PSYCHOLOGICAL FOUNDATIONS OF TEACHING AND LEARNING: STUDENT MOTIVATION BY "SECTIONING STUDENTS"

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TOPIC OVERVIEW

The sectioning of students, which is often accomplished by some measure of perceived academic ability or achievement, remains among the most hotly debated and contested topics in American education - just as it has been for nearly a century. Different terminology has been used to describe the sectioning of students. Terms such as clustering, group clustering, ability grouping, and tracking, leveling, and peer tutoring all have connotations and represent variations involving the sectioning of students by some method other than a random distribution.

This paper defines each of the methods used to section students by methods other than random selection, and then examines the issues relating to each method, the history of the various practices, and the beneficial as well as the controversial aspects of each practice. It should be noted that academic research in this area of higher education has led to mixed results and recommendations, sometimes with the same research used in support of both sides of an argument.

Group Clustering

Group Clustering occurs when

> "five to eight identified gifted students, usually those in the top 5% of ability in the grade level population, are clustered in the classroom of one teacher who has training in how to teach exceptionally capable students. The other students in that class are of mixed ability…Cluster grouping of gifted students allows them to learn together, while avoiding permanent grouping arrangements for students of other ability levels."[1]

Group Clustering requires the teacher to have at least the following skills:

- Create conditions in which all students are challenged.

- Provide opportunities to cover new materials faster.
- Being flexible for all students.

The following are identified as advantages of group clustering:

- Allows gifted students to become tutors.
- All students benefit from being exposed to teaching gifted students.
- Gifted students feel more comfortable when their peers are also gifted.
- Teacher can respond to the needs of several gifted students as opposed to just one gifted student.

The following are identified as disadvantages or challenges regarding the group clustering of students:

- Gifted education is seen by some as being "elitist."
- It is difficult or impossible for students to move "up" in the group rankings.
- Lower rankings stigmatize students.

Ability Grouping and Tracking

Although ability grouping and tracking are different, these two terms are often used interchangeably.

Ability grouping is typically based on students' ability in a particular subject, such as English, math, or the sciences. Ability grouping is typically used at the elementary school level[2] and also at the college level.[3]

Tracking is used in high schools and middle schools to group students between classes and offer courses in academic subjects that reflect differences in students' prior learning. In a tracking system, all students are grouped by ability for much of the school day, and students tend to remain in the same track throughout their school experience. Magnet high schools and middle schools would be examples of tracking.

Both practices, although somewhat different in application, still have the ramification of grouping students of similar ability or prior achievement together for instruction.

These concepts have their supporters and their critics. "Tracking has been condemned by such prominent groups as the National Governors' Association, the ACLU, the Children's Defense Fund, the Carnegie Corporation, the College Board, and the NAACP Legal Defense Fund. Professors of Education overwhelmingly deplore it. Yet surveys also show solid support for tracking among parents, teachers, and students. Several states have issued advisories urging the abolition of tracking. Districts across the country have reduced or eliminated its use, often turning otherwise placid communities into hotbeds of controversy."[4]

The following are the often cited disadvantages for using tracking or ability grouping:

- The criteria used to group students are based on subjective perceptions.
- Tracking causes students to take on labels in their own minds as well as in the minds of their teachers. These labels may become self-fulfilling prophesies that create low self-esteem for low performing students.
- There are different expectations for the different groups of students.
- It is difficult for students to "shed" their ranking label and move to a different group.
- Perceived or real psychological damage to low achievers.
- Lack of peer role models for low-level students.
- Perpetrates class and racial inequalities by channeling poor and minority students to low tracks.
- Creates unequal opportunities for academic achievement.
- Tracking is another form of racial segregation.

The following are the advantages that are cited as arising from using tracking or ability grouping:

- Provides low-achieving students with attention and slower work pace and allows high-achieving students to be challenged.
- High ability students do not languish and remain unchallenged in mixed ability classes.
- Allows for appropriate rapid and advanced instruction that matches the ability of the students.
- High achievers benefit from having to compete with one another, and the low-achievers benefit from not having to compete with the high-achieving peers.
- Provides more individual attention, repetition and review for low-achievers.

An interesting observation was made by one e-mailer who wrote the following regarding tracking or ability grouping:

> "I teach in a school which does not "track" and I think I have learned how to deal

> with the problem of wildly varying skill and background levels in the same classroom. I find myself wondering though why it's OK for MIT, Yale, and Harvard to define their student bodies by academic performance and test predicted capabilities but it isn't OK for a public school to do the same. Why does a student have the "right" to be challenged by the surroundings of a selective public university but not selectivity through the preparatory process?"[5]

Peer and Cross-Age Tutoring

Peer and Cross-Age tutoring refers to one student instructing another student on materials where one is an expert and the other is a novice. Cross-age tutoring occurs when the tutor is older than the student he/she is tutoring.

Tutoring programs are also known as "peer teaching," "peer education," "partner learning," "peer learning," "learning through teaching," and "cooperative learning."[6]

The benefits of peer tutoring are:

- The learning of academic skills.
- The development of social behavior.
- Enhancement of peer relations.
- Students learn to share, help, comfort, and empathize with others.

Many universities have not only embraced and adopted peer tutoring, but have also formalized the tutoring program.[7] The professional literature is generally silent as to disadvantages relating to peer tutoring.

[1] "Cluster Grouping of Gifted Students: How to Provide Full-Time Services on a Part-Time Budget," by Susan Winebrennen and Barbara Devlin, www.kidsource.com.

[2] Students are organized into groups within each school class with instruction targeted to each group's level. For example, the "redbirds" or the "bluebirds" reading group. When I was in elementary school our groups were labeled the "rabbits" and the "turtles." Of course, those descriptions left little doubt as to which group was the fast learners and which group was the slow learners.

[3] Remedial courses typically offer no credit, while college credit is awarded for "regular" or "advanced" courses.

[4] As reported by Tom Lovelace at footnote one in his report, "The Tracking and Ability Grouping Debate." "The list of groups condemning tracking comes from a foreward written by Jeannie Oakes to the book by Anne Wheelock, *Crossing the Tracks: How Untracking Can Save America's Schools* (New York: The New Press, 1992), p.xi. Several studies conducted by the Public Agenda Foundation report sentiments on tracking and heterogeneous grouping. When professors of education were asked whether they'd like to see more or less mixed ability grouping in K-12 classrooms, 50% said more, 15% said less; in Steve Farkas and Jean Johnson, 1997, *Different Drummers: How Teachers of Teachers View Public Education*, (New York: Public Agenda Foundation, 1997), p.32. Only 34% of the public and 40% of teachers believe heterogeneous grouping will improve education; in S. Farkas and J. Johnson, 1996, *Given the Circumstances: Teachers Talk about Public Education Today* (New York: Public Agenda Foundation, 1996), p. 41. Parental opposition to heterogeneous grouping is reported in *First Things First: What Americans Expect from the Public Schools* (New York: Public Agenda Foundation, 1994). High School students' support for more ability grouping is reported in *Getting by: What American Teenagers Really Think About Their Schools* (New York: Public Agenda Foundation, 1997). A survey conducted during the Howard County, MD controversy found that two-thirds of middle school teachers, three-fourths of students, and almost three-fourths of parents thought students learn better with classmates of similar ability. See Katherine Shaver, "Middle Schools Wrestle with Complaints About Levels of Learning," *Washington Post* (9/4/97), P. M1."

[5] www.middleweb.com/TchTalkTrack.html

[6] www.nwrel.org

[7] For example, see www.educ.uidaho.edu/bestpractices/peer_works.html

ANNOTATED BIBLIOGRAPHY

Century, J. R. (1994). "Making Sense of the Literature on Equity in Education. Draft One." Newton, MA: Educational Development Center, Inc., Statewide Systemic Initiative Equity Leadership Institute.

This scholarly work cites evidence and studies that a disproportionate number of minority and low-income students are placed in low-ability groups and tracks. This work also cites other work of both advocates and opponents of ability grouping that show the importance of enabling gifted students to work together for sustained periods of time. Also, "some researchers suggest that while tracking and ability grouping clearly should be reexamined – especially for students in low-end tracks or groups – any reforms that result should not necessarily affect individual gifted and special education programs."

Greenwood, C. R. "Classwide Peer Tutoring: Longitudinal Effects on the Reading, Language, and Mathematics Achievement of At-Risk Students," Reading, Writing and Learning Disabilities (1991) 105-123.

This work "describes how Classwide Peer Tutoring ("CWPT") puts effective instructional variables into practice and how it improves academic achievement. The effective instructional variables CWPT utilizes are: engaged time, time management success rate or successful completion of tasks, academic learning time, monitoring, structuring and questioning. Reports findings that CWPT, when systematically applied to oral reading, spelling and arithmetic facts, increased students' performance on standardized measures of reading, language and mathematics. The work also discusses two CWPT drawbacks: first, that most of the evidence of its effectiveness is in the realm of acquisition of rote skills and second, that the content for tutoring sessions must be developed or adapted by the teacher."

Hoffer, T. B. (1992) "Middle School Ability Grouping and Student Achievement in Science and Mathematics," Education and Evaluation and Policy Analysis. 205-227.

Hoffer researched ability grouping at the middle school level to determine if ability grouping acts as a "sorting event" that has long-term consequences. Hoffer used mathematics class enrollment in middle school to determine how that enrollment effected students' decisions regarding high school math classes. "Hoffer found that the main effects of ability level and ability grouping were significant; they also significantly interacted in affecting student performance. Hoffer found no positive long-term effects for low-ability students who were placed in low-grouped mathematics classes. In fact, when compared to low-ability students in non-grouped classrooms, those placed in low-grouped classrooms appeared to fare worse."

Kulik, James, A. and Chen-Lin, Handbook of Gifted Education (1997, 2nd Edition); "Ability Grouping," Allyn and Bacon.

As the title of the book suggests, this chapter of the book notes the strongest case and provides comprehensive arguments in support of ability grouping. Ability grouping increases the academic achievements of gifted students and gifted students who are not exposed to ability grouping are at risk for possible social and emotional risks. Also, the authors find that ability grouping does not hurt the self-esteem of gifted students, nor does it hurt average or below average ability students. Regarding ability grouping, the author notes "the damage would be truly profound if…school eliminated enriched and accelerated classes for their brightest learners. The achievement level of such students would fall dramatically if they were required to move at the common pace. No one can be certain that there would be a way to repair the harm that would be done."

Loveless, T. (1999) The Tracking Wars: State Reform Meets School Policy, Brookings Institution Press.

"This book examines the reactions of schools in Massachusetts and California to policies that sought to persuade schools to abandon or reduce tracking—the practice of grouping students into classes by ability and organizing curriculum by level of difficulty. The text is divided into 8 chapters: (1) "Implementing Tracking Reform," which sets forth the book's purpose and introduces the remaining chapters; (2) "The Origins of Tracking Reform," analyzes agenda setting and antitracking policies; (3) "The Schools Respond," discusses why some schools track and other detrack; (4) "Influences on tracking Policy," compares tracked and untracked schools and discusses the influences on tracking policy, institutional characteristics of schools, the technical challenge of heterogeneity, and the organizational characteristics of schools; (5) "Governing Reform," describes educational governance in California and Massachusetts, the states' role in tracking policy, and the source of tracking policy; (6) "Tracking and Subject Area," details subject area subsystems, tracking in English and math, middle-school subjects as part of a discipline, and a math department rebellion; (7) "The Classroom, the Teacher, and Tracking Reform," discusses alternative instructional strategies and different philosophies; and (8) "The Fate of Reform," provides insights on the reform of tracking and casts doubt on prevailing explanations."

Oakes, J., with Ormseth, T., Bell, R., and Camp, P. (1990, July) "Multiplying Inequalities: The Effects of Race, Social Class, and Tracking Opportunities to Learn Mathematics and Science." Santa Monica, CA: RAND Corporation.

These authors made the following important findings regarding the effects of race, social class and tracking learning mathematics and sciences: "During the elementary grades, the science and mathematics experiences of children from low-income families, African-American and Hispanic children, children who attend school in central cities, and children who have been clustered in 'low-ability classes' differ in small but important ways from those of their more advantaged and white peers. By the time the studies reach secondary school, their science and mathematics experiences are strikingly different." The authors also argued that all students, and especially at risk students, must be given full access to the knowledge society considers "high status" if choices for their future are to be ensured.

Roe, M. F. and Rodebaugh, M. (1993) "One Middle School's Elimination of Homogenous Grouping: A Quantitative Study." Research in Middle Level Education, 47-62.

"Roe and Radebaugh examined one middle school's elimination of tracking in mathematics, English, and reading classes. They found that shared decision making is important to a successful transition from tracking to de-tracking and that the teachers felt that heterogeneous grouping improved classroom culture. After the elimination of tracking, teachers reported positive social benefits, positive behavioral implications, and less parental competition. The teachers also felt that de-tracking had academic benefits due to the social nature of learning and the strong influence of the adolescent's peer group."

Slavin, R. E. (1987, Summer) "Ability Grouping and Its Alternatives: Must We Track?" American Education, 32-48.

Slavin is often cited for providing research that suggest other alternatives to traditional tracking. Specifically, "cooperative learning groups, in combination with preventative tutoring and within-class grouping, have been shown to result in higher achievement, little or no psychological harm, and less segregation."

Slavin, R. E. (1993) "Ability Grouping in Middle Grades: Achievement Effects and Alternatives," Elementary School Journal, 535-552.

Slavin's review summarized his and others' research regarding the achievement effects of ability grouping in middle grades and other approaches used to accommodate student diversity. He advocates that "if the effects of ability grouping on student achievement are zero, then there is little reason to maintain the practice."

Spear, R. C. (1994). "Teacher Perception of Ability Grouping Practices in Middle Level Schools," Research in Middle level Education, 117-130.

This is a quantitative study, teachers thinking and views of ability grouping. Spear found that teachers who want to retain ability grouping are more "subject centered"

than those teachers who want to eliminate ability grouping. Those teachers who want to eliminate ability grouping are more "student centered" than those teachers who want to maintain ability grouping. Spear also found that teachers believe that teaching is easier in ability grouped classes.

Wheldall, K., and Colmar, S. "Peer Tutoring for Low-Progress Readers Using 'Pause, Prompt and Praise'." In Children Helping Children, edited by H. C. Foot, M. J. Morgan, and R. H. Shute. New York: John Wiley and Sons, 1990, 117-134.

The authors "argue for using peers for reading tutoring because (1) parents may not always be available or appropriate tutors; 2) peer tutors are plentiful, available for training and can be readily monitored and organized; (3) low-progress readers respond readily to peer tutors; and (4) tutoring is beneficial to tutors and increases their caring for others. They describe original study and four replication studies of 'Pause, Prompt and Praise' method, and concludes that peers can learn to use the method's procedures quickly and easily, tutors can gain reading skill from using it, and low-progress readers gain a great deal by being tutored with it. Average or better readers, meanwhile, do just as well if they simply have someone hear them read regularly. Finally, this work emphasizes the importance of teacher training in the method" of peer tutoring.

ADDITIONAL RESOURCES

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Tammi, L. (1990, February 14). Programs for the gifted are not "elitist," Education Week, 44.