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ABSTRACT

This review of research focuses on policies and practices that result in placing students in groups that are more or less homogeneous with respect to academic performance. Recent analysis of data from the National Education Longitudinal Study of 1988 provides the largest and best-controlled multi-year study of ability grouping ever conducted (Braddock and Slavin). The outcomes of scores of studies have been similar, and these outcomes are discussed in the following categories: (1) opportunities to learn; (2) ability grouping and achievement; (3) ability grouping and segregation; (4) ability grouping and intergroup relations; (5) ability grouping, self-esteem, and feelings of inferiority; (6) ability grouping, delinquency, and dropouts; and (7) alternatives to ability grouping. Ability grouping must end because it is ineffective, harmful to many students, and damaging to interracial relations and democratic society. Effective and practical alternatives exist. Public schools must provide more equitable access to learning opportunities that develop reasoning, inference, and critical thinking skills. Major school restructuring will be necessary to develop the needed alternatives. A 71-item list of references is included. (SLD)

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Why Ability Grouping Must End: Achieving Excellence and Equity in American Education

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"The only thing that matters in my life is school, and there they think I'm dumb and always will be. I'm starting to think they're right. Hell, I know they put all the Black kids together in one group if they can, but that doesn't make any difference either. I'm still dumb. Even if I look around and know that I'm the smartest in my group, all that means is that I'm the smartest of the dumbest.

Upper tracks? Man, when do you think I see *those* kids? I never see them. Why should I? Some of them don't even go to class in the same building with me. If I ever walked into one of their rooms they'd throw me out before the teacher even came in. They'd say I'd only be holding them back from their learning." (Cottle, 1974, p. 24)

The quotation above is an excerpt of a conversation with Ollie Taylor, an eleven-year-old African American boy in Boston who had recently been assigned to the low track in his school. In this conversation, Ollie illustrates many of the problems and dilemmas of ability grouping, especially in integrated schools. First, and most obviously, Ollie reminds us of the shame of being assigned to the low track. At age 11, Ollie has presumably had a great deal of information about his capabilities relative to other students. He may know that he was keeping up with them, but also presumably knows that he is not one of the top achievers. Yet assignment to the low track puts a stamp on him that is altogether different from anything that he learned about himself in heterogeneous classes.

Secondly, Ollie reflects the belief that the low track is especially designed for black students like himself, that race is one factor in assignment to tracks.

Third, Ollie discusses the profound division between students in high and low tracks, describing a feeling that students and teachers alike would "throw him out" if he dared to trespass on their area of the school.

Ability grouping has several forms, all of which sort children into different learning environments based on evidence or assumptions about a student's academic performance. Among the forms of ability grouping by which children's learning opportunities are sorted and

thereby differentiated are tracking, misassignment to special education, more or less permanent assignment to groups within classrooms, retention in grade, and differences in teacher expectations and curriculum coverage. In addition, children may be sorted *among* schools because of differences in the socioeconomic characteristics of the communities served or because of their assignment to schools established for students who are defined as having special needs and problems.

In this review of research, we focus on policies and practices that result in placing students in groups that are more or less homogeneous with respect to academic performance.

Effects of Ability Grouping*

Ollie Taylor's experiences and feelings are not unusual. They are not unique to African American students or to other minority students. A recent longitudinal study (Braddock & Slavin, 1992) shows the pervasive negative effects of ability grouping for *all* students. In our analysis of data from the National Longitudinal Study (NELS:88), we provide unusually rich information on ability grouping practices and student outcomes in a nationally representative sample of schools and students. We looked at eighth graders who attended schools in which ability grouping was or was not used, and then examined many outcomes for these students in the tenth grade, statistically controlling for prior grades and test scores, gender, ethnicity, socioeconomic status, school size, and other variables. We compared high, average, and low achievers separately in the tracked schools to their counterparts in the untracked schools.

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*We use the term ability grouping because it is commonly used, but we note that this term usually is applied to assessments of performance which may or may not be closely related to actual ability or capacity.

The results were striking. Students in the low track performed significantly less well than did similar low achievers in untracked schools on composite and core subject achievement tests (reading, mathematics, science and social studies). Yet there was no consistent corresponding benefit of ability grouping for high or average achievers. Put another way, Ollie Taylor's pain was no one's gain.

Test scores were not the only indicators of the negative effects of tracking. Low-track eighth graders were much more likely to end up in non-college preparatory programs in the tenth grade than were untracked low achievers. This effect suggests that being in the low track in eighth grade slams the gate on any possibility that a student can take the courses leading to college. The gate remained open for equally low achieving eighth graders who had the good fortune to attend untracked schools.

Like Ollie Taylor, low-track students in our study had lower self-esteem than did untracked low achievers, and had markedly less positive perceptions of intergroup relations in their schools. Again, these negative impacts were not offset by any positive effects on any outcomes for high or average achievers.

The NELS:88 data we analyzed provide the largest, best-controlled multi-year study of ability grouping ever conducted. However, the effects of ability grouping have been studied for seventy years, and the outcomes of scores of studies have been similar to what we found. The following sections review research on the main outcomes of ability grouping.

Opportunities to Learn

Students cannot learn what they have not been taught. One of the clearest outcomes of ability grouping at all instructional levels is that students in low ability groups are exposed to

substantially less material and to lower quality instruction than are students in middle or high ability groups (Oakes, Gamoran, & Page, 1991). The pace of instruction is slower in low reading groups (Barr & Dreeben, 1983; Gamoran, 1986) and in low track classes in middle and high schools (Page & Valli, 1990). Further, students in low ability groups are likely to be exposed to more low-level basic skills than are students in middle and high groups (Hiebert, 1983; Powell, Farrar, & Cohen, 1985; Oakes, 1985). Even more to the point, low achievers in tracked settings are exposed to far less content and to lower level content than are similarly low achieving students in mixed-ability classes (Oakes, 1991). In fact, Oakes (1985) found that the level and pace of instruction provided to heterogeneous middle school classes was like that given to the top track in tracked schools. The presence of low achievers in heterogeneous classes does not cause teachers to slow down or "dumb down" their curriculum; instead, it appears to allow low achievers to benefit from the same richer and faster-paced curriculum traditionally offered to the top track.**

Ability Grouping and Achievement

In the long history of research and debate on the effects of ability grouping, the same essential arguments have been advanced on both sides (see Slavin, 1990a). Proponents of ability grouping have claimed that grouping is necessary to individualize instruction for students, to accommodate their diverse needs. In particular, they have been concerned about the possibility that including low achievers in heterogeneous classes would slow down the progress of high achievers, and have claimed that high achievers benefit from the challenge and example of other

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**This is not to say that instruction in top track classes is optimal for high achievement or anyone else.

high achievers. In contrast, opponents of ability grouping have been concerned about the negative effects of the practice on low achievers, in particular denying them access to high-quality instruction, and have opposed the practice on principle as undermining social goals of equity and fairness in our society. There is an interesting lack of parallelism in these arguments. The pro-grouping argument is primarily concerned with *effectiveness*, while the anti-grouping argument is primarily concerned with *equity* and democratic values. Consequently, the burden of proof in terms of effectiveness must be on those who would track.

Clearly, ability grouping fails to meet this burden of proof. Reviews of research on ability grouping in elementary schools (Slavin, 1987) and in secondary schools (Slavin, 1990a) have failed to find any positive effects of between-class ability grouping for any subgroup of students. These reviews consider studies done in all types of schools over many years. Many of the studies used either random assignment to ability grouped or nongrouped classes or case-matching procedures to ensure that the grouped and ungrouped classes were identical in prior performance. Not only were *average* achievement levels no better in ability grouped classes, but hardly any individual studies find educationally meaningful positive effects. Trivial differences on achievement measures (less than 10% of a standard deviation) have been found for high, average, and low achievers. All reviewers of studies comparing ability grouped and nongrouped classes agree that there are no overall positive effects of ability grouping on achievement (see, for example, Esposito, 1973; Good & Marshall, 1984; Kulik & Kulik, 1982, 1984; Gamoran, 1986). There is some disagreement about differential effects for high and low achievers. Some studies, such as our recent reanalysis of the NELS:88 data (Braddock & Slavin, 1992) and a similar longitudinal study by Hoffer (1991) found significantly negative

effects of ability grouping for low achievers, with no corresponding advantage for high achievers. Others, such as Fuligni, Eccles, & Barber (1990), found small positive effects of ability grouping for high achievers, negative for low. Most studies comparing ability grouped and ungrouped students find no difference in achievement (Slavin, 1987, 1990a). There is only one aspect of ability grouping research that engenders serious debate concerning achievement effects. This has to do with effects of programs for the gifted. There is general agreement that *acceleration* programs are effective. For example, gifted seventh graders who take Algebra I (usually given to students in ninth grade) perform far better on Algebra tests and little worse on Math 7 tests than equally bright students who take Math 7 (Fox, 1979; Kulik & Kulik, 1984). However, there is little reliable evidence to favor the far more common enrichment programs often provided to gifted students (Slavin, 1990b, 1991a). Research in this area often appears to favor enrichment programs because it fails to adequately control for student ability levels, but well-controlled randomized studies are few and fail to support separate programs for the gifted (e.g., Mikkelson, 1962).

Whatever the effects of programs for the gifted, it is important to keep in mind the fact that such programs only apply to 3-5% of students. No serious reviewer suggests that there are educationally important positive effects of comprehensive ability grouping plans for a broader range of high achievers (for example, the top 33% of students). Even if there were evidence in favor of enrichment programs for the gifted, there would still be no evidence whatsoever to deny that such enrichment programs might be effective for *all* students, not just gifted ones.

Ability Grouping and Segregation

One of the most consistent impacts of ability grouping is the creation of classes that have disproportionate numbers of students from different racial or social class groups. As Ollie Taylor put it, "I know they put all the Black kids together in one group if they can." In high schools, Black and Hispanic students are greatly overrepresented in the vocational track, underrepresented in academic programs (Braddock, 1989). These groups are also overrepresented among the low tracks in junior high and middle schools (e.g., Jones, Erickson, & Crowell, 1972), and in low reading groups in elementary school (e.g., Haller, 1985). Further, the U.S. Office of Civil Rights has estimated that more than half of U.S. elementary schools have at least one "racially identifiable" classroom in its highest or lowest grade. A racially identifiable classroom is one in which the proportion of students of a given race in a class is substantially different from that in the school as a whole. This is considered an indication of discriminatory ability grouping (see Wenning, 1992). Leaving aside race and ethnicity, students from low socioeconomic circumstances are also greatly overrepresented in the low tracks (e.g., Heyns, 1974; Alexander, Cook, & McDill, 1978).

Ability Grouping and Intergroup Relations

Before our recent study (Braddock & Slavin, 1992), relatively little was known about the direct effect of ability grouping on attitudes among students of different ethnicities. One earlier study compared interethnic attitudes in ability grouped and heterogeneous sixth grades in New Mexico schools containing Hispanic and Anglo students. Intergroup attitudes were consistently higher in the heterogeneous classes (Sarthory, 1968). However, the effects of between-class ability grouping are certainly much more profound than this. By separating students into classes

that are predominately composed of one or another ethnic group, ability grouping obviously limits the number of positive relationships that could possibly develop across ethnic group lines. Without such positive relationships, the development of broader interracial understanding and tolerance is unlikely (Allport, 1954). Our evidence from the NELS:88 data suggest that ability grouping has major consequences for both students' perceptions of race relations in their schools and their reports of "racist remarks."

Other studies show that student friendship patterns are closely linked to academic track placements in high school where students choose friends from witnin their own track (Alexander & McDill, 1976; Cohen, 1975; Rosenbaum, 1976), and even in the early elementary grades, students' opportunities for interaction with students of different abilities and races are affected by the teacher's choice of more or less resegregating classroom grouping practices (Epstein, 1985).

Ability Grouping, Self-Esteem, and Feelings of Inferiority

The most poignant aspect of the conversation with Ollie Taylor excerpted above was the degree to which placement in the low track made him feel inferior and worthless. A great deal of research shows that Ollie's feelings were not unique. We found students in the low track to have significantly lower self-esteem than low achievers in mixed-ability classes; there were no differences for middle and high achievers. Earlier studies have also found that in comparison to others, students in low tracks are low in academic self-esteem, even controlling for their actual achievement; they also tend to report feelings of inferiority, shame, and anger (Sarthory, 1968; Ogletree, 1968; Schafer & Olexa, 1971; Rosenbaum, 1976; Persell, 1977; Oakes, 1982). In addition, our study found that tracked low achievers had more feelings that their fate was out

of their hands (external locus of control) than did untracked low achievers (Braddock & Slavin, 1992).

Ability Grouping, Delinquency, and Dropout

The experience of being in the low track has many effects beyond low self-esteem and feelings of inferiority. Controlling for their achievement and other factors, studies have found that students in the low track are more likely to be delinquent than are other students (Wiatrowski, Hansell, Massey, & Wilson, 1982) and are less likely to complete their education (Rosenbaum, 1976).

Alternatives to Ability Grouping

Arguments in favor of ability grouping depend entirely on the assertion that grouping is necessary to meet the unique needs of children of different performance levels, especially those of high achievers. Yet evidence from dozens of studies done over a sixty-year period has consistently failed to demonstrate any benefits of between-class ability grouping for students at any performance level. Given the segregative impact of ability grouping, the negative effects of grouping on such outcomes as self-esteem, delinquency, and dropout, and the anti-egalitarian nature of the practice, there is little reason to maintain the between-class ability grouping practices so prevalent in American middle and high schools and not uncommon at the elementary level.

While it is easy in concept to say that ability grouping should be reduced or eliminated, it is much more difficult in practice to bring this about. An old Russian analogy is appropriate: "It's easy to make an aquarium into fish soup, but hard to make fish soup back into an aquarium." American schools have been ability grouping for decades and know few alternatives

to the practice. Strong political pressures, especially from parents of high achievers, inhibit change. Teachers need to learn about, witness, and experiment with new practical methods for teaching heterogeneous classes, and parents, teachers, and students themselves need to be satisfied that a change from homogeneous to heterogeneous grouping will meet the needs of all students, including those of high achievers.

A few general principles of untracking seem to be worth stating at the outset. First, untracking must be seen as a part of an overall improvement in instructional practices and curriculum for all students. Untracking must never be or appear to be taking from high achievers to give to low achievers. Instead, it must be seen as bringing into the school methods and materials that are better for all students. Second, the expectations for student performance in untracked schools must be similar to those formerly characteristic of the top track. As noted earlier, Jeannie Oakes' (1985) observational research in homogeneous and heterogeneous middle school classes found that the pace and quality of instruction in the untracked classes *was* like that in the high tracks; schools undertaking untracking need to make certain that this is in fact the case and is *perceived* to be the case. For example, some schools that have successfully untracked have put their former gifted teachers in charge of helping all teachers to make all their (heterogeneous) classes "gifted" classes, in the sense that all classes can experience activities typical of enrichment programs for the gifted (see Wheelock, 1992).

The key goal of untracking should be to make the "top track" curriculum accessible to a broader range of students without watering it down. This may mean doing more active teaching and less seatwork; using more projects and hands-on curriculum and less passive lecture; using more cooperative learning (see below); using more frequent curriculum-based

assessments of student progress with adequate time allowed; providing low achievers with assistance (including adult and peer tutoring) closely linked to their classroom curriculum; and many other strategies. Note that with the exception of the last of these, all are generally considered effective strategies for all students (see, for example, Brophy & Good, 1986; Slavin, 1991b), not only for low achievers.

One alternative to ability grouping often proposed (e.g., Oakes, 1985) is the use of cooperative learning methods, which involve students working in small, heterogeneous learning groups. Research on cooperative learning at all grade levels consistently finds positive effects of these methods if they incorporate two major elements: group goals and individual accountability (Slavin, 1990b). That is, the cooperating groups must be rewarded or recognized based on the sum or average of individual learning performances. Cooperative learning methods have also had consistently positive impacts on intergroup relations (Slavin, 1985) and on such outcomes as self-esteem, acceptance of mainstreamed academically handicapped students, and ability to work cooperatively (Slavin, 1990b).

One category of cooperative learning methods may be particularly useful in schools that are moving toward heterogeneous class assignment. These are Cooperative Integrated Reading and Composition (Stevens, Madden, Slavin, & Farnish, 1987) and Team Assisted Individualization - Mathematics (Slavin, Madden, & Leavey, 1984; Slavin & Karweit, 1985). Both of these methods are designed to accommodate a wide range of student performance levels in one classroom, using both homogeneous and heterogeneous within-class grouping. These programs have been successfully researched in grades 3-6, but are often used up to the eighth grade level. Elizabeth Cohen's (1986) Complex Instruction and Sharan & Sharan's (1992)

Group Investigation are also effective cooperative learning programs designed for use in heterogeneous classes.

In addition to cooperative learning, there are many other strategies known to be effective for students in general and likely to be particularly appropriate for teaching heterogeneous classes. One is the use of active teaching strategies (Brophy & Good, 1986). A much broader range of students can benefit from engaging, active, well-organized lessons than can learn from worksheets and textbooks. Another such strategy is an emphasis on "constructivist" teaching, in which students begin with large, "authentic" problems and work together to discover how to solve them and, along the way, the more basic concepts underlying them (Brown, Collins, & Duguid, 1989). Particularly well-researched problems using this approach are writing process models (Hillocks, 1984) and new mathematics approaches (Carpenter et al., 1989). The use of "scaffolding," as in Reciprocal Teaching can provide all learners with increased responsibility for their own learning and thereby can make success available to a broader range of students (Palincsar, 1986).

Extending learning time for low achievers can be a very effective means of helping them keep up with a demanding curriculum. Extra time embedded in the school day for preteaching or remedial work closely linked the students' regular classroom work can help low achievers succeed in heterogeneous, high-expectations classes (MacIver, 1992). Curriculum-based assessment and directed services to help at-risk children succeed can obviate the need for special education or separate remedial services for many children (Fuchs et al., 1990). The importance of effective assistance for low achievers is extremely important in untracking efforts, not only for the benefit of low achievers, but also to keep teachers from feeling as though they must slow

down the curriculum. If untracking is to be effective for everyone and is *perceived* to be so, it must maintain a fast-paced, high-expectations curriculum for all students, and targeted assistance to low achievers must be part of this plan. Targeted assistance can be provided by peer tutors (Devin-Sheehan et al., 1976), volunteer tutors (Morris et al., 1990), special education or Chapter I teachers, or even computers.

None of the instructional methods that have promise for teaching heterogeneous classes can be mandated schoolwide next Monday morning. All require top-quality staff development over an extended period of time. Staff development programs should make extensive use of peer coaching (Joyce, Hersh, & McKibbin, 1983) or other means of following up initial training sessions with in-class follow up from fellow teachers, expert coaches, or outside trainers. In addition, it is important to involve teachers in making decisions about how staff development will take place and, more generally, how the school will change to increase its effectiveness for all students. It is also important to see that teachers are able to make individual choices about whether to use particular teaching methods or curriculum materials. Untracking is fundamentally a school level decision; teachers and others should participate in making the decision, but once it is made, it will generally apply to the whole school or at least to whole grades within a school. However, it does not make sense to require that *all* teachers use cooperative learning or within-class grouping or process writing or other methods.

Finally, it is important to begin untracking where it is easiest to do so: in the earlier grades. In a district with high, middle, and low classrooms at the primary level, untracking should probably begin in these grades before the upper elementary and middle grades. In districts with heterogeneously grouped elementary schools, middle schools--not senior high

schools--should be the focus of untracking efforts. The reasons for this should be obvious. First, it is important to move from success to success. A major push to untrack senior high schools may well fail on political or practical bases and thereby undermine the broader policy. Changes in grouping policies are much easier to carry out in the elementary and early middle grades. Also, it is difficult, though certainly not impossible, to untrack tenth graders who already have four (or nine) years of experience in tracked settings. Schools need to make a long term commitment ultimately to reduce or eliminate tracking, but to do so across the board, or in high school before elementary or middle schools, invites turmoil and possible failure.

Why Ability Grouping Must End

Ability grouping is ineffective. It is harmful to many students. It inhibits development of interracial respect, understanding, and friendship. It undermines democratic values and contributes to a stratified society. There are effective and practical alternatives. Ability grouping and tracking must end. Academic tracking is an anachronism. There may have been a time when curriculum tracking in schools actually coincided with the needs of the society and the economy. That is, a designated number of academically proficient students were needed to pursue further education and careers that depended upon that education, while a number of non-academically oriented students were needed to enter the workforce directly and perform the important and occasionally well-paying jobs that required less education. That situation has changed dramatically. If the U.S. is to maintain its standard of living, it must develop a workforce capable of thinking, learning, and making decisions.

Writing off a substantial proportion of our students never made sense from a social standpoint and is rapidly becoming suicidal from an economic standpoint. Yet curriculum

tracking still exists and is widely practiced in most American schools today. The effects of curriculum tracking and ability grouping on student learning opportunities are especially negative for students of color who are overrepresented among the low groups. African American and Latino students constitute our largest-- and fastest growing--student populations, and the future well-being of the country depends upon their access to a high quality education. Corporate leaders and educators have recently focused increased attention on the level and type of skills American youth bring to the workforce and on the content and quality of their high school courses and programs of study. According to a recent U.S. Department of Education report (National Assessment of Educational Progress, 1990), for example, high school seniors with higher reading proficiency scores reported being in the "academic track" and taking more rigorous coursework. The strong effect of tracking on adults' cognitive skill levels makes it clear that if schools are to meet the requirements of our economy for a more highly skilled future workforce, public schools must provide more equitable access to learning opportunities which develop reasoning, inference, and critical thinking skills.

Accomplishing this important shift in educational policy will require major school restructuring efforts that encourage alternatives to tracking and ability grouping. The nation's changing demographics have resulted in a similar imperative with regard to issues of social cohesion in an increasingly pluralistic society. As the American population becomes ever more racially and culturally diverse, issues of intergroup tolerance and understanding take on greater significance for our national well-being. In this vein, corporate leaders' concerns with the type of graduates produced by our public schools is not limited to cognitive and technical skills, but also includes social skills and especially the ability to relate to persons of different backgrounds

and to be good team players. Thus, the adverse effects of tracking on students' social skills and affective outcomes related to racial intolerance suggest the need for change. As a society we cannot tolerate low skills in a major portion of our workforce and expect to thrive; moreover, we cannot tolerate intolerance and expect to survive.

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