HETEROGENEOUS GROUPING

In support of *This We Believe* characteristic:
- High expectations for every member of the learning community

What is Heterogeneous Grouping?

Heterogeneous grouping refers to (a) grouping arrangements in which whole classes of students of varying intellectual ability learn together in one classroom or (b) within-classroom groupings in which students of varying abilities learn together in cooperative learning arrangements. This grouping practice is associated with efforts to assure high academic standards for all students and to allow all students the benefits of access to high-level instructional practices. In contrast to heterogeneous grouping, many middle grades schools group young adolescent students by their ability levels for all or part of the day. Ability grouping (also known as homogeneous grouping or tracking) is based on educators' judgments of students' abilities. When assigning students to tracks, educators examine prior test scores or other performance measures they have administered or that have been provided by educators from other grades or schools. Students are then grouped with others who have been judged to be at a similar ability level for instructional purposes.

Ability grouping has been an extremely controversial practice (Ansalone, 2006; Rubin, 2006) as evidenced by the fact that it "has been the subject of more research studies (well over 500) than almost any other educational practice" (George & Alexander, 2003, p. 414). Proponents of ability grouping (including many parents and teachers) maintain that teachers can more specifically target instruction to meet the needs of students when they are grouped by ability. Opponents maintain that intended gains for students in all tracks too often fail to materialize; that students are too often grouped so that their ability tracks correlate with income, social class, and race; and that identification of students with "low"-ability groups brings about stigmatizing results (Gamoran & Weinstein, 1998; Mallery & Mallery, 1999; Oakes, 1985).

Summary of the Research

Over time, middle grades schools have varied in their use of heterogeneous grouping and ability grouping. While middle grades advocates (e.g., Doda, 2005; George & Alexander, 2003; Mills, 1997) frequently favor heterogeneous grouping, studies of practices in middle grades schools indicate a trend toward more ability grouping. In a nationwide study, McEwin, Dickinson, and Jenkins (2003) reported that 78% of middle schools in 2001 used some degree of ability grouping. This compared to only 68% of schools surveyed in 1993 (McEwin, Dickinson, & Jenkins, 1996). Valentine and his colleagues found that 82% and 85%, respectively, of middle grades schools surveyed used some degree of ability grouping in studies published in 1993 (Valentine, Clark, Irvin, Keefe, & Melton) and 2002 (Valentine, Clark, Hackmann, & Petzko). Interestingly, those middle grades schools that are considered exemplary engage in less tracking than other middle schools (George, 1988).

Gamoran and Weinstein (1998) and Slavin (1990, 1993), in their reviews of research on ability grouping, concluded that few studies yield results favorable to the practice. In 1989, the Carnegie Council on Adolescent Development recommended the elimination of all tracking (ability grouping) in schools serving young adolescents. The effects of tracking are particularly negative for poor, minority, and limited English proficient students (Vang, 2005), with these students often confined to lower tracks that fail to focus on their true learning needs. Further, Catsambis, Mulkey, & Crain (2001) found that when young adolescent students are assigned to high-ability groups in mathematics, the academic self-concept of the males diminishes while that of the females thrives. By contrast, males placed in low-ability mathematics groups actually experienced increased self-concept, at least temporarily.

Ansalone and Biafora (2004) found that teachers continue to support ability grouping (tracking) as a

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result of their managerial concerns about the complexities of teaching students with diverse learning needs. Tracking may make the teacher's work easier, even if it is not the most effective way to serve students. This finding is interesting considering that another study (Yonezawa & Jones, 2006) found that students regarded tracking policies as unjust and inequitable. In response to the negative outcomes of tracking, many schools have begun to implement "detracking" measures (i.e., concentrated efforts to move from ability grouping or tracking to heterogeneous grouping while maintaining appropriately high standards for all students involved). Oakes and Lipton (1992), reflecting on a decade of schools' efforts to detrack, noted that schools must take the issue more seriously than simply moving students from homogeneous to heterogeneous groups:

> Schools that choose to [effectively] undertake detracking … move away rather quickly from an exclusively practical focus. … Instead, they pay considerable attention to the philosophies, values, and beliefs that underlie their tracking practices and that make agreement about alternatives so difficult. … Alternatives to tracking begin to make sense when schools seriously entertain other conceptions of intelligence and learning: when detracking is not merely a response to an abstract sense of fairness but is also a practical way to act on new knowledge about intelligence and learning. (p. 449)

Watanabe (2006) found that teachers must learn how to appropriately initiate dialogue about tracking and detracking: "As any experienced teacher can tell you, 'tracking' and 'detracking' are not the equivalent of 'forward' and 'reverse' on a car" (Rubin & Noguera, 2004, p. 94). Teachers implementing heterogeneous grouping as an alternative to tracking must also be careful not to perpetuate inequalities within their detracked classrooms and, thereby, "retrack" their students within the midst of the apparently heterogeneous group. Because detracking is inherently difficult, some would argue that an alternative solution is to maintain tracking but focus on the assurance of quality of instruction provided to students in the lower tracks. Gamoran and Weinstein (1998) warned, however, that this nobly-intended alternative is inherently flawed. Ability grouping, while addressing instructional differentiation, is powerless to address the unequal distribution of status which led to the choice of ability grouping in the first place.

Gamoran and Weinstein (1998) studied eight middle grades schools that had implemented some form of detracking as part of their school-wide reform and restructuring efforts. Only one of the schools had adopted heterogeneous grouping for all subjects, and, in this school, the instruction was rarely characterized by higher-order thinking. The other seven schools offered at least one high-track class (often algebra), and several had "honors" sections of other classes. In general, the researchers found isolated classrooms in which teachers demonstrated high-quality instruction across all schools, substantiating that detracking in and of itself is of limited value if the school does not also address the overall quality of instruction.

While the Gamoran and Weinstein (1998) study is extremely useful, it is limited in application due to the lack of control group comparisons, a limitation frequently found in the literature (Mulkey, Catsambis, Steelman, & Crain, 2005). In attempting to overcome this limitation, Mulkey and associates examined data from the National Education Longitudinal Survey (NELS:88) for differences in mathematics achievement and self-concept between tracked and untracked eighth grade students. Few of the effects of tracking were positive. Students placed in a higher mathematics track in the eighth grade experienced diminished mathematics self-concept in the tenth and twelfth grades, when compared with those eighth graders in nontracked settings. This trend was particularly problematic for males. Trends in self-concept were, in turn, linked to students' academic choices (e.g., whether to continue to college) and to tenth and twelfth grade mathematics grades. The effects of tracking on lower-performing eighth graders were also problematic, as those eighth graders placed in lower tracks continued to perform most poorly in mathematics in grades 10 and 12. In practically all cases, the data favored those students assigned to untracked settings in eighth grade mathematics.

Research has also addressed the effects of heterogeneous versus ability grouping on students with special needs. Obviously, students with special needs, like other students, need interactions with peers, opportunities to develop higher-level thinking, recognition of their contributions, and equal access to quality instruction. Research on heterogeneous grouping of lower achieving students, including those with special needs, has indicated positive effects on students' academic achievement, self-esteem, and interpersonal relationships (Slavin, 1990; Villa &

Thousand, 2003). Hence, Braddock (1990) advocated for schools to develop flexible criteria that allow students with high commitment, regardless of demonstrated ability, to decide to take more challenging classes. These recommendations are supported by Mulkey and associates (2005), who found positive linkages between students' freedom to make academic choices and their later academic performance. Heterogeneous groupings that include students with special needs may or may not have inclusion provisions (e.g., specific accommodations to assure success of students with special needs, teaming of the exceptional education teacher with the regular classroom teacher). If students with disabilities are to be included, it is important that teachers receive training to work with inclusionary practices that help meet the needs of these students. Otherwise, the academic achievement and behavior of all students in the class may suffer (Daniel & King, 1997). Villa, Thousand, Meyers, and Nevin (1996), in a study of administrators and teachers at schools practicing heterogeneous grouping, found that the participants favored including students with disabilities in general education settings, rather than assigning them to "pullout" programs.

Educators have frequently debated the most effective way to meet the needs of gifted learners in the middle grades. Experts in education for the gifted (e.g., Renzulli & Reis, 1997) have argued for curriculum differentiation and flexible scheduling to allow some ability grouping for young adolescents who are identified as gifted. Other educational experts (e.g., George, 1997) have maintained that gifted learners can be adequately served in heterogeneous middle grades classrooms. This debate is far from being resolved, and more research is needed to look at the performance of middle grades gifted learners taught in varying instructional settings. As Oakes and Lipton (1992) noted, "Many elementary and middle schools have taken the position that well-designed heterogeneous classes can meet the needs of most intellectually gifted students. But many schools also provide special activities for high achievers either within the regular classroom or after school. Most schools report success with this approach—but only after considerable time and work with parents" (p. 451).

Recommendations

While the effects of tracking have long been recognized as detrimental to students, most middle grades schools continue to use ability grouping to some degree. It is recommended that schools work to replace ability grouping with heterogeneous grouping wherever possible. George and Alexander (2003) noted that where full elimination of tracking is not feasible, partial de-tracking may be a viable alternative. For example, tracking can be eliminated in at least some subject areas, or the number of ability groups at a given grade level can be decreased. While a move to more heterogeneous grouping is desirable, detracking of middle grades schools is of little value if there is not a concurrent focus on the quality of instruction in the school. Moving an academically struggling young adolescent from a low-track language arts class to a heterogeneous language arts class featuring mediocre instructional quality does little to meet his or her needs. Decisions about instructional arrangement of students with special needs and those who are gifted should be made with care, based on the needs of the students and the capacity of the school. Providing teachers with appropriate professional development to work effectively with these students is essential.

There is clearly a need for additional research regarding heterogeneous grouping. George and Alexander (2003) have suggested that practitioners and researchers conduct local studies on the effects of tracking. National research findings are often overly impersonal and meaningless to local educators and citizens. It is important that control groups be used as much as possible, as suggested by Mulkey and associates (2005), so that the effects of the heterogeneous grouping arrangements can be comparatively evaluated.

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Gamoran, A., & Weinstein, M. (1998). Differentiation and opportunity in restructured schools. *American Journal of Education, 106*(3), 385–431.

This study examined the responses of 24 highly restructured schools (8 elementary, 8 middle level, and 8 high schools) across the United States regarding the question of how to deal with students of differentiated ability levels. As part of their restructuring efforts, all of the schools had taken some measures to restrict the degree to which they used ability grouping. Schools were studied for one year. Researchers observed classrooms, interviewed participating teachers regarding the influence of school restructuring on their teaching, and reviewed student work samples selected by teachers to reflect higher-order thinking. While findings were fairly consistent across schools at all three levels, the researchers concluded that detracking was more difficult for the middle level and high schools than for the elementary schools. While detracking was accomplished to some degree, only one of the eight middle schools had eliminated it entirely. Further, in both the middle level and the high schools, researchers found only isolated instances of truly high-quality instruction.

Mulkey, L. M., Catsambis, S., Steelman, L. C., & Crain, R. L. (2005). The long-term effects of ability grouping in mathematics: A national investigation. *Social Psychology of Education, 8*, 137–177.

This longitudinal study is perhaps one of the most well-executed and telling pieces of research on the efficacy of whether heterogeneous or ability grouping produces better results for middle level students. The study followed 5,895 students from grade 8 through grade 12 using data from the National Education Longitudinal Survey (NELS:88). Eighth grade students placed in either tracked or untracked mathematics instruction were followed up on several variables: attitudes toward mathematics, school engagement, mathematics self-concept, and mathematics grades. The study yielded a rich data set which almost without exception indicated that eighth graders in untracked mathematics classes fared better than those in tracked settings. Students placed in high-ability tracks in middle school suffered considerable losses in mathematics self-concept that negatively affected their mathematics achievement and their math course taking decisions. Initial drops in self-concept for tracked students continued throughout high school and were correlated strongly with lower mathematics grades in high school.

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This study reviewed results of 29 studies on the effects of ability grouping in secondary (grades 7–12) schools. The effects of ability grouping on achievement were found to be nonexistent or trivial across all studies. Results in 9 of 13 experimental studies and in three studies focused on social studies settings showed a slight advantage to students taught in heterogeneous groups. Only one study showed a small positive effect for high achievers in an ability-grouped setting, and none of the studies found appreciable effects in either direction for average or low achievers. Those studies focused on comparisons between the learning gains of high and low achievers in ability-grouped settings found that students assigned to high tracks substantially outgained those in the low tracks, even when variables such as IQ, socioeconomic status, and pretests were controlled, giving credence to the argument that ability grouped classes tend to stultify the achievement capacity of lower achieving students.

RECOMMENDED PRACTITIONER RESOURCES

Bauer, A. M., & Shea, T. M. (1999). *Inclusion 101: How to teach all learners.* Baltimore, MD: Paul H. Brookes.

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