

Ability Grouping Research Sources

“Expecting all children the same age to learn from the same materials is like expecting all children the same age to wear the same size clothing.” - Madeline Hunter

Meta-analyses of ability grouping research:

In 1919, Detroit implemented an XYZ grouping of students based on IQ test results. Although separated for single subjects by IQ, the groups received the same curriculum and instruction. Ninety-eight research studies were done on these students. Slavin (1987, 1991) reported meta-analysis on 47 and Kulik and Kulik (1982) reported meta-analysis on 51. Both reached the conclusion that grouping without differentiation of instruction had no benefit for student learning.

Slavin, R. (1987). “Ability grouping and student achievement in elementary schools: A best-evidence synthesis.” *Review of Educational Research*, 57, 293-336.

Slavin, R. (1991). “Synthesis of research on cooperative learning.” *Educational Leadership*, 47 (4), 3.

Kulik, J.A., & Kulik, C.-L. C. (1982). “Effects of ability grouping on secondary school students: A meta-analysis of evaluation findings.” *American Educational Research Journal*, 19, 415-428.

Kulik, J.A., & Kulik, C.C. (1992). “Meta-analytic findings on grouping programs.” *Gifted Child Quarterly*, 36(2), 73-77. ©1992 National Association of Gifted Children.
*Abstract - Meta-analytic reviews have focused on five distinct instructional programs that separate students by ability: multilevel classes, cross-grade programs, within-class grouping, enriched classes for the gifted and talented, and accelerated classes. The reviews show that effects are a function of program type. Multilevel classes, which entail only minor adjustment of course content for ability groups, usually have little or no effect on student achievement. **Programs that entail more substantial adjustment of curriculum to ability, such as cross-grade and within-class programs, produce clear positive effects. Programs of enrichment and acceleration, which usually involve the greatest amount of curricular adjustment, have the largest effects on student learning. These results do not support recent claims that no one benefits from grouping or that students in the lower groups are harmed academically and emotionally by grouping.***

Kulik, J. A., “An analysis of the research on ability grouping: Historical and contemporary perspectives.” Storrs, (CT: National Research Center on the Gifted and Talented, 1992).

Abstract - Meta-analytic reviews have shown that the effects of grouping programs depend on their features. Programs that entail only minor adjustment of

course content for ability groups usually have little or no effect on student achievement. In some grouping programs, for example, school administrators group students by test scores and school records and then expect all groups to follow the same basic curriculum. Under this approach, pupils in middle and lower programs learn the same amount as equivalent students do in mixed classes, while students in the top classes outperform equivalent pupils from mixed classes by about 1 month on a grade-equivalent scale. Self-esteem of lower aptitude students rises slightly and self-esteem of higher aptitude students drops slightly. Grouping programs that entail more substantial adjustment of curriculum to ability have clear positive effects on children. In cross-grade and within-class programs that provide both grouping and curricular adjustment, pupils outperform equivalent control students from mixed-ability classes by 2 to 3 months on a grade-equivalent scale. Programs of enrichment and acceleration, which usually involve the greatest amount of curricular adjustment, have the largest effects on student learning, with talented students from accelerated classes outperforming nonaccelerates of the same age and intelligence quotient by almost 1 full year on achievement tests. Talented students from enriched classes outperform initially equivalent students from conventional classes by 4 to 5 months on grade equivalent scales. (Contains over 200 references.)

Tieso, Carol L., "The Effects of Grouping and Curricular Practices on Intermediate Students' Math Achievement" Roeper Review, Vol. 26, 2004 (No abstract available.)

Success For all is a reading program where elementary students are grouped by ability across grade levels. It was modeled after an earlier ability-grouping plan from Joplin, Missouri. Slavin and Madden (2000) reported more than 200 comparisons using Success For All and control groups in grades 1-5. Effect sizes averaged around 0.5 standard deviations. **Effects were strongest for students in the lowest 25% students. Effects were still present in middle school follow-up studies.** (Source – Todd Kettler, Coppell ISD presentation to TAGT Conference, November 14, 2008.)

Within-Class Grouping (often seen as cluster groups or literacy groups)

The practice of regrouping students by subject with different textbooks at different levels, has been studied by Kulik and Kulik (1984a, 1984b, 1987, 1990, 1992) and Kulik (1992a, 1992b) and **Slavin** (1987, 1991). The meta-analysis concluded that there were positive effects for all ability groups (low, middle and high) averaging 0.25 standard deviations. This has also been reported as gains of about 1.2 years of a school year.

The positive effects of cluster groups were also proven against control groups. Gentry, M. & Owen, S. (1999). "An Investigation of the Effects of Total School Flexible Cluster Grouping on Identification, Achievement, and Classroom Practices." *Gifted Child Quarterly*, 43 (4), 224-242.

Ability Grouping Combined with Acceleration: Proven With Control Groups

The Kulik 2003 meta-analysis of experimental model research showed that in all 23 cases of ability grouping combined with accelerated curriculum yielded greater performance in the experimental group students than control group students.

Separate GT Classes Provide the Most Significant Positive Effects

Goldring, E. B. (1990). Assessing the status of information on classroom organizational frameworks for gifted students. *Journal of Educational Research*, 83, 313-326

Van Tassel-Baska, J. Willis, G. B., & Meyer, D. (1989). "Evaluation of a full-time self-contained class for gifted students." *Gifted Child Quarterly*, 33, 7-10.

GT Pullout Programs have Significant Positive effects on Achievement, Critical Thinking, Creativity, Writing, Attitudes about School and Self

Vaughn, V. L., Feldhusen, J. F., & Asher, J. W. (1991). "Meta-analysis and review of research on pull-out programs in gifted education." *Gifted Child Quarterly*, 35, 92-98.

Stoddard, E. P., & Renzulli, J. S. (1983). "Improving the writing skills of talent pool students" *Gifted Child Quarterly*, 27, 21-27.

Shields, C. M. (2002). "A comparison study of student attitudes and perceptions in homogeneous and heterogeneous classrooms." *Roeper Review*, 24, 115-120.

GT Pullout Programs, Separate Classes and Special Schools Provide Greater Gains than Within-class Ability Groupings Without Harmful Effects on Non-gifted Peers.

"Policy makers should know that students from within-class grouping arrangements received the lowest scores in all areas of achievement when compared with their gifted peers who participated in either special school, separate classes, or pullout programs." (p.377)

Delcourt, M. A. B., Cornell, D. G., Goldberg, M. D. (2007). "Cognitive and affective learning outcomes of gifted elementary school students." *Gifted Child Quarterly*, 51, 359-381.

Ability Grouping has Positive Cognitive and Affective Results

Fiedler-Brand, E., Lange, R. E., & Winebrenner, S., "Tracking, ability grouping and the gifted." (Norristown, PA: Pennsylvania Association for Gifted Education, 1992). Available online at: <http://www.penngifted.org/tracking.cfm>

Ability Grouping has Positive Effects on Motivation and Achievement

Feldhusen, John F. and Moon, Sidney M., "Grouping Gifted Students: Issues and Concerns" *Gifted Child Quarterly*, Jan 1992; vol. 36: pp. 63 - 67.

Abstract - Gifted and talented students need instruction at a level and pace as well as conceptual complexity commensurate with their advanced levels of ability and achievement. Grouping heterogeneously and providing cooperative learning in heterogeneous groups leads to lowered achievement and motivation

as well as poorer attitudes toward school. Academic achievement of American youth is lower than the achievement of youth in many Asian and European countries. If we wish to sustain or increase the academic achievement of American youth they should be grouped for instruction according to ability and achievement levels, but grouping practices should be flexible, and rigid tracking should be avoided.

Ability Grouping has Positive Effects on Affective Dimensions

Shields, C.M., "A comparison study of student attitudes and perceptions in homogeneous and heterogeneous classrooms." *Roeper Review*, Vol. 17 (4) (1995), 234-238.

Ability Grouping has Positive Effects on Math and Science Achievement

Ireson, J., Hallam, S. & Hurley, C., "What are the effects of ability grouping on GCSE attainment?" *British Educational Research Journal*, Vol. 31 (2005), pp.443-458.

Ability Grouping is Considered a Best Practice

Robinson, A., Shore, B. M., & Enersen, D. L. (2006). *Best practices in gifted education: An evidence-based guide*. Waco, TX: Prufrock Press

Curriculum Model Analysis Reveals Best Practices

From: *Gifted Child Quarterly*, Special Issue "Best Practices in Gifted Education," v51 n4 2007.

VanTassel-Baska, Joyce and Brown, Elissa F. state, "Best practice, then, would be to group gifted students instructionally by subject area for advanced curriculum work that could be flexibly organized and implemented based on students' documented levels of learning within the subject area." (p. 351)

In "Toward Best Practice: An Analysis of the Efficacy of Curriculum Models in Gifted Education" (*Gifted Child Quarterly*, p342-358, 2007), Karen B. Rogers provides 5 lessons:

1. Gifted and talented learners need daily challenge in their specific areas of talent.
2. Opportunities Should Be Provided on a Regular Basis for Gifted Learners to Be Unique and to Work Independently in Their Areas of Passion and Talent
3. Provide Various Forms of Subject-Based and Grade-Based Acceleration to Gifted Learners as Their Educational Needs Require
4. Provide Opportunities for Gifted Learners to Socialize and to Learn With Like-Ability Peers
5. For Specific Curriculum Areas, Instructional Delivery Must Be Differentiated in Pace, Amount of Review and Practice, and Organization of Content Presentation

According to Rogers' research, peer tutoring fails both the gifted student and their peer.

The Reality of Differentiation in Heterogeneous Groupings is Challenged

Research has shown that teachers of mixed-ability classrooms rarely deliver different instruction and content to gifted learners. Tiered assignments effectively require two lesson plans. Gifted students often spend time doing work they have already mastered without ability grouping. In a 9-month study, students in $\frac{3}{4}$ of the heterogeneous classrooms studied received no challenging reading material or advanced instruction. Peer-reviewed research demonstrating that differentiation is really being delivered is rare or non-existent, so how can effectiveness be demonstrated?

(Archambault, F. X. et al., 1993; Westberg, K. L. et al., 1993; U.S. Department of Education, 1993; Gallagher, 1997, p. 157)

Westberg, K. L., Kulikowich, J., Caillard, F., Hébert, T., Plucker, J. (1993). "Why not let high ability students start school in January? The curriculum compacting study." (Research Monograph No. 93106). Storrs: The National Research Center on the Gifted and Talented, University of Connecticut.

Reis, S. M., Gubbins, E. J., Briggs, C. J., Schreiber, F. J., Richards, S., Jacobs, J. K., Eckert, R. D., & Renzulli, J. S. (2004). "Reading instruction for talented readers: Case studies documenting few opportunities for continuous progress." *Gifted Child Quarterly*, 48, 315-338.

This research summary is an elaboration of sources cited by Todd Kettler of Coppell ISD in his presentation of "Ability Grouping: Research on Special Classes and Gifted Clusters" to the Texas Association For Gifted and Talented Professional Development Conference, November 14, 2008.

NEW: As of 12/2/08, you can access a free 25-minute summary interview of the above-referenced Todd Kettler on the topic of ability grouping. He explains ability grouping in layman's terms, summarizes what we know from research and addresses some of the current trends and hurdles in implementation. To listen to the podcast, go to the iTunes store and search for Prufrock in the podcast category, or visit Prufrock's blog at: <http://resources.prufrock.com/tabid/56/Default.aspx>