

*Effective programs and pupil gains seem to "fade": in this view, schools are not the great equalizer and grand panacea.*

## **THE FADING OUT OF GAINS IN "SUCCESSFUL" COMPENSATORY EDUCATION PROGRAMS**

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**Since the late 1950s** there have been innumerable educational programs in this country, most under the title of compensatory education, which have attempted to reduce the inequality in academic achievement among children from various socio-economic groups by attempting to accelerate the achievement growth rate of children labeled disadvantaged. Despite the many efforts to modify curriculum and instruction in "enrichment" programs from preschool through high school, the mean achievement growth rate in reading and mathematics of children from poverty-stricken families continues to be approximately two thirds the growth rate of middle class children (roughly .7 of a month's learning per month of instruction averaged over an entire year; Thomas et al., 1975).

One explanation for the persistence of this cumulative deficit is that those exemplary compensatory education programs that have produced educationally significant achievement gains are usually available to children only for a short period. Because of inadequate funding and poor planning, most children remain in an enrichment program for only a year or two before they are forced to return to a regular classroom. According to this line of reasoning, children go back to the traditional setting and their accelerated cognitive growth rate soon begins to fade. While this explanation may sound plausible enough, there are no data to this writer's knowledge to support the argument that exposing disadvan-

tagged children to a "successful" program for a sustained period will permit them to achieve throughout their schooling at a rate equal to or in excess of the national norm. Indeed, there exists some evidence that the fading out of initial gains may also occur *while* children are participating in model compensatory education programs.

### THE SEARCH FOR SUCCESSFUL PROGRAMS

The criteria used by most evaluators of compensatory education to determine whether a program is successful are different for preschool programs as compared to the criteria for elementary and secondary projects. While a program at the higher levels usually must demonstrate a mean achievement growth rate in math and reading equaling or exceeding the national norm (Hawkrige et al., 1968, 1969; Wargo et al., 1971), a preschool program must raise the average IQ of its participants to 100 or above (Bereiter and Engelmann, 1966; Gray and Klaus, 1970). Success reported in the early childhood programs is far more common than in the elementary and secondary projects. Hundreds of full-year Head Start programs and several experimental preschool programs repeatedly have demonstrated their ability to raise the IQs of disadvantaged children by 5 to 15 points (Westinghouse Learning Corporation, 1969; Bronfenbrenner, 1975). At the elementary and secondary school levels, however, apparently only a very small percentage of enrichment programs have collected hard data demonstrating 1:1 or greater achievement gains.

Given the many problems associated with conducting national studies of school effectiveness such as the one conducted by Coleman in 1965 and the early annual surveys of Title I attempted by the U.S. Office of Education (USOE), a popular alternative strategy for evaluating the ability of schooling to compensate for the exigencies of a poverty-stricken environment has been to search the nation for successful enrichment programs. Typically, a research organization would gather information on several hundred programs by an extensive reading of published and in-house program evaluations. Usually researchers then would make site visits

to those programs reportedly making month-for-month achievement gains that appeared to be based on hard data. If the closer scrutiny confirmed that the programs were successful, the research organization would gather additional information on curriculum and methodology so that these exemplary programs could serve as models for other educators constructing compensatory programs. Under contract with USOE, the Center for Educational Policy Research at Harvard University (McLaughlin et al., 1971) and the RMC Research Corporation (Foat, 1974) approximated this approach to identify model programs.

The earliest, the most publicized, and eventually the most extensive search for exemplary programs was conducted by the American Institute for Research (AIR) of Palo Alto, California. Under contract to USOE, AIR identified 21 exemplary programs (producing better than 1:1 gains) at the elementary and secondary levels (Hawkrigde et al., 1968, 1969) which were included in the *It Works Series*, a 31-booklet package<sup>1</sup> published by USOE providing detailed descriptions of each successful program. Although AIR's selection represented an infinitesimal percentage of well over 1,000 programs reviewed, USOE eagerly publicized these exemplary programs as evidence that compensatory education could work.

Generally overlooked, however, is a third evaluation by AIR (Wargo et al., 1971) that not only identified ten additional successful programs but also conducted a follow-up study on the exemplary projects described in the two earlier reports. Of the 21 elementary and secondary school programs included in the 1968 and 1969 publications, only six were judged to be successful when reviewed two to three years later.<sup>2</sup>

Just what occurred to thwart the sustaining effectiveness of most AIR programs was apparently impossible to determine from the available data. AIR could only state that of the 21 elementary and secondary school programs four had been terminated, three did not conduct new evaluations, four had inadequate data, and four of the ten with adequate data were judged no longer effective (Wargo et al., 1971). Collecting longitudinal data on program effectiveness beyond the pre-school levels is one of the most difficult tasks for the student in

the field of compensatory education. This investigation becomes particularly arduous when the researcher attempts to gather achievement data on the same pupils over more than a year's period within the same compensatory education program.<sup>3</sup>

### THREE PROGRAMS INDICATING FADE OUT

In this writer's reading of both the national evaluations of compensatory education and a 20% random sampling of state and local evaluations published by ERIC from 1966-1974, he has found only three programs beyond preschool that have recorded hard achievement data on the progress of a group of pupils for longer than a single academic year. A glance at the evaluations of these three programs not only may give us a clue as to why some compensatory education programs enjoy only short-term success, but may offer us a somewhat different perspective on the nature of the fade out phenomenon.

*More Effective Schools Project (MES), New York, NY.* Shortly after MES began in September 1964, this general enrichment elementary school program operating in 17 schools reported impressive achievement gains (well above 1:1) on the Metropolitan Achievement Test (MAT) in word knowledge and reading. An independent evaluation by the Psychological Corporation (North et al., 1969), however, reported that these gains were not sustained. According to the Psychological Corporation, the reading achievement scores on the MAT of children who entered the program in the second grade did not differ significantly at the beginning of grade two from the reading MAT scores of children in the control schools. By the end of the third grade, however, the average MES third grade not only was well ahead of the controls but surpassed the national norm in word knowledge and reading. In the 1968-1969 school year, the Psychological Corporation analyzed the MAT reading scores of only those MES and control group children who had taken the tests in the second and third grades, nearly four years after the original testing in the fall of 1964. At the end of the fifth

**TABLE 1**  
**Differences Between Actual and Expected Mean**  
**Grade Score for Reading Comprehension of Pupils**  
**on the Three Testing Dates**

	Nov., 1959	April, 1960	May, 1961
Actual grade score	2.73	3.46	4.21
Expected grade score	2.87	3.34	4.26
Difference	-0.14	+0.12	-0.05

SOURCE: Wrightstone (1964: 50).

grade, "differences between the means of the groups of paired MES and control schools in word knowledge and reading were not large enough to be statistically significant." The report explained that "the means of both groups fell below the national norm for this grade level (5.7) by three to eight months." (MES was an AIR exemplary program in the Institute's 1968 publication but was judged no longer effective in the 1971 follow-up report.)

*Higher Horizons Program, New York, NY.* The Higher Horizons (HH) Program was one of the earliest, largest, and most influential compensatory education programs that ever existed in this country. This elementary school program was in operation from 1959-1965, enrolled by 1962 some 64,000 pupils, and apparently served as a model for many of the compensatory programs envisioned by several persons instrumental in the construction of the Elementary and Secondary Education Act (ESEA) of 1965 (Freeman, 1969). Following the release in 1965 of an evaluation of Higher Horizons by New York City's Board of Education (Wrightstone, 1964) that found the program ineffective (which occurred only a few weeks after ESEA was passed by Congress), the program was terminated. This writer has obtained a copy of the Board's evaluation from one of the program's founders, Richard Turner. According to Turner, his copy of the report "may be the only copy still in existence."<sup>4</sup>

The evaluation's longitudinal study on pupil reading achievement (see Table 1) indicates a pattern similar to the early gain and fade out reported in the MES evaluation. The Board of Education study of Higher Horizons included the Metropolitan Reading Test (MRT) scores of 855 third grade pupils who took the tests for the first time on November 4, 1959, less than a month after Higher Horizons was initiated. The mean grade score for the 855 children at that sitting was 2.73, which was roughly a month and a half behind the expected grade score of 2.87 for this population. Approximately six months later, on April 28, 1960, Higher Horizons children again took the MRT, and the test scores of the same 855 pupils were obtained. In this six-month period these third grade children had made a substantial gain in reading achievement. Their April grade score was 3.46, which was more than a month above the expected grade score of 3.34. At this point most Higher Horizons participants were exceeding a month's learning for month of instruction and were closing the achievement gap. Roughly 13 months later, on May 16, 1961, the MRT was given once again, and the test scores of the same 855 students, now in the fourth grade, were analyzed. This time the mean grade score was 4.26. In that 13-month interval most Higher Horizons children (while still in the program) had begun to fall behind.

*Initial Enrichment Program, New York, NY.* Begun as a preschool program in 1958, this experimental early childhood model evolved into a five-year program from prekindergarten through third grade. Under the direction of the influential educational psychologist Martin Deutsch, the Initial Enrichment Program (IEP) has placed a heavy emphasis on language development, individualized instruction, and the promotion of self-discipline (Deutsch et al., 1974). Like participants in many other preschool programs, the IEP children usually have made initial gains in IQ (from roughly 92 to 100). In a recent review of early intervention projects by Bronfenbrenner (1975), it was stated that in IEP "the means for the experimental group showed the characteristic hairpin turn while the children were still in the program." Bronfenbrenner

explains that "at the final testing, after the children had been exposed to five years of the intervention, the I.Q. difference between the experimental and randomized control group was a non-significant four points" (96 versus 92).

The test scores from Deutsch's Initial Enrichment Program are extremely important because of the paucity of longitudinal data published by the various sponsors of Project Follow Through. Begun in 1967 as an early elementary (grades 1 through 3) enrichment experience designed to sustain the cognitive gains of many Head Start children, Project Follow Through's major evaluations by the Stanford Research Institute (Bissell, 1973) and ABT Associates (Cline, 1974, 1975) have focused on attempting to measure specificity of effects of the several experimental models. There is no information in these reports on the progress in achievement of Follow Through children who benefited cognitively from Head Start. To this writer, the evaluations' omission of these data is somewhat puzzling, considering the original purpose for designing the project, the ample time period for the collection of longitudinal information, and the fact that the 20-odd sponsors of Follow Through were carefully chosen because of their expertise in child development and experimental research.

### **AN ATTEMPT TO EXPLAIN FADE OUT**

If the fading out of early gains reported in *More Effective Schools*, *Higher Horizons*, and *Initial Enrichment* is indicative of what has occurred in many other compensatory education programs, it is important to consider the possible causes of this phenomenon.

Two things may occur to explain the initial academic gains of children entering a compensatory education program. (We are assuming here that there have been proper controls for statistical regression toward the mean.) At the preschool level the cognitive growth of a disadvantaged child in a structured academic program may accelerate relative to his middle class counterpart. This might be expected, considering the probability that the middle class child either is not in

school at all or is in a traditional nursery school. Consequently, on measures such as the Peabody Picture Vocabulary Test and reading readiness tests the disadvantaged child may approach or even exceed the national norms. The gains of the disadvantaged child may be maintained until the middle class child enters the first grade, and then the cumulative deficit begins to reappear. This is to be expected, for now the advantaged child begins his formal academic training and his achievement growth rate increases. In other words, it is not just a fading of gains of the disadvantaged child that widens the achievement gap, but the acceleration of the advantaged child once he enters school. By grades three or four the initial gains of the Head Start child have been lost almost completely, for he is now little better off than his disadvantaged counterpart without pre-school experience. But, once again, the latter child has entered school for the first time in the first grade, and his cognitive growth may increase modestly at this point. And, if one looks at the control group IQ scores in several of the longitudinal preschool studies, this increase often occurs (Kirk, 1958; Bronfenbrenner, 1975). Since it is improbable that there are any optimal moments or magic years when cognition can be influenced permanently, the disadvantaged child without preschool experience begins to "catch up" with the Head Start child.

The second thing that may occur to explain the initial gains and possible fade out that occurs in compensatory education programs at the elementary and secondary levels involves a somewhat different phenomenon. The initial gains may be produced by some experimenter bias effect, but it is also conceivable that in any new situation a person with relatively limited knowledge of a subject may learn at a more rapid rate for a short period than would a person with broader knowledge. For example, in a compensatory reading program such as Higher Horizons, an entering third grader (who is already behind his middle class counterpart) may for a period of a few months increase his reading growth rate relative to the national norm (achieving, say, at 1.5). The new and exciting approach to reading employed by a Higher Horizons type program may trigger this accelerated learning of very basic



reading skills. In order to sustain these gains, however, or even to keep pace at 1:1 with the middle class norm, the child must have ample opportunity to practice his reading outside of school. The more advantaged child is provided this opportunity by the powerful reinforcers in his home environment, while the lower class child may be denied this opportunity. Also, home environmental reinforcers become increasingly important as the reading material requires an increasingly conceptual sophistication. Therefore, a substantial fading out of the impressive initial gains occurs, and the achievement growth rate once again is less than 1:1.

### THE GENETIC ARGUMENT

Critics of compensatory education in the hereditarian camp have offered a genetic explanation for the persistence of the cumulative deficit in achievement between most economically advantaged and disadvantaged pupils. While it is surely conceivable that absolute differences in intelligence may exist among the social classes, it is illogical to cite the alleged failure of compensatory education as evidence of these suggested inherent differences.

First of all, it must be understood that apparently children from the subculture of poverty normally learn *more* from the schools than do children from the main culture. When the schools are closed for a sustained period (as they were in Prince Edward County, Virginia, because of an integration dispute, and as they were during the 1967 New York City teachers' strike), the academic achievement growth rate of disadvantaged children suffers considerable decline (Green et al., 1964; Jencks et al., 1972). In these instances, the effects of terminated public schooling on the achievement of middle class pupils were difficult to determine since a large percentage of children were enrolled in private schools or were tutored at home.

During the summer recess, however, when the vast majority of children from middle class and poverty-stricken backgrounds are not receiving formal academic instruction, poor children experience far greater losses than their more affluent

counterparts.<sup>5</sup> Therefore, it is suggested that disadvantaged children learn most of their academic skills (as measured by standardized tests) from the schools, while middle class children acquire a relatively greater percentage of their environmentally determined academic aptitudes from the home. Once again, it is probable that the cumulative deficit can be attributed largely to different experiences *outside* the school, not to differing learning rates *during* school.

Second, one can hardly fault disadvantaged children for their apparent failure to respond to the various "innovations" of compensatory education programs when it has been known for years in some educational circles that variation in curriculum and methodology generally have little or no effect on the pupil achievement of the advantaged population (Gage, 1963; Stephens, 1967). It is interesting that one of the few input variables in the entire field of education that correlates rather consistently with greater pupil learning is the degree of structured schooling that disadvantaged pupils receive (Hawkrige et al., 1968; Wargo et al., 1971). Therefore, it can be argued that methods characteristic of the traditional school are more suited to the development of the cognitive skills of children from the subculture of poverty than the more open, whole-child approach used commonly in compensatory "enrichment" programs. Indeed, a highly structured approach should be more effective with children from the subculture of poverty, for it attempts to teach some of the cognitive processes of the dominant culture in a systematic way. Compensatory programs that encourage children to discover these processes on their own are unlikely to have any positive effect and may even be detrimental.

### CONCLUSION

Surely, additional longitudinal research similar to the evaluations of programs cited in this paper must be conducted before we can come to grips with the ability of the schools to eliminate the mean differences in achievement which exist among various socioeconomic groups in this country. The limited longitudinal data that do exist, however, do not

suggest that the schools can be "the great equalizer." The fading out of initial gains that apparently occurred *during* the More Effective Schools, Higher Horizons, and Initial Enrichment Programs offers us additional evidence that perhaps the only way to reduce significantly the environmentally determined inequalities of achievement is to reduce significantly the existing inequalities in environment.

### NOTES

1. AIR also identified ten preschool programs in these reports, making a total of 31.
2. Intensive Reading Instructional Teams, Hartford, CT; After School Study Centers, New York, NY; Summer Junior High Schools, New York, NY; College Bound Program, New York, NY; Project R-3, San Jose, CA; Programmed Tutorial Reading Project, Indianapolis, IN. It is interesting that two of these programs provide instruction beyond the normal schooling time period and that the College Board Program may cater to a select group.
3. In addition to combing the various indexes and reading many of the Title I evaluations published in ERIC, this writer conversed either by phone or in person with Urie Bronfenbrenner, David Cohen, the research assistant to Edmund Gordon, Merle Karnes, and Sheldon White, as well as officials from ABT Associates (who are doing the Project Follow Through evaluation for USOE), the Stanford Research Institute, and the New York City Board of Education. Each acknowledged the importance of such longitudinal data, but only Richard Turner of the New York Board of Education could provide any assistance. Dr. Turner graciously sent me his personal copy of the Higher Horizons evaluation, which contained data on pupil achievement over a two-year period.
4. From a telephone conversation in March 1976.
5. The Stanford Research Institute (Thomas et al., 1975) has estimated that roughly half of the achievement differences between the advantaged and disadvantaged school population can be attributed to the ten months of public school. The remaining half of the cumulative deficit occurs during the summer recess.

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