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Grouping and the Gifted

Are Cooperative Learning and "Untracking" Harmful to the Gifted?

Response to Allan

I find no evidence to support Allan's conclusion that ability grouping is worthwhile for high achievers and find much to recommend cooperative programs for these (and other) students.

In the past few years there has been remarkably rapid development in American education on two distinct but related fronts. One is the adoption of various forms of cooperative learning, and the other is the search for alternatives to traditional tracking and ability-grouping practices. Cooperative learning and "untracking" have completely different rationales, research bases, and political and practical implications. Cooperative learning can work within a completely tracked school, and untracking by no means requires cooperative learning. Yet the two movements have become intertwined in the minds of educators because cooperative learning is often offered as one means of teaching the very heterogeneous classes created by untracking and because of a widespread assumption that if homogeneous large groups are bad, then heterogeneous small groups must be good. Perhaps I have contributed to the confusion by having written in support of both practices (see, for example, Slavin 1988 and 1991).

In education, there is no fundamental change that does not generate enemies. In the case of both untracking and cooperative learning, opposition is now developing among members of the same group: researchers, educators, and parents concerned about the education of gifted children. For example, recently in *ASCD Update*, cooperative learning was cited by several researchers and educators involved in gifted education as having a detrimental effect on the gifted, both in that the cooperative learning movement has often led to abandonment of separate gifted programs and in that gifted students "report feeling used, resentful, and frustrated by group work with students of lower ability" (Willis 1990, p. 8). And in this issue of *Educational Leadership*, Susan Allan writes that "gifted and high-ability children show positive academic effects from some forms of homogeneous grouping" (see p. 64).

The questions of untracking and cooperative learning for the gifted are important for others besides the 5 percent (or so) of students who are identified as academically gifted, because arguments about the gifted are often used to defeat attempts to reduce or eliminate tracking with the remaining 95 percent of students.

What is the evidence on ability grouping and cooperative learning for gifted or other high-ability students? In this article I discuss the research and the logic around these issues of programming for very able students.

Is Untracking Bad for High Achievers?

Leaving aside the question of cooperative learning or other instructional strategies, it is important to understand what has been found in the research on ability grouping in general. Susan Allan correctly observes that the popular press has distorted the research, making ability grouping appear disastrous for the achievement of all students. She is also correct in noting that different ability grouping practices have different achievement effects (see Slavin 1988). However, I strongly disagree with her conclusion that ability grouping is beneficial to high achievers and her implication that it is therefore a desirable practice.

First, let me make a critical distinction between "high achievers" and the "gifted." In most studies, high achievers are the top 33 percent of students; "gifted" are more often the top 3–5 percent. These are very different groups, and I will address them separately.

Is ability grouping beneficial for high-ability students? My reviews of research on between-class ability grouping (tracking) found it was not. In elemen-

What *Update* Said About Gifted Students and Cooperative Learning

An article in the October 1990 issue of *ASCD Update* reported that several experts in gifted education were concerned that "gifted students are being exploited in cooperative groups" (Willis 1990, p. 6). The article quoted advocates of special programs for the gifted—including John Feldhusen, James Gallagher, Julian Stanley, Linda Silverman, and Grace McDonald—who expressed fears that the movement to phase out tracking and concurrent efforts to widen use of cooperative learning were having a detrimental effect on gifted students. The article included comments defending cooperative learning from researcher Bob Slavin and from Margo Long, director of a center on education of the gifted, but emphasized the complaints of some gifted education specialists that (1) funding for gifted programs is being cut because of misinterpretations of the research, (2) gifted students are not sufficiently challenged in regular classrooms, and (3) in heterogeneous cooperative learning groups, gifted students often either "carry" the group or get bored and tune out.

Willis, S. (October 1990). "Cooperative Learning Fallout?" *ASCD Update* 32,8:6–8.

tary studies I found a median effect size for high achievers of +.04, which is trivially different from zero (Slavin 1987).[1] In secondary schools, the effect was +.01 (Slavin 1990a). Kulik and Kulik (1987) obtained medians of +.10 in elementary, +.09 in secondary schools —higher than mine, but still very small. Most reviewers consider an effect size less than +.20 to be educationally insignificant. In almost every study I reviewed, the achievement differences between ability-grouped and heterogeneous placement were not statistically significant for high achievers. The possibility that the failure to find educationally meaningful effects could be due to ceiling effects on standardized tests is remote; standardized tests are certainly designed to adequately measure the achievement of the top 33 percent of students.

Now let's consider the gifted, the top 3–5 percent of students. Gifted programs fall into two categories, *enrichment* and *acceleration*. In acceleration programs, students either skip a grade or take courses not usually offered at their grade level (for example, Algebra I in 7th grade). When acceleration involves only one subject, that subject is almost always mathematics. All other gifted programs, which do not involve skipping grades or courses, are called "enrichment."

Research on *acceleration* does favor the practice (see Kulik and Kulik 1984), although this research is difficult to interpret. If one student takes Algebra I and a similar student takes Math 7, the Algebra I student will obviously do better on an algebra test. Still, studies of this type find that the accelerated students do almost as well as non-accelerated students on, say, tests of Math 7, so the extra algebra learning is probably a real benefit.

Research on *enrichment* programs, which are far more common in practice, is, to put it mildly, a mess. Most such studies compare students assigned to a gifted program to students who were not so assigned, often to students who were *rejected* from the same programs! Such studies usually control statistically for IQ or prior achievement, but these controls are inadequate. Imagine two students with IQs of 130, one assigned to a gifted program, the other rejected. Can they be considered equivalent? Of course not—the rejected student was probably lower in motivation, actual achievement, or other factors highly relevant to the student's likely progress (see Slavin 1984). A study by Howell (1962), included in the Kulik and Kulik (1982, 1987) meta-analyses, compared students in gifted classes to those rejected for the same program, controlling for nothing. The only study I know of that randomly assigned gifted students to gifted (enrichment) or heterogeneous classes (Mikkelson 1962) found small differences favoring *heterogeneous* placement. Reviewers of the literature on effects of gifted programs (for example, Fox 1979) have generally concluded that while acceleration programs do enhance achievement, enrichment programs do not. Even if enrichment programs were ultimately found to be effective for gifted students, this would still leave open the possibility that they would be just as effective for *all* students (Slavin 1990b).

Leaving aside for a moment the special case of acceleration, nearly all researchers would agree that the achievement effects of between-class ability grouping (tracking) for all students are small to nil. What does this say to the practitioner? Since arguments for ability grouping depend entirely on the belief that grouping increases achievement, the absence of such evidence undermines any rationale for the practice. The harm done by ability groups, I believe, lies not primarily in effects on achievement but in other impacts on low and average achievers. For example, low-track students are more likely to be delinquent or to drop out of school than similar low achievers not in the low track (Wiatrowski et al. 1982). Perhaps most important, tracking works against our national ideology that all are created equal and our desire to be one nation. The fact that African-American, Hispanic, and low socioeconomic students in general wind up so often in the low tracks is repugnant on its face. Why would we want to organize our schools this way if we have no evidence that it helps students learn?

I do believe that schools must recognize individual differences and allow all students to reach their full potential, and they can do this by using flexible within-class grouping strategies and other instructional techniques without turning to across-the-board between-class grouping (see Slavin et al. 1989). In some cases (mostly mathematics), acceleration may be justified for extremely able students. But the great majority of students can and should learn together.

Is Cooperative Learning Bad for High Achievers?

In research on cooperative learning, we have routinely analyzed achievement outcomes according to students' pretest scores. Those in the top third, middle third, and low third have all gained consistently, relative to similar students in control classes, as long as the cooperative learning program in use provides group goals and individual accountability (see Slavin 1991). High achievers gain from cooperative learning in part because their peers encourage them to learn (it benefits the group) and because, as any teacher knows, we learn best by describing our current state of knowledge to others (see Webb 1985).

In preparation for writing this article, I asked my colleague, Robert Stevens, to run some additional analyses on a study he is doing in two suburban elementary schools. The two schools have been using cooperative learning in all academic subjects for many years, in which all forms of between-class ability grouping are avoided and in which special education teachers team with regular classroom teachers to teach classes containing both academically handicapped and non-handicapped students. Stevens' analyses focused on three definitions of high ability: top 33 percent, top 10 percent, and top 5 percent. The results for grades 2–5 on standardized tests are summarized in Figure 1.

Fig. 1. Difference in Effect Sizes Between High Achievers in Two Cooperative and Two Control Schools

Measure	Top 33%	Top 10%	Top 5%
Reading Vocabulary	+.42	+.65	+.32
Reading Comprehension	+.53	+.68	+.96
Language Mechanics	+.28	+.11	−.14
Language Expression	+.28	+.48	+.17
Math Computation	+.63	+.59	+.62
Math Concepts & Applications	+.28	+.32	+.19

Note: These data are from Point Pleasant and Overlook Elementary Schools and two matched comparison schools in Anne Arundel County, Maryland, a Baltimore suburb.

Figure 1 shows that even the very highest achieving students benefited from cooperative learning in comparison to similar students in the two control schools. The only exception was on Language Mechanics, probably because the writing process approach we use does not emphasize mechanics out of the context of writing. It is important to note that the Stevens study does not involve run-of-the-mill cooperative learning in reading, writing/language arts, or mathematics, but uses Cooperative Integrated Reading and Composition or CIRC (Stevens et al. 1987) and Team Assisted Individualization (TAI) Mathematics (Slavin 1985) (also see Slavin et al. 1989/90). These programs incorporate flexible grouping within the class and therefore differentiate instruction for students of different achievement levels. Still, no separate grouping or special program was needed to substantially accelerate the achievement of even the highest achievers (and of other students as well).

Many of the concerns expressed about high achievers in cooperative learning are based either on misconceptions or on experience with inappropriate forms of cooperative learning. First, many educators and parents worry that high achievers will be used as "junior-teachers" instead of being able to move ahead on their own material. This is a confusion of cooperative learning with peer tutoring; in all cooperative methods, students are learning material that is new to all of them. A related concern is that high achievers will be held back waiting for their groupmates. This is perhaps a concern about untracking, but not about cooperative learning. In cooperative learning students are typically exposed to the same content they would have seen anyway; and in forms of cooperative learning such as CIRC and TAI, they may progress far more rapidly than they otherwise would have. Sometimes parents are concerned when their youngsters' grades are made dependent on those of their groupmates. This does happen in some forms of cooperative learning, but I am personally very opposed to the practice. Certificates or other recognition work just as well, and grades can and should be given based on individual performance.

No Evidence in Favor of Tracking

My personal philosophy of education is that all students should be helped to achieve their full potential. I am in favor of acceleration programs (especially in mathematics) for the gifted, and I believe in differentiating instruction *within* heterogeneous classes to meet the needs of students above (and below) the class average in performance. But I see no evidence or logic to support separate enrichment programs for gifted students. Enrichment is appropriate for *all* students. I see little evidence at all for separate tracks for high achievers. The burden of proof for the antidemocratic, antiegalitarian practice of ability grouping must be on those who would group, and no one who reads this literature could responsibly conclude that this requirement has been met.

The likely impact of untracking *per se* on the achievement of high achievers is no impact at all—these students will do well wherever they are. However, with the use of effective cooperative learning programs, especially those that differentiate instruction within the class, high achievers are likely to benefit in achievement, even the very top-achieving 5 percent. Educators of the gifted should be in the forefront of the cooperative learning movement, insisting on the use of

forms of cooperative learning known to benefit gifted and other able students. If these methods also happen to be good for average and below average students, so much the better!□

[1]In this case, an "effect size" is the difference between ability grouped and ungrouped students on achievement tests divided by the test's standard deviation. Effect sizes between -.20 and +.20 are generally considered to indicate no meaningful differences.

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Author's note: This article was written under a grant from the Office of Educational Research and Improvement, U.S. Department of Education (No. OERI-R-117-R90002). However, any opinions expressed are mine and do not represent OERI positions or policies.

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