60

Joshua Lederberg

A Test of Classroom 'Bloomers' New Key to Education Research

SINCE THE 1954 Supreme Court decision outlawing racial segregation in public schools, educational theory has become ever more closely entwined with the halting progress of the law to meet the most urgent of our social problems. The priority given to school desegregation as a social objective, however, may be attributable more to its symbolic role, and to the hope that it might be reachable by an act of law, than to any scientifically justified confidence that desegregation, by itself would solve any educational problem.

Research in education hardly provides the atmosphere of dispassionate criticism and reflection needed for good science. Most such research is observation, like the survey of American education that led to last year's Coleman Report from the U.S. Office of Education.

Human beings are quite ornery about being neatly pigeonholed and their various activities are most intricately confounded with one another. Economically depressed localities, whose citizens are themselves poorly educated, rarely oblige the investigator by providing many examples of excellent as well as dilapidated school plants, or by showing high as well as poor levels of racial acceptance.

The Coleman report did conclude that no single factor was better correlated with a student's academic performance than his self-concept: his sense that he has some command over his environment, that anything he does will matter. But we have to ask whether this is more a cause of, than a response to, school failure.

ANOTHER LINE of research, hopefully regarded as more rigorous, is the controlled experiment: the comparative performance of groups of children exposed in parallel to different educational environments. Most such reports can be disregarded at the outset because the difficult requirement of comparability of the control and experimental groups simply could not be met.

Small differences in pupil achievement, though statistically significant, will be meaningless in comparisons of segregated and desegregated schools when the communities are different in untold ways. Within a given community, social attitudes rarely allow a school to be used for a rigorous educational experiment with blind, unbiased assignment of pupils to one or another regime. If there is a well-founded conviction about the advantages of one regime, it may be immoral to contemplate, and impolite to enforce, the placing of students under a predicted handicap.

Psychologists Robert Rosenthal (Harvard) and Lenore Jacobson (South San Francisco School District) have, however, reported an experiment that cleverly and humanely meets these criteria. In each of 18 classes, about 20 per cent of the pupils were singled out as having scored high on a "test for educational blooming" indicating that they might show unusual intellectual gains over their previous performance.

After a school year, the children were retested; the "bloomers" did indeed show a startling improvement compared to their classmates. The youngest children showed the greatest relative improvement in IQ, 15 points more than their fellows. The class as a whole also improved somewhat more than expected.

The main point of the experiment is that the "bloomers" had been chosen at random. They differed from their classmates only in the teacher's expectations.

THIS KIND of result is not new in social psychology but it has not been emphasized enough in educational research. It does pose an almost impossible dilemma over how to obtain scientific validation of educational theories, since the investigator's expectations can hardly ever be extracted. We could, however, learn more about the ways such expectations are communicated, for example, the student's awareness of them and his own participation in a virtuous cycle of achievement.

We can hardly hope to exploit the effect by systematic deception of teachers about their young students' capabilities. But is it just a coincidence that the global achievement lag of Negroes is about 15 units? Could we not then exploit the expectancy effect by systematically erasing negative prejudgments, which are exacerbated by unintelligent inferences from intelligence tests?

Needless to say, this is not a responsibility just for teachers. Across the whole community, our expectations about the potentialities of minorities are likely to be deadly accurate because they are self-fulfilling.

© 1967, The Washington Post Co.