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An Analysis of the Research on Ability Grouping

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Educational researchers formulated the basic questions about ability grouping decades ago. Does anyone benefit from grouping? Who benefits most? Is anyone harmed? How? How much? Why? But after more than a half-century of analysis and interpretation, reviewers of the research findings have still not reached agreement on the answers. For every research reviewer who has concluded that grouping is helpful, there is another who has concluded that it is *harmful.*

Today, however, researchers are using statistical methods to organize and interpret the research literature on grouping, and they are more hopeful than ever before of coming to a consensus on what the research says. Glass (1976) coined the term *meta-analysis* for this statistical approach to literature reviews. Researchers who carry out a meta-analysis locate studies of an issue by clearly specified procedures, code outcomes and features of the studies on quantitative scales, and use statistical techniques to relate characteristics of studies to outcomes. The approach yields reliable and precise summaries of large bodies of research.

Two major sets of meta-analyses on research findings on grouping have been completed, one set at the University of Michigan (e.g., J. Kulik & Kulik, 1991) and the other at Johns Hopkins University (Slavin, 1987, 1990). The two sets of meta-analyses together examine findings from five kinds of grouping programs:

1. *XYZ classes.* School personnel assign students by aptitude to classes (e.g., high, middle, and low classes), and the classes are instructed in separate rooms either for a full day or for a single subject. Highly similar or identical curricular materials are usually used in all classes at the same grade level.

2. *Cross-grade grouping.* Children from several grades who are at the same level of achievement in a subject are formed into groups, and the groups are then taught the subject in separate classrooms without regard to the children's regular grade placement. Different curricular materials are thus used with same-age students who are at different aptitude levels.

3. *Within-class grouping.* A teacher forms ability groups within a single classroom and provides each group with instruction appropriate to its level of aptitude. The teacher usually uses different rates of instruction and different instructional materials for the within-class groups.

4. *Accelerated classes.* Students who are unusually high in academic aptitude receive instruction that allows them to proceed more rapidly through their schooling or to finish schooling at an earlier age than other students. The curriculum is clearly adapted to the higher aptitude level of students in these programs.

5. *Enriched classes.* Students who are unusually high in aptitude receive richer, more varied educational experiences than would be available to them in regular classes. Like accelerated programs, these enriched classes provide a curriculum that is specially tailored to students of higher aptitude levels.

Findings from the Michigan and Johns Hopkins meta-analyses agree quite well, but overall conclusions of the two research teams differ. The Michigan team found no clear effects of grouping in some programs, moderate positive benefits in others, and large positive benefits in still others. Hopkins researchers found moderate positive benefits from some grouping programs and no negative or positive effects from others. The difference in conclusions seems to stem from differences in the scope of the Michigan and Hopkins analyses. The Michigan analysts concluded that the strongest benefits from grouping were found in programs in which there was a great deal of adjustment of curriculum for highly talented learners. The Hopkins meta-analysts did not find any strong positive effects of grouping, but they also did not examine grouping programs designed for highly talented students.

A careful re-analysis of findings from all the studies included in the two sets of meta-analyses confirmed that higher aptitude students usually benefit academically from ability grouping. The academic benefits are positive but usually small when the grouping is done as a part of a broader program for students of all abilities. For example, XYZ grouping, in which little or no effort is made to adjust curriculum to the ability level of the classes, raise the test scores of higher ability students by about 0.1 standard deviations, or by about 1 month on a grade-equivalent scale. Within-class and cross-grade programs, which entail moderate amounts of curricular adjustment, boost test scores of higher aptitude students by about 0.2 to 0.3 standard deviations, or by 2 to 3 months on a grade-equivalent scale.

Benefits are larger in special classes for higher aptitude learners. Gains on standardized tests are especially large when the programs entail acceleration of instruction. Classes in which talented children cover four grades in three years, for example, usually boost achievement levels a good deal. Test scores of children accelerated in this fashion are about one year higher on a grade-equivalent scale than they would be if the children were not accelerated. Enriched classes, in which students have a varied educational experience, raise test scores by more moderate amounts. The average gain from such classes is 4 months on the grade-equivalent scales of typical standardized tests. Although smaller than the gains from accelerated classes, gains of this size are still impressive because in many enriched classes students spend as much as half their time on cultural material (e.g., foreign languages, music, art) that is not directly tested on standard achievement tests.

The re-analysis also showed that grouping has less influence on the school work of middle and lower aptitude learners. XYZ classes, for example, have virtually no effect on the achievement of such students. Test scores of middle and lower aptitude students taught in XYZ classes are indistinguishable from test scores of similar students in mixed classes. Cross-grade and within-class programs, however, usually raise test scores of middle and lower aptitude pupils by between 0.2 and 0.3 standard deviations. The adjustment of curriculum to pupil ability in within-class and cross-grade programs may be the key.

Evidence was less clear on the noncognitive outcomes of grouping programs. One conclusion is that grouping programs usually have only small effects on student self-esteem. The programs certainly do not lead talented students to become self-satisfied and smug, nor do they cause a precipitous drop in the self-esteem of lower aptitude students. If anything, XYZ grouping may have effects in the opposite direction. XYZ programs may cause quick learners to lose a little of their self-assurance, and they may cause slower learners to gain some badly needed self-confidence. The available literature also suggests that grouping programs may have some program-specific effects in noncognitive areas. For example, a few programs of accelerated instruction clearly have an effect on the vocational plans of youngsters; other programs of acceleration have no consistent effect.

These conclusions are obviously different from the well-known conclusions reached by Oakes (1985) in her book *Keeping Track.* According to Oakes, students in the top tracks gain nothing from grouping and other students suffer clear and consistent disadvantages, including loss of academic ground, self-esteem, and ambition. Oakes also believes that tracking is unfair to students because it denies them their right to a common curriculum. She therefore calls for the *de-tracking* of American schools. De-tracked schools would provide the same curriculum for all, and they would not offer special educational opportunities to any on the basis of ability, achievement, or interests.

Oakes's conclusions, however, are based on her own selective and idiosyncratic review of older summaries of the literature and on her uncontrolled classroom observations. Objective analysis of findings from controlled studies provides little support for her speculations. Whereas Oakes believes that grouping programs are unnecessary, ineffective, and unfair, the opposite appears to be true. American education would be harmed by the wholesale elimination of programs that group learners for instruction by ability.

The harm would be relatively small from the simple elimination of XYZ programs in which high, middle, and low classes cover the same basic curriculum. If schools replaced all their XYZ classes with mixed ones, the achievement level of higher aptitude students would fall slightly, but the achievement level of other students would remain about the same. If schools eliminated grouping programs in which all groups follow curricula adjusted to their ability, the damage would be greater, and it would be felt more broadly. Bright, average, and slow students would suffer academically from elimination of such programs. The damage would be greatest, however, if schools, in the name of de-tracking, eliminated enriched and accelerated classes for their brightest learners. The achievement level of such students falls dramatically when

they are required to do routine work at a routine pace. No one can be certain that there would be a way to repair the harm that would be done if schools eliminated all programs of enrichment and acceleration.

Reference

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