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Common Misconceptions about Cooperative Learning and Gifted Students

Response to Allan

By clarifying misunderstandings about cooperative learning and high achievers, perhaps we can resolve the conflict—to the benefit of all students.

The controversy about cooperative learning in general is perplexing, because it is such a benign and beneficial innovation. Given its effects in the personal, social, and academic domains, how can anyone object to teaching students how to cooperate in learning?

When we specifically consider whether cooperative approaches to learning are suitable for gifted students, we often find the discussion clouded by questions about the wisdom of continuing GATE programs and concern about the adverse affects of tracking. The question of whether cooperative learning benefits gifted students, however, is important in its own right and needs to be settled as an issue separate from the matter of tracking. Otherwise it will persist, whether GATE programs survive or not.

Several misconceptions fuel the dispute about cooperative learning and gifted students. If we can clarify these assumptions, perhaps we can resolve the controversy.

Misconceptions about Cooperative Learning

I repeatedly hear four erroneous assumptions about cooperative learning in the arguments against its use for gifted and talented students.

Assumption No. 1: *Cooperative learning refers to only one approach to teaching.* Some objections to the use of cooperative learning are based on an impression of *one* technique that has been overused or misused somewhere. Rejection of that technique is then extended to all cooperative approaches to learning, when, in actuality, there are *many* ways of generating cooperative activity in the classroom to achieve specific purposes (Joyce et al. 1991). For example:

- To increase attention to divergent thinking, teachers use Synectics (Gordon and Poze 1971), which combines individual and cooperative activity to teach students how to use metaphors and analogies in writing and problem solving.
- To help students take on the modes of scientific inquiry, teachers select the inductive models of cooperative activity, in which students work both separately and together to build and test hypotheses (Joyce et al. 1991).
- For the analysis of public issues and personal values, teachers use Jurisprudential Inquiry and Role Playing, which help students capitalize on individual differences in perception to

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fuel their personal and collective investigations (Joyce et al. 1991).

- For education in cooperation itself, there are the techniques developed by Johnson and Johnson (1990), among others.
- For the study of specific academic content, there are the approaches developed by Aronson et al. (1978), Slavin (1988), and Kagan (1990).
- To teach scientific inquiry and the democratic process simultaneously, there is Group Investigation (Sharan and Shachar 1988).

All of these techniques address objectives frequently mentioned as special needs of gifted and talented students. If a teacher needs others, the catalog of publications and idea-books put out by the International Association for the Study of Cooperation in Education, now 50 pages long, includes many techniques not mentioned here (Graves and Graves 1990). The great range produced by this fertile community provides avenues that can benefit *any* student population.

Assumption No. 2: *Cooperative learning is the only type of learning approach to use.* Just because the social approaches to education are supported by a fine research base does not imply that all activity should be developed around cooperative projects. However, it *is* fundamental in all teaching to build a community of learners who use many learning tools to achieve their ends (Joyce and Weil 1986; Joyce et al. 1991). No doubt, some disseminators of cooperative approaches overclaim their research and advocate greater use of specific techniques than is reasonable, but no experts on cooperative learning suggest that any one technique will be effective all day long. Building a learning community, however, needs to be pervasive.

Assumption No. 3: *Gifted and talented students are mismatched with cooperative learning.* I simply know of no supporting evidence to uphold the belief that gifted and talented students are, as a group, immune to the benefits of cooperating in order to learn or that they possess psychic antibodies that make cooperative activity actually harmful to them. Certainly, individual students, including those thought to be gifted, respond differently to any educational environment, but that is a different question from whether they have the social skill to profit from cooperative activity (just about all students do) or whether they can or should learn those skills if they don't have them.

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The literature contains stunning examples where students of a wide range of academic histories profited dramatically from the environment of a very cooperative classroom (See, especially, the findings in Sharan and Shachar 1988). The discomfort generated by learning to do unfamiliar things may, in fact, be a critical mechanism for growth (Joyce 1986 1991).

There is evidence, from the time of the early Terman studies, that manifestations of learning ability are often accompanied by general problem-solving aptitude, enabling students thus blessed to profit from a wider range of environments than many of their cohorts. That something works well for average and below-average students should not lead to the conclusion that it must, *ipso facto*, not benefit the above-average.

For example, Baveja, Joyce, and Showers (Baveja 1988) combined cooperative learning with inductive thinking strategies with students selected because of a combination of outstanding academic and athletic aptitude (talented in two areas) in a science course. The resulting effect size was 1.0 for lower-order tests, and a mean for higher-order test items was *six times* greater than the mean of the matched control group.

In another recent study of cooperative learning—in this case, through Group Investigation—Sharan and Shachar (1988) illustrated how rapidly students of differing learning histories can accelerate their learning rates. They prepared social studies teachers to organize their students into learning communities and then compared the classroom interaction and academic achievement in these classes with classes taught by the customary "whole-class" method. In Israel, where the study was conducted, students of Middle Eastern origin generally belong to the disadvantaged population, whereas students of European-origin generally are more advantaged. Students from both origins were mixed in the classes studied.

Sharan and Shachar found that the students of Middle Eastern origin taught with Group Investigation achieved average gains nearly two-and-a-half times those of their whole-class counterparts. In fact, the "socially disadvantaged" students taught with Group Investigation learned at rates above those of the "socially advantaged" students taught by teachers who did not have Group Investigation in their repertoires. For the students of Western origin, the average gain was *twice* that of their whole-class counterparts. Thus, the model was exceptionally effective for students, from both backgrounds; as it turned out, students from both backgrounds were disadvantaged in the classes where cooperative learning was not used.

Assumption No. 4: *Cooperative learning and extreme heterogeneous grouping go hand in hand.* This assumption is no doubt based on a mistaken extrapolation of a finding from the research on social models designed to make use of heterogeneity for specific purposes. An example is Synectics, where heterogeneity frequently benefits learning. But social models of teaching can be used with either specially selected *or* randomly assembled populations. Some models capitalize on heterogeneity in ability, heritage, and point of view; but in any group of students, there is enough variance to make any of the

cooperative formats work to the benefit of all students. Clearly, grouping to *maximize* variance is a matter of choice rather than necessity.

Questions about variance in classrooms often get bound up with the difficult question of tracking, generating emotions that cloud important issues. Given the evidence (see, for example, Slavin 1990), it is clear that tracking is not a good thing. However, that evidence, although long-standing, has failed to influence practice. In recent years a new device for tracking, the magnet school movement—by increasing segregation by ability and social background—has been a disaster for many students in our larger cities (See *The New Improved Sorting Machine* by Moore and Davenport 1989). Thus, advocates of *all* programs for students with special needs will have to search for ways to carry them out that do not have the bad side effects that tracking has had. I have no doubt that this can be done, but the simple "track and educate" model will now have to go. Again, however, the issue about cooperative learning is a separate one.

Cooperating for Better Solutions

As we attempt to design better educational programs, giving up assumptions may be as important as developing new approaches. We have to acknowledge that individual differences exist and that they need to be accommodated much more effectively than in the past. Clinging to unwarranted assumptions in the face of evidence to the contrary will not help us in that task. But if we cooperate to develop better solutions and freely borrow from others to nourish our specialties, we should soon see success for every student—not just an avoidance of failure, but an acceleration of richness and rates of learning unanticipated even a few years ago—and for all. □

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