage behavior. The staff couldn’t distinguish the different reasons behind my different walks. Therefore, people tended to misread what was going on.”

So Tooms began to train herself to think *stroll* whenever she left her office. “I wrote ‘stroll’ on my walkie-talkie and on the back of my office door,” she says. “In about two months, a teacher remarked that she had overheard in the teachers’ lounge that I seemed so much more relaxed. The teachers thought that I was ‘easing into the job so much better.’ In my mind, nothing had changed. I still had lots of people wanting lots of things all at once. But now I was strolling.”

Tooms said she was also careful to stroll in the front office. There is a more intimate relationship with office staff members because they see much more of the principal, but she knew that are just as likely as teachers in the farthest corners of the school to get the wrong impression. “Secretaries can be town criers,” says Tooms, “spreading information or misinformation to your community.”

“The Rookie’s Playbook: Insights and Dirt for New Principals” by Autumn Tooms in *Phi Delta Kappan*, March 2003 (Vol. 84, #7, p. 530-533), no e-link available; the author can be reached at atooms@kent.edu.

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3. Short Item:

Quizzes on everything – In this *Boston Globe* article, Don Aucoin raves about Sporcle – <http://www.sporcle.com> – a website that provides quizzes on a variety of subjects, including U.S. presidents, the nine planets, countries of the world, and Shakespeare plays. Sporcle has become an obsession for many college students, but it has definite applications for high schools too. The website has stirred up a little controversy. Joseph Nevin, a professor of geography at Vassar College, worries that it makes geography into a trivia game. But James Hayes-Bohanan, a Bridgewater State College geography professor, disagrees. “It piques curiosity,” he says. “Once you see the kinds of phenomena they quiz on, I hope that would inspire people to do some reading.” Sporcle’s product manager, Derek Pharr, says that the site is “tricking people into learning.”

“On Top of the World: Thanks to Sporcle, Young People Are Learning About Geography, and Other Subjects” by Don Aucoin in *The Boston Globe*, June 16, 2009, p. G10

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Do you have feedback? Is anything missing?

If you have comments or suggestions, if you saw an article or web item in the last week that you think should have been summarized, or if you would like to suggest additional publications that should be covered by the Marshall Memo, please e-mail: kim.marshall8@verizon.net

About the Marshall Memo

Mission and focus:

This weekly memo is designed to keep principals, teachers, superintendents, and others very well-informed on current research and effective practices in K-12 education. Kim Marshall, drawing on 37 years' experience as a teacher, principal, central office administrator, and writer, lightens the load of busy educators by serving as their "designated reader."

To produce the Marshall Memo, Kim subscribes to 44 carefully-chosen publications (see list to the right), sifts through more than a hundred articles each week, and selects 5-10 that have the greatest potential to improve teaching, leadership, and learning. He then writes a brief summary of each article, pulls out several striking quotes, provides e-links to full articles when available, and e-mails the Memo to subscribers every Monday evening (with occasional breaks; there are about 50 issues a year).

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Publications covered

Those read this week are underlined.

American Educator
American Journal of Education
American School Board Journal
ASCD, CEC SmartBriefs, Daily EdNews
Catalyst Chicago
Changing Schools (McREL)
Ed. Magazine
EDge
Education Digest
Education Gadfly
Education Next
Education Week
Educational Leadership
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Phi Delta Kappan
Principal
Principal Leadership
Principal's Research Review
Reading Research Quarterly
Reading Today
Rethinking Schools
Review of Educational Research
Teacher Magazine (online)
Teachers College Record
The Atlantic Monthly
The Language Educator
The New Yorker
The Reading Teacher
Theory Into Practice
Tools for Schools/The Learning Principal