Warren G. Findley was professor of education and psychology at the University of Georgia from 1961 to 1974 and is now at the University of Alabama in Birmingham. From 1965 to 1968, he was also director of the Research and Development Center in Educational Stimulation there.

He has served as national president of the Division of Educational Psychology of the American Psychological Association, the National Council on Measurement in Education, and the Association on Measurement and Evaluation in Guidance. He is a member of Phi Beta Kappa, Phi Delta Kappa, Kappa Delta Pi, and Psi Chi.

Miriam Bryan, a graduate of Bridgewater (Massachusetts) State College and Boston University, was a teacher of English before beginning her editorial career. She has served in an editorial capacity with the Cooperative Test Service of the American Council on Education, the Iowa Testing Programs, Silver Burdett Company, Reader’s Digest Educational Services, Psychological Corporation, and the Mental Measurement Yearbooks. She was editor for Pi Lambda Theta until April, 1975.

Series editor, Donald W. Robinson
THE PROS AND CONS OF ABILITY GROUPING

By Warren G. Findley and Miriam M. Bryan

This manuscript and two others in this set were provided by Pi Lambda Theta, an honor and professional association in education.

Library of Congress Catalog Card Number: 75-19963
ISBN Number: 0-87367-066-3
Copyright © 1975 by The Phi Delta Kappa Educational Foundation
Bloomington, Indiana
TABLE OF CONTENTS

Ability Grouping: Helpful or Harmful? ........................................... 5
Preliminary Statements ..................................................................... 9
Conclusions ...................................................................................... 11
Recommendations ............................................................................ 27
References ....................................................................................... 29
ABILITY GROUPING: HELPFUL OR HARMFUL?

Ability grouping, the organization of classroom groups in the same grade or subject by putting together those most nearly equal in estimated learning ability, has been recommended, tried, debated, discarded, revived, and debated again. In an effort to clarify the effects of this practice in today’s schools, a task force was commissioned and funded by the U.S. Office of Education in late 1969 with the senior author as principal investigator and the junior author as principal associate in assembling and editing information to be gleaned from published studies and responses to questionnaires about current practices.

It will surprise some, but not others, that little systematic research preceded or accompanied the adoption and substantial use of this fundamental departure in organizing classes. The investigators therefore undertook, with the guidance and assistance of a distinguished panel, to synthesize as best they could the reports of largely ad hoc analyses and the data from a few well-designed studies into a cogent interpretation of ability grouping’s status and impact over the fifty years from 1920 to 1970. To this was added a similar synthesis of mutually compatible elements of alternative approaches to ability grouping as ways of organizing and conducting instruction in classes.

To bring this report current involved little new material since, again, the practice has continued without serious reexamination for reasons most insightfully presented by Jane Mercer. As she argues, use of intelligence testing to separate children of lower “ability” from those of higher “ability” tends to maintain and enhance differential advantages of those from the Anglo-American mainstream and further serves to “explain” the con-
tinuing lower scholastic achievement of minority group children. Use of achievement testing and/or teachers' frequently class-stereotyped judgments to form "ability" groups serves these same latent functions. All this is said by way of preliminary explanation of a continuing practice that has been evaluated quite as unfavorably as we have by designated contributors to each of the four editions of AERA's Encyclopedia of Educational Research and, most recently, by Ralph Tyler in his shorter summary.

Ability grouping was introduced in the 1920s and revived in the 1950s on the basis of overgeneralization from experience with instructing children in groups with similar learning needs. It is clearly more efficient to subgroup children in a classroom with particular learning needs, as in achieving mastery of number combinations in addition, or at particular stages, in mastering a complex system of related skills, as in learning to read for comprehension. It is an overgeneralization to argue from this that whole classrooms of thirty or so children who have attained similar scores on a general measure of "mental ability" or on an achievement test battery can be more effectively stimulated than a more diverse group with whom they stay together all day every day for a school year or longer. There are many variations on this "total" ability grouping approach to be mentioned and discussed, but it remains true that they were adopted first by inference in the 1920s; were discredited by failure to produce hoped for results in the 1930s and 1940s; then revived in the 1950s when "all the children of all the people" tended to go on through high school and the term "dropout" was coined to describe failure to continue. Thus, ignoring the findings of earlier studies and relying on the original logic, now in the 1970s a practice continues without systematic justification and, indeed, with a few notable studies to point the way to a tenable synthesis of what happens when ability grouping is used.

Part of the problem of determining whether or how well ability grouping works lies in defining what will be considered acceptable or unacceptable effects. One criterion might be whether on the average for all children, ability grouping produces more favorable results than other practices. Another consideration could be whether for children in the different ability groups the practice is equally effective, e.g., do the high and low groups gain while
the middle group does about as well as under more conventional practices? Judgments based on this second criterion rest upon not only one's general philosophy of democracy in education, but also one's considered opinion of what is required in the United States in the 1970s to serve our several pluralistic groups as we contemplate continuation of this country as a world leader and as a provider for the needs of the nation. Can we accept a solution by which the intellectually "rich get richer and the poor get poorer" in fulfillment of a gloomy prediction of an "inevitability"? Or must the approach at least provide for gains at the low ability levels?

So much by way of preface to analysis of the uncoordinated research on the impact of ability grouping. It is most important to bear these considerations in mind because ability grouping has differential impacts on identifiably different categories of school children rather than a uniform or random impact on all.

The numbered conclusions below constitute a sequential series of statements, followed by supporting detail. If these statements are read in sequence, with or without reference to the supporting detail, they form a logical argument or brief in support of the recommendations that follow. A few preliminary statements will make the conclusions clearer.
PRELIMINARY STATEMENTS

A. As used here, ability grouping is the practice of organizing classroom groups in a graded school to put together children of a given age and grade who have most nearly the same standing on measures or judgments of learning achievement or capability.

B. Grouping and regrouping within a classroom for instruction in particular subjects is an accepted and commended instructional practice. It is not to be considered ability grouping in the sense in which that term is used here.

C. Ability grouping may be based on a single test, on teacher judgment, or on a composite of several tests and/or judgments.

D. Ability grouping in a school district may take one of several forms, but chiefly one of four varieties:

1. Ability grouping of children in all school activities on the same basis

2. Ability grouping for all learning of basic skills and knowledge on the same basis, but association with the generality of children of the same age in physical education and recreation

3. Ability grouping for learning of basic academic skills and knowledge on the same basis, but association with the generality of children of the same grade in less academic activities, including physical education, art, music, and dramatics

4. Ability grouping for learning of individual subjects or related subjects on different bases related to progress in mastering different areas (for example, language arts vs. mathematics), but association with the generality of children of the same grade in nonacademic areas. This
has sometimes been referred to as "achievement grouping."

E. Ability grouping in the first grades, usually the first six or eight grades, is generally by assignment to single classroom teachers for instruction in most subjects.

F. Ability grouping in the last grades, usually in junior and and senior high school, is generally by assignment within programs of study (college preparatory, commercial, vocational, general).

G. At high school, assignment to a curriculum or program of study may be made a part of a total ability grouping program. On the other hand, ability grouping is often accomplished to a degree by a process of self-selection in which individual students choose their programs of study freely or with some regard to prerequisites. In essential respects, the difference between the two methods is analogous to the distinction between de jure and de facto segregation.

H. Ability grouping practices differ in the degree to which reclassification or reassignment is provided for. Practices vary from virtually no review to systematic review at specified intervals of years or more often.

I. Ability grouping may be limited to provision for extreme groups.

J. Special education for mentally retarded children is to be distinguished from general ability grouping, but needs to be considered a special case subject to examination and report here. Indeed, since Lloyd Dunn’s 1968 presidential address to the Council for Exceptional Children, the argument for treatment of educable mentally retarded children parallels so closely the proposals for teaching those with lowest achievement in regular classes that they are indistinguishable. Court testimony regarding placement and instruction of mentally retarded children has followed the same lines presented here for low-achieving children generally.

K. Provision of advanced subjects for limited numbers of superior students is to be distinguished from ability grouping applied to all students of a grade group, but needs to be considered a special case. Such provisions serve to reconcile the general recommendations for heterogeneous contacts with legitimate aspirations for advanced specialization.
CONCLUSIONS

We turn now to the conclusions, set in sequence to indicate first the extent and acceptance of ability grouping in the schools, next its effects on achievement and affective development of schoolchildren, then its effects in producing ethnic and socioeconomic separation with corollary effects on achievement and affective development of schoolchildren from low socioeconomic backgrounds and minority groups. Beginning with number twenty-six, conclusions are devoted to delineating ways in which alternative practices, singly and in combination, may be used to achieve the improved schooling originally sought via ability grouping.

1. Ability grouping is widely practiced in American school systems. Our own survey and the 1968 HEW survey agree in indicating that about 77 percent of school districts use ability grouping in some measure at some grade levels. The replies to the NEA survey indicating intentions to add or increase ability grouping may be taken to indicate that the practice has not abated, but no new data are available to indicate anything exact.

2. Ability grouping is especially characteristic of larger school systems. The larger the school district, the more likely it is that grouping will be practiced on a systemwide basis. Forty-six percent of school systems with enrollments of 100,000 or more reported systemwide use of ability grouping.

3. Ability grouping is more common in higher grades than in earlier grades. Of the school districts reporting in 1970 the use of ability grouping at one or more grade levels, those specifying particular grades involved in the practice reported use in the secondary grades (7-12) twice as frequently as in the elementary
grades. And 53 percent of those who used grouping at any grade level continued the practice through grade 12.

4. Ability grouping is widely approved by school teachers and administrators. A 1962 NEA study found 57 percent of elementary school teachers and 87 percent of secondary school teachers approving ability grouping. A variety of sources show a considerable number of school administrators similarly favoring ability grouping.

5. Although unqualified approval of ability grouping is widespread among teachers, disproportionate numbers express preference for teaching mixed, average, or superior classroom groups over teaching lower achieving groups. In the 1962 study quoted above, barely 3 percent of the teachers queried expressed preference for teaching low-ability groups, while 87 percent preferred teaching average, high, or heterogeneous classes; 10% expressed no preference.

6. Homogeneous grouping by ability across the subjects of the school curriculum is impossible. Groups homogeneous in one field or subfield will prove heterogeneous in other fields. Thus, children grouped by reading score or "intelligence" will overlap considerably in mathematics achievement. In an ordinary seventh grade, barely half the students would be in the same third of the group in reading and arithmetic, while 5 percent would be in the top third in one and the bottom third in the other. Homogeneous grouping implies that children are "homogenized" in ability, as they are not.

7. Substantial educational research on streaming (homogeneous grouping) in England’s schools indicates that the most detrimental effect is caused by assigning “prostreaming” teachers to “nonstreamed” classes. The generalization also applies to American schools. So-called prostreaming teachers use teaching methods and show attitudes toward school children reflecting the “knowledge-centered” pattern found in streamed schools rather than the more “child-centered” pattern found in most nonstreamed schools. The high achievement easily earned by those from favored backgrounds is overpraised while the lesser achievement accomplished by disadvantaged children receives at best “benign neglect,” at worst invidious comparison. The effect is most noticeable in the poor self-concepts of average and lower
ability students, but this spreads to effort and achievement; in some "knowledge-centered" classes, this leads to friendless isolates among low achievers and is an invitation to these children to drop out early.

8. Socioeconomic and social class differences are increased by streaming, reduced by nonstreaming. Data from court cases as well as school surveys show high-socioeconomic groups and mainstream ethnic groups overrepresented in high-ability groups or tracks, while low-socioeconomic groups and most ethnic minorities are overrepresented in low-ability groups or tracks. In one school system where class placement into seven classes was based on tests, the top sections in all subjects varied from 33-1 white to 26-5 white while the bottom sections varied from 26-1 black to 20-5 black. Similar effects are found with respect to socioeconomic separation. (See #13 below.)

9. Virtually all ability grouping plans depend on tests of aptitude or achievement as an integral feature. Tests are used by about 82 percent of the schools that practice grouping, but only about 13 percent among these rely on test scores alone.

10. Ability grouping, as practiced, produces conflicting evidence of usefulness in promoting improved scholastic achievement in superior groups, and almost uniformly unfavorable evidence for promoting scholastic achievement in average- or low-achieving groups. Put another way, some studies offer positive evidence of effectiveness of ability grouping in promoting scholastic achievement in high-achieving groups; studies seldom show improved achievement in average- or low-achieving groups.

It may be well to add at this point a note on the difference between the effects of ability grouping when first used between 1920 and 1940 and the effects noted more recently, since 1955. In the early studies, with the prevailing emphasis on drill to bring as many as possible up to a uniform standard, ability grouping had its most favorable effect on the low-ability groups. High-ability groups were recognized as capable of attaining typical grade standards on their own with little help, so were left sometimes to acquire inefficient habits while teaching effort was concentrated on the laggards in their less competitive groups. By the time Sputnik in 1957 made the United States aware that we could no longer assume we were No. 1 in everything technolog-
ical, two important changes had occurred in the educational scene: 1) We had become convinced that able students could progress farther and faster than the easy common pace so that they might do more if stimulated and helped to do so; 2) at the same time, equal educational opportunity for “all the children of all the people” promulgated by the Educational Policies Commission in 1944 was in process of being realized at a rapidly increasing pace, soon to be considerably facilitated in the 1960s, so that already a far greater diversity of backgrounds and interests were to be found in the school population. As a consequence, administrators reached out for a mechanism to sort out the children, speed some ahead to be our aristocracy of science, while others went about their business of mastering more fundamental skills.

Two other studies showed more progress by ability grouped high achievers than by those kept in heterogeneous groups. But the results for the low achievers ran in the opposite direction at least as much if not more. Data from a four-level ability grouping program in a small Southern school district was even more clearcut. It was possible to relate the mean achievement of three classes of children on eight tests of a well-standardized test battery over periods of one or two years. A group was said to have made better than expected progress on a test if the percentile equivalent on the national norms of the mean at the higher grade was two or more points higher than the percentile equivalent of the mean at the lower grade had been for that grade; likewise, a group was judged to have made less than expected progress if the percentile equivalent of the mean on the national norms at the higher grade was two or more points lower than the percentile equivalent of the mean at the lower grade had been for that grade. The table below gives the results for the 24 comparisons at each ability level.

<table>
<thead>
<tr>
<th>Ability Level</th>
<th>Gains</th>
<th>+1</th>
<th>Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>18</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>II</td>
<td>13</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>III</td>
<td>5</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>IV</td>
<td>2</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>19</td>
<td>39</td>
</tr>
</tbody>
</table>
In W. R. Borg's extensive comparative study of adjacent Utah school districts with contrasting grouping practices, 1) 96 of 144 comparisons (two-thirds) were not statistically significant despite the large samples, 2) 15 of the 19 significant differences at the elementary school level that favored ability grouping were found during the first year of the four-year study and failed to persist or increase after the first year, and 3) whatever modest significant differences favored ability grouping were at the superior level, while low-ability level students tended to do better in undifferentiated classes.

11. The effect of ability grouping on the affective development of children is to reinforce (inflate?) favorable self-concepts of those assigned to high-achievement groups, but also to reinforce unfavorable self-concepts in those assigned to low-achievement groups. On this point the evidence from the several studies is in greatest agreement. The effect on the lower tracks or groups of being stigmatized as such by their open segregation is devastating. Among others, the Borg and British studies already cited show clearly that any favorable self-image accrued to top groups, while low-ability groups got the clear message that "We're too dumb," "We don't know very much," and/or "We are lazy."

12. Low self-concept operates against motivation for scholastic achievement in all individuals, but especially among those from lower socioeconomic backgrounds and minority groups. In the studies where lowered self-concept has been found in low-ability groups in a tracking system, the parallel finding of lowered achievement relative to heterogeneously grouped low-ability children is regularly present. Whatever the explanation of the direction of cause/effect, or that it is circular, its regular occurrence in severest form with certain minority groups in our society is clear.

13. Children from unfavorable socioeconomic backgrounds tend to score lower on tests and to be judged less accomplished by teachers than children from middle-class homes. This discrepancy is more marked as children grow older and approach adulthood.

Here it is especially significant to note a study of the impact of teacher judgment on placement in ability groups. As noted earlier, few ability grouping plans use tests alone for placement.
The chief supplementary evidence used is teacher and/or administrator judgment, presumably to correct by personal observation for capability not detected by objective measurement. In a midwestern city Kariger was able to compare placement in a junior high school tracking system based on tests and teacher judgment with what would have happened if placement had been based on tests alone.

In keeping with relations found quite uniformly in other studies, assignment to tracks on the basis of standardized test scores alone would have resulted in 77 percent of upper socioeconomic status children in the high track and only 38 percent of the lower socioeconomic status children in that track. However, when teacher judgment was introduced, 80 percent of the upper socioeconomic status children whose test scores would have warranted placing them in the high track were actually assigned to that track, while barely 50 percent (210 of 408) of the lower socioeconomic status children who qualified for high track placement on tests alone were so assigned. The obvious explanation for less favorable placement of low socioeconomic status children after teacher judgment is added to tested achievement is a form of social-class stereotyping. To quote the immortal Pogo, "We have met the enemy and he is us!"

14. The effect of grouping procedures is generally to put low achievers of all sorts together and deprive them of the stimulation of middle-class children as learning models and helpers. Bereiter and Engelmann in their book, Teaching Disadvantaged Children in the Preschool, and Bloom and Broder in their monograph, Problem-Solving Processes of College Students, working at distant extremes of the schooling continuum, present remarkably similar diagnoses of ineffectual thinking processes of low achievers. Briefly, it is a tendency to see problem solving as "knowing" the answer to a problem rather as a process of attending to detail, drawing upon prior knowledge, and carrying through a step-by-step consideration of all related information available. Their model for intervention is to have these poor achievers hear more able achievers solve problems aloud and then gradually acquire the skills by like activity guided by feedback, an opportunity denied low achievers segregated by ability level.
15. Low achievers include many disruptive children who have failed to acquire constructive school attitudes as well as children with low- and slow-achievement patterns. Local school systems typically do not distinguish among low achievers as to cause. Insofar as classroom groups are administrative arrangements for conducting instruction within established tax frames, it is only when special arrangements are made for “learning disabled,” emotionally disturbed, physically handicapped, multiply-handicapped, or behavior problems that the low-ability group is just that. Ordinarily, it is a conglomerate of variously motivated non-achievers. Apart from undertaking a separate analysis of all deviant individuals as the basis for a thoroughly reorganized scheme of treating such deviants under individualized arrangements, we can only point to current exploration of “alternative schools” as an alleviation of the problem of unanalyzed low achievement.

16. Children of many minority groups (Negro, Puerto Rican, Mexican-American, native American) come disproportionately from lower socioeconomic backgrounds. In view of the findings of the Kariger study cited above under 13, the generalizations regarding socioeconomic status on one hand and tested achievement and teacher stereotyping on the other, one can only impute the same effects, intensified by ethnic prejudice against these minority groups. Stated another way, low socioeconomic status may be considered the more widely pervasive disadvantage, with ethnic separation an added handicap. The fact that socioeconomic factors operate within race as well as between races needs to be pondered as ability grouping is studied. It is notably involved in plans of “matched pairing” sometimes now used to meet the federal guideline that uses racially identifiable groups (more than 20 percent disparate from the proportions of ethnic groups in the total school population) as the crucial test of discriminatory resegregation. In matched pairing, the top third of whites will be put with the top third of blacks, for example, the middle thirds of the two groups are put together, then the bottom thirds of both groups are put into the third class. The three classes will have equal proportions of blacks and whites, thus conforming exactly and completely to the requirement of equal ethnic proportions in each class, at the same time that the basic underlying socioeconomic separation is little affected.
None of the blacks in the bottom group enjoys contact and stimulation from upper-third students, with the result that the disadvantage of this separation and stigmatization may be presumed to affect them in roughly the same differential fashion as was illustrated in the table under 10 above. It is little comfort to them to be associated with the lower third of whites rather than with a mix of them and the next higher third of blacks for educational stimulation. One may well ask why this type of separation is fostered at the expense of sacrificing the ethnic separation that has been the subject of civil rights legislation. The reader may be referred for one provocative explanation in the writings of Mercer, especially as summarized in her referenced article.

17. The source of disadvantage, leading to low grouping in tracking systems, for some minority groups (Puerto Rican, Mexican-American, native American) derives in part from the fact that teaching and testing in schools are usually entirely in English, which for them is a “second” language. This language “disadvantage” has been dealt with variously. In Texas, for example, local systems are now required to offer initial instruction in Spanish to those for whom it is the native language, while providing instruction in oral and written skills of the English language, with gradual transition to a curriculum in English in later grades. An especially promising bilingual-cultural program is in effect in the Greater Miami (Dade County) area in Florida. The influx of Cubans has been made the basis for a mutually beneficial exchange under which Spanish-speaking children and teachers help English-speaking children and teachers learn Spanish and Spanish customs and the latter reciprocate by helping the Spanish-speaking children and teachers to acquire competence in the English language and American customs. The effect is not only to help the Spanish-speaking individuals attain a healthy self-esteem through performing the “helper” role, but also to enable the American children and teachers to take steps to correct the prevailing provincialism of the “ugly American” who is often known abroad for his limited familiarity with other cultures, sometimes tainted with a too self-satisfied disdain.

18. The language patterns of black and white children from lower socioeconomic backgrounds often differ so markedly from
“standard American” as to make schooling in most schools involve language disability by such language standards, with resulting placement in low groups where ability grouping is used. This circumstance has not only the direct effect of making learning more difficult. Indirect effects are also produced via lowered self-concept because of frequent corrections as well as stigmatization and reduced stimulation by assignment to low groups in tracking systems. It is common today to speak of dialect studies to test whether ignoring of common errors of usage and spelling by ghetto children in the elementary grades will free them to learn the more important skills of reading and arithmetic.

Apropos of correct usage, it is worth noting that English is the exceptional Western language in which the double negative is incorrect. For example, in the second most common language spoken in the United States, Spanish, to say “It is nothing,” the Spanish-speaking person says “No es nada.” Translated word for word into English, this says, “It is not nothing” or, more colloquially, “It ain’t nothing!” The double negative is used for emphasis at all levels of society in countries where French or Spanish is spoken. The child who says, “They don’t know nothing!” or “There ain’t nobody in there” is using the double negative for emphasis in the same way and for the same reason as his Spanish-speaking counterpart, because he continues to hear it used that way in his home and community. If correction is desired, let it be achieved by modeling correct speech in the classroom.

19. Differences in socioeconomic backgrounds result in cumulative effects because of early acquired differences in ability to interact profitably with teachers who have the middle-class habits and values implicit in much schooling and translated into differential placement where ability grouping is used. Middle-class children come to school prepared to respond to approval by teachers for their prior learning and readiness to respond. Disadvantaged children, especially boys, often have to unlearn assertive, unresponsive behavior in order to participate in a teaching/learning rapport in the classroom. A particularly telling example of the strength of such rebellious habits was given by one of Engelmann’s associates. She told of a behavior modification program in which young children were first given tangible re-
wards directly for learning, then were given token rewards exchangeable at the lunch counter, next were given the token with a squeeze of the receiving hand and broad teacher smile, and finally the smile and light pat alone, a program that extended over weeks. Placement in low groups on the basis of tests and judgments correlated with low socioeconomic status serves to reinforce negative motivations toward school learning.

20. Desegregated classes have greatest positive impact on school learning of socioeconomically disadvantaged children when the proportion of middle-class children in the group is highest. Conversely, when socioeconomically disadvantaged children are in the majority in a class, the effect of grouping is commonly to produce poorer achievement on their part. McPartland found a direct positive relation throughout the scale of white-black proportions in large samples (5,000) drawn from New England junior high school boys in the 1966 Coleman study. In a more elaborate study in 1972, McPartland and Sprehe found that socioeconomic status of classmates was more influential than teacher qualifications or per pupil expenditure in promoting educational achievement of black students.

21. Assignment to low-achievement groups carries a stigma that is generally more debilitating than relatively poor achievement in heterogeneous groups. Beginning in the early 1960s, studies have shown an increasing tendency for slow students in heterogeneous classes to benefit more from such placement than from placement in low tracks of ability grouping programs. The data summarized under 10 above are pertinent.

22. A positive dynamic of all instructional programs is constructive stimulation, what Hunt calls "the problems of the match"—some stimulation, but not too much, accompanied by supportive encouragement. This match is set at a higher level when others who learn more rapidly are in the same class with the less able. The modeling of successful learning or problem solving is the crucial factor as discussed under 14 above.

23. Ability grouping practices are to be distinguished from each other in terms of their underlying strategies for dealing with initial differences among children and the cumulative effect of such differences. In some instances, much reliance is placed on early determinations of capability. Individual children
are often not reevaluated for different group placement, as recommended and even mandated by state or local regulations. Initial differences are thus allowed to cumulate so that low groups fall progressively farther behind. Finally, by a process that may be characterized satirically as “orderly sedimentation,” these low achievers drop out of school at the earliest opportunity.

24. Different ability grouping practices show different amounts of differential treatment given to different children after ability grouping has been done. The teaching strategies employed with those classified low often deny stimulation offered to those classified high on the criterion used in grouping. Elsewhere, all those classified in one group are thereafter taught as if almost identical in capability. Again, the teaching strategies attempted with low groups are often a reflection of the absence of models and helpers within the group who learn more readily. Positive reinforcement can be given for modest learning, but the intrinsic motivation of mastering at higher levels is absent.

25. Ability grouping by subject takes account of intra-individual differences better than the more common types of ability grouping across the board. However, even this type fails its purpose if individuals most alike in each subject are then treated identically rather than as individuals with a narrower range and variety of learning problems than those in a heterogeneous group.

26. There are viable alternatives to ability grouping as a means of furthering school learning, including stratified heterogeneous grouping, peer tutoring, team teaching, and individually programmed instruction. More recently, the term “positive reinforcement” has come to represent a general factor in all learning, first extrinsically by significant others, later internalized and applied by the maturing individual intrinsically to his own progressive mastery of successively more difficult learnings. Building on strengths, supplementing strengths by improving strength where not yet as strong, being unreasonably hopeful and expectant of learning by all when interested, and making systematic efforts to give some warranted positive encouragement to each pupil every day, are integral parts of a program of positive reinforcement.

27. Planned heterogeneous grouping—notably the Baltimore plan of stratified heterogeneous grouping by tens—takes into
account simultaneously the concern for curtailing extreme heterogeneity, while assuring enough diversity to give leadership opportunities in each class, providing thereby for stimulation of the less advanced by these leaders, and avoiding the concentration of defeated and stigmatized children in a bottom group almost impossible to inspire or teach. Heterogeneous grouping is commonly attained by random assignment of children within a grade, often by alphabetical schemes. It may be consciously attempted in an effort to bring together unlike individuals on an ad hoc basis to share known differences of experiences. Children who have lived in other states and countries may thereby be given opportunity to lead, to communicate, to gain self-esteem as the bearer and teller of unique knowledge.

A special systematic procedure for achieving such purposes as educational stimulation of low achievers by high achievers while at the same time reducing the extreme variability to be found in completely heterogeneous grade groups owes its origin to the Baltimore public schools. Under the Baltimore plan, if three classes of thirty are to be made of ninety children ready to start fifth grade, the children are ranked in order of excellence on some composite—say, a standardized test battery most recently given—and are then divided into nine groups of ten each. Teacher A is given a class consisting of the highest or first ten, the fourth ten, and the seventh ten; Teacher B will have the second, fifth, and eighth tens; Teacher C is given the third, the sixth, and the ninth (lowest) tens, as shown below.

<table>
<thead>
<tr>
<th>Teacher A</th>
<th>Teacher B</th>
<th>Teacher C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 (1-10)</td>
<td>Group 2 (11-20)</td>
<td>Group 3 (21-30)</td>
</tr>
<tr>
<td>Group 4 (31-40)</td>
<td>Group 5 (41-50)</td>
<td>Group 6 (51-60)</td>
</tr>
<tr>
<td>Group 7 (61-70)</td>
<td>Group 8 (71-80)</td>
<td>Group 9 (81-90)</td>
</tr>
</tbody>
</table>

Note the several merits of this scheme. First, there is no top or bottom section; the sections overlap, so invidious comparisons between groups are minimized. Second, each class has a narrower range than the full ninety have: Teacher A has the top ten, but none of the bottom twenty; Teacher C has the bottom ten, but none of the top twenty; Teacher B has neither the top nor the bottom ten. Third, teachers can give special attention where it is needed without feeling unable to meet the needs of the opposite extreme: Teacher A can give a little special attention to the top
ten because the bottom twenty are not in the class; Teacher C can concentrate on the bottom ten, without fear of “losing” the top twenty. Fourth, each class has leaders of appropriate capability to stimulate each other in a fair competitive way while giving leadership to lower groups. Note particularly that in Teacher C’s class, the top group is the third ten, a group that has probably always had to play second fiddle to some in the first or second ten. Finally, no teacher has to teach the bottom group of a homogeneous plan, that mixture of disruptive, leaderless children who lack motivation and capability and make teachers like homogeneous grouping, but equally dislike to teach the slow group.

Such a method of grouping is not offered as a complete answer by itself, but as a constructive step in the right direction. It is, moreover, compatible with other special teaching arrangements like team teaching, peer tutoring, and early education.

28. Where older children, themselves academically retarded, are paid to tutor younger children who are having difficulty in learning reading in the elementary grades, both groups gain substantially. In fact, the older children gain even more than the younger ones being tutored. Similar findings apply to writing. The classical experiment was reported by Cloward who paid children at least a grade below norms in reading in junior high school to help their peers who were a grade or more below norms in fourth grade to learn to read. The fourth-graders, whose current learning rate would have predicted three and a half months progress in the five-month experiment, gained six months on the average, but their tutors gained even more, twice as much as comparable junior high classmates who had been given a strong remedial reading program. A significant sidelight is that the tutors signed up for what may best be described as an inservice course in the teaching of reading! They joined the establishment and became self-respecting contributors rather than pitied slow learners. A compilation of similar practices may be found in the book, *Children Teach Children*, by Gartner et al., listed among the references. In a classroom in which an atmosphere of helpful cooperation has superseded competitive individual motivation, the more able can learn to help the less proficient and earn their respect and gratitude in ways prevented by the old order of completely individual recognition.
29. Teaching by teams of teachers with different responsibilities, under the leadership of coordinating master teachers, is a fundamental pattern in plans developed for training future elementary school teachers. Departmentalization of instruction may be considered a step in this direction. In Goldberg's ability grouping study, one of the secondary findings was that teachers were generally able to teach one or two subjects over a wide ability range better than they could teach the whole gamut of school subjects to an ability grouped section of a single grade in a self-contained classroom. In some instances, children may be efficiently taught the several subjects by the same teacher in a team arrangement in which the teachers alternate as lead teacher in the different subjects.

30. Individualized instruction by prescription of sequences of learning experiences has been worked out for much of the learning of basic skills and structured knowledge. The original IPI (Individually Prescribed Instruction) developed by the Research and Development Center at the University of Pittsburgh and disseminated by Research for Better Schools, has been followed by IGE (Individually Guided Education) the multigraded program developed and disseminated by the Research and Development Center at the University of Wisconsin, and PLAN, developed and disseminated by the American Institute for Research at Palo Alto. Segments of the curriculum may, of course, be similarly adapted whether or not the approach is adopted full scale. Criterion-referenced testing is often developed by local school districts to fit such programs and may or may not be normed thereafter for other purposes.

31. All four of the above teaching-learning practices can be applied simultaneously. They are mutually compatible. It would be wrong to let one of these practices stand in the way of any other. For example, stratified heterogeneous grouping was conceived to make teaching in self-contained classrooms more effective, but this need not and indeed should not be interpreted to stand in the way of team teaching or varying the grouping from subject to subject. Peer tutoring can be used productively in heterogeneous grouping as indicated under 28 above.

32. Early childhood education, whether designed to be compensatory or for all children, presents a further supplementary
approach. The Denver experiment of beginning the teaching of reading in kindergarten, associated with the names of Brzeinski, Harrison, and McKee, is a prime example of how early childhood education can show persistent effects on up through grade 5. Other types of preschool instruction of the sort described by Bereiter and Engelmann and mentioned under 14 above may contribute compatibly to persistent intellectual development.

33. Ethnic and socioeconomic desegregation to achieve desirable interactive effects in schooling meets a more serious and substantial roadblock than resegregation by ability grouping within schools when the resegregation is accomplished by residential segregation and segregation via private school. Residential segregation, in the form of concentrations of minority groups in cities and the moving of majority groups to suburbs, plus the organization of private schools along ethnic lines, makes ethnic desegregation within many large cities almost meaningless. When this last statement was included among our 1970 conclusions, there might have been some feeling that it represented a synthesis of the current trend beyond the bounds of direct inference. Today, with minority groups joining majority groups in protesting the busing of their children to distant schools to become parts of school populations predominantly minority in every school in the district, the evidence mounts that the obstructive tactics that have delayed application of the civil rights legislation have accomplished the resegregation desired by the obstructionists. Only the broadening of school districts to obliterate urban-suburban boundaries could now achieve the original intent of the laws and some would consider the very bigness of the resulting districts a dubious solution. De facto segregation is the national pattern, North and South. It remains to be seen what those districts that accepted the unitary pattern will finally achieve.

The same may be said to a lesser degree of socioeconomic segregation without regard to ethnic distinctions. Instances are on record of socioeconomic separation being perpetuated and strengthened in school districts wholly white, or wholly black. In a large city with multiple minorities, certain minorities with cultural patterns more like the WASP mainstream fought to preserve their enclaves against being broken up to produce racially proportional school populations. The practice of "matched pairing"
described under 16 above is best viewed as an effort to preserve socioeconomic stratification at the price of sacrificing ethnic stratification.

34. Ability grouping has generally undesirable effects on learning and self-concept within like ethnic and socioeconomic groups, which are magnified when the correlated factors of ethnicity and socioeconomic status are involved. As pointed out earlier, the pressures for ethnic and socioeconomic separation via school grouping are partly separate, but considerably intertwined. The old pattern of de jure racial segregation in the South and the persisting pattern of de facto segregation by residence or by ability grouping within race and across racial lines shows the strength of pressures for socioeconomic segregation. Taken together, the total impact is strongest. Local situations call for individual analysis, but the more prevalent force for socioeconomic segregation stands out.

35. Findings of the impact of ability grouping on classroom groups have implications for residential segregation and schooling tied to it. The issues underlying ability grouping and school desegregation are deeply embedded in our society and its culture. The matters reported here are integral parts of a larger social pattern, contributing to the perpetuation or change of that pattern, but largely determined by it. It remains to be decided through political processes, variously exerted through the legislative, executive, and judicial branches, what reconciliation can be achieved between elitist separatist feelings and egalitarian inclusivist beliefs. One may hope that some resolution may be effected in the way the Baltimore schools found it possible to meet the most objectionable features of both homogeneous and heterogeneous grouping.
RECOMMENDATIONS

1. Ability grouping of the types described in Preliminary Statements D1, D2, and D3 should not be used. Even those who express preference for ability grouping recognize as countervailing considerations the effects of stigmatizing of low groups and their separation from the stimulation of more able peers.

2. Ability grouping in specific academic subjects may be used to advantage where the information gained by testing and/or observation is the first step in a program of diagnosis and individualized instruction. This approach needs to be scrutinized closely and put to the test of showing benefits to those in low groups as well as to those in the top groups. Despite the fact that different groupings will characterize different subject areas, it will still be true that the top groups will be predominantly mainstream, subject by subject, while the bottom groups will be predominantly lower socioeconomic and/or minority children. Special attention needs to be paid to the atmosphere in which the differential treatments are applied, particularly whether the children in each ability group are further diagnosed for differential treatment within their classroom groups.

3. Provision should be made for frequent review of each individual’s grouping status as part of the instructional program. The evidence that ability grouping results in practically permanent assignment of children to low or high groups, with resultant “orderly sedimentation” and consequent early dropout makes a regular program for reviewing group placement absolutely essential. Even this, however, is generally less promising than heterogeneous grouping.
4. Peer tutoring, team teaching, individually programmed instruction, and early childhood education should be explored and exploited for their usefulness in promoting learning. For the reasons spelled out under Conclusions 26-32 these solutions need to be explored and exploited in a classroom atmosphere of positive support and cooperative effort. One may remember an occasional instance in which individual competition between two or more individuals in a class led them to outstanding performances. But the rest of such classes became spectators. Think again of how often each of us has mastered difficult material under an enthusiastic teacher who persuaded all of us to sweat a little until, often as a group, we made it! As the Seabees motto says, "The impossible just takes longer."

5. The personality dynamics of the tutoring of younger children by older children, often of modest ability, should be explored and exploited. A telling example is of a class of predelinquent and mentally retarded teen-age boys whom an ingenious teacher paired, so that each of the predelinquents had a retarded peer to help. A visitor to the class could take it all in at a glance. Pairs would line up before the teacher to take turns in having the retarded boy show what he had learned, both received warranted praise from the teacher and advice on a next goal to meet, whereupon that pair would move off to attack the new assignment, happily yielding their place to the next pair. Once again, the predelinquents (stealers of hubcaps, and the like) had joined the "establishment" to the mutual benefit of all.

6. Heterogeneous grouping, in a classroom atmosphere of cooperation and helping, should be the rule, except as indicated under Recommendation 2. The heterogeneity need not be a matter of ability, but of experience. It could well be that those more talented in fine or industrial arts could make their first recognized contributions in illustration of stories or construction of models others more talented academically could only conceive, but not execute.

7. Stratified heterogeneous grouping by tens, as practiced in Baltimore, should be utilized and refined. Again, note that this approach is compatible with more flexible classroom arrangements than the self-contained classrooms for which it was originally designed.
8. Favorable self-concept should be a goal in itself, but is also a supportive factor in learning. An attitude of firm confidence and hope by the teacher is fundamental. Techniques for conveying such an attitude can be learned. Inservice training procedures have been observed in which teachers were taught to make daily checks against their class rolls for increasing ability to give positive motivation to each child every day.

9. Teacher training should include emphasis on welcoming diversity in children, and teaching children to prize it in each other. A particularly important aspect of such diversity is with regard to language and customs of minority groups. Teachers therefore need preservice and/or inservice preparation in language habits and cultural heritages of minority groups to use as the basis for positive acceptance of all kinds of children into the classroom group. The example given of Spanish-English mutual support under Conclusion 17 and the suggestion of emphasis on modeling correct language usage vs. “correction” of dialect usage under Conclusion 18 should be reviewed for possible extensions in particular situations.

10. Steps should be taken as early as possible in each local situation to promote unitary school populations in each district and each classroom. When a district or city has become almost completely a socioeconomically limited population, the possibility of effective desegregation and its constructive impact virtually disappear. It is no longer “early” anywhere.

REFERENCES


McKee, P. R. and Brzeinski, J. E. *The Effectiveness of Teaching Reading in Kindergarten*, Cooperative Research Project No. 5-0371, Denver, Colo.: Denver Public Schools, 1966.


Shockley, W. "Dysgenics, Geneticity, Raceology," *Phi Delta Kappan*, 1972, 53, 297-308 (See also accompanying rejoinder by N. L. Gage).

233. What Educators Should Know About Copyright
234. Teenage Suicide: What Can the Schools Do?
235. Legal Basics for Teachers
236. A Model for Teaching Thinking Skills: The Inclusion Process
237. The Induction of New Teachers
238. The Case for Basic Skills Programs in Higher Education
239. Recruiting Superior Teachers: The Interview Process
240. Teaching and Teacher Education: Implementing Reform
241. Learning Through Laughter: Humor in the Classroom
242. High School Dropouts: Causes, Consequences and Cure
243. Community Education: Processes and Programs
244. Teaching the Process of Thinking, K-12
245. Dealing with Abnormal Behavior in the Classroom
246. Teaching Science as Inquiry
247. Mentor Teachers: The California Model
248. Using Microcomputers in School Administration
249. Missing and Abducted Children: The School's Role in Prevention
250. A Model for Effective School Discipline
251. Teaching Reading in the Secondary School
252. Educational Reform: The Forgotten Half
253. Voluntary Religious Activities in Public Schools: Policy Guidelines
254. Teaching Writing with the Microcomputer
255. How Should Teachers Be Educated? An Assessment of Three Reform Reports
256. A Model for Teaching Writing: Process and Product
257. Preschool Programs for Handicapped Children
258. Serving Adolescents' Reading Interests Through Young Adult Literature
259. The Year-Round School: Where Learning Never Stops
260. Using Educational Research in the Classroom
261. Microcomputers and the Classroom Teacher
262. Writing for Professional Publication
263. Adopt a School—Adopt a Business
264. Teenager Parenthood: The School's Response
265. AIDS Education: Curriculum and Health Policy
266. Dialogue Journals: Writing as Conversation
267. Preparing Teachers for Urban Schools
268. Education: By Invitation Only
269. Mission Possible: Innovations in the Bronx Schools
270. A Primer on Music for Non-Musician Educators
271. Extraordinary Educators: Lessons in Leadership
272. Religion and the Schools: Significant Court Decisions in the 1980s
273. The High-Performing Educational Manager
274. Student Press and the Hazelwood Decision
275. Improving the Textbook Selection Process
276. Effective Schools Research: Practice and Promise
277. Improving Teaching Through Coaching
278. How Children Learn a Second Language
279. Eliminating Procrastination Without Putting It Off
280. Early Childhood Education: What Research Tells Us
281. Personalizing Staff Development: The Career Lattice Model
282. The Elementary School Publishing Center
283. The Case for Public Schools of Choice
284. Concurrent Enrollment Programs: College Credit for High School Students
285. Educators' Consumer Guide to Private Tutoring Services
286. Peer Supervision: A Way of Professionalizing Teaching
287. Differentiated Career Opportunities for Teachers
288. Controversial Issues in Schools: Dealing with the Inevitable
289. Interactive Television: Progress and Potential
290. Recruiting Minorities into Teaching
291. Preparing Students for Taking Tests
292. Creating a Learning Climate for the Early Childhood Years
293. Career Beginnings: Helping Disadvantaged Youth Achieve Their Potential
294. Interactive Videodisc and the Teaching-Learning Process
295. Using Microcomputers with Gifted Students
296. Using Microcomputers for Teaching Reading
297. Using Microcomputers for Teaching Science
298. Student Privacy in the Classroom
299. Cooperative Learning
300. The Case for School-Based Health Clinics
301. Whole Brain Education
302. Public Schools as Public Forums: Use of Schools by Non-School Publics
303. Developing Children's Creative Thinking Through the Arts
304. Meeting the Needs of Transient Students
305. Student Obesity: What Can the Schools Do?

Single copies of fastbacks are 90¢ (75¢ to Phi Delta Kappa members). Write to Phi Delta Kappa, P.O. Box 789, Bloomington, IN 47402-0789, for quantity discounts for any title or combination of titles.
PDK Fastback Series Titles

107. Fostering a Pluralistic Society Through Multi-Ethnic Education
111. Teacher Improvement Through Clinical Supervision
114. Using Role Playing in the Classroom
118. The Case for Competency-Based Education
119. Teaching the Gifted and Talented
121. Student Discipline and the Law
127. Writing Centers in the Elementary School
128. A Primer on Piaget
130. Dealing with Stress: A Challenge for Educators
132. How Parent-Teacher Conferences Build Partnerships
135. Performance Evaluation of Educational Personnel
137. Minimum Competency Testing
138. Legal Implications of Minimum Competency Testing
143. The Process of Grant Proposal Development
145. Migrant Education: Teaching the Wandering Ones
146. Controversial Issues in Our Schools
147. Nutrition and Learning
148. Education in the USSR
149. Teaching with Newspapers: The Living Curriculum
151. Bibliotherapy: The Right Book at the Right Time
153. Questions and Answers on Moral Education
154. Mastery Learning
159. Education for Cultural Pluralism: Global Roots Stew
162. The Public Community College: The People's University
164. Children's Books: A Legacy for the Young
165. Teacher Unions and the Power Structure
166. Progressive Education: Lessons from Three Schools
167. Basic Education: A Historical Perspective
169. Teaching the Learning Disabled
170. Safety Education in the Elementary School
171. Education in Contemporary Japan
172. The School's Role in the Prevention of Child Abuse
174. Youth Participation for Early Adolescents: Learning and Serving in the Community
175. Time Management for Educators
176. Educating Verbally Gifted Youth
180. Supervision Made Simple
182. School Public Relations: Communicating to the Community
183. Economic Education Across the Curriculum
186. Legal Issues in Education of the Handicapped
187. Mainstreaming in the Secondary School: The Role of the Regular Teacher
188. Tuition Tax Credits: Fact and Fiction
189. Challenging the Gifted and Talented Through Mentor-Assisted Enrichment Projects
190. The Case for the Smaller School
191. What You Should Know About Teaching and Learning Styles
192. Library Research Strategies for Educators
193. The Teaching of Writing in Our Schools
194. Teaching and the Art of Questioning
195. Understanding the New Right and Its Impact on Education
196. The Academic Achievement of Young Americans
197. Effective Programs for the Marginal High School Student
199. What Should We Be Teaching in the Social Studies?
201. Master Teachers
202. Teacher Preparation and Certification: The Call for Reform
203. Pros and Cons of Merit Pay
205. The Case for the All-Day Kindergarten
206. Philosophy for Children: An Approach to Critical Thinking
207. Television and Children
208. Using Television in the Curriculum
209. Writing to Learn Across the Curriculum
210. Education Vouchers
211. Decision Making in Educational Settings
213. The School's Role in Educating Severely Handicapped Students
214. Teacher Career Stages: Implications for Staff Development
216. Education in Healthy Lifestyles: Curriculum Implications
217. Adolescent Alcohol Abuse
218. Homework—And Why
220. Teaching Mildly Retarded Children in the Regular Classroom
222. Issues and Innovations in Foreign Language Education
224. Teaching About Religion in the Public Schools
225. Promoting Voluntary Reading in School and Home
226. How to Start a School/Business Partnership
227. Bilingual Education Policy: An International Perspective
228. Planning for Study Abroad
230. Improving Home-School Communications
231. Community Service Projects: Citizenship in Action
232. Outdoor Education: Beyond the Classroom Walls

(Continued on inside back cover)