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Revisiting James Coleman's Epic Study Entitled Equality of Educational Opportunity

Dr. David E. Bartz
Professor Emeritus
College of Education & Professional Studies
Department of Educational Leadership
Eastern Illinois University
Charleston, IL

Abstract

James Coleman's 1966 epic study entitled Equality of Educational Opportunity documented the shocking achievement gap (e.g. Five years) between Black and White children. Coleman concluded that schools have little influence on children's achievement independent of family background and related variables. The study's impact switched the focus of measuring school equality from inputs such as expenditures and class size to outcomes in the form of achievement, graduation rates, and impact on adult life. This article reviews Coleman's conclusions and discusses present-day status of selected and related factors he studied.

Keywords: James Coleman, inequalities in school, achievement gap, and family background

Major Conclusions and Impact

Coleman's research design and variables addressed in his study switched the focus for measuring school quality from *inputs* such as school expenditures, class size, volumes in library, quality of science labs, and teacher qualifications to *outcomes* in the form of student achievement, graduation rates, and impact on adult life. This was a monumental and critical change for how the quality of schools is judged in the U. S.

Equality of Educational Opportunity (EEO or "Coleman Report" hereafter) also presented shocking disparities between the achievement of Black and White students. For example, the average achievement level of a Black student in the twelfth grade in the South was the same as an average White seventh grade student in the Northeastern region of the U. S. (Coleman et al., 1966). Coleman is credited for providing data and reporting results that clearly documented the *achievement gap*. Today the achievement gap is still the major reference point for the inequalities in achievement results by race and income status of children attending schools in the U. S. Holistically Coleman et al. (1966) found that:

> Taking all these results together, one implication stands out above all: That schools bring little influence to bear on a child's achievement that is independent of his background and general social context; and that this very lack of an independent effect means that

> inequalities imposed on children by their home neighborhood, and peer environment are carried along to become inequalities with which they confront adult life at the end of school. (p. 325)

The Coleman Report concluded that family background (e.g., parents' education, number of siblings, and parents reading to children) explained more about a child's achievement than school resources (e.g., inputs such as school expenditures, class size, and teacher qualifications). Coleman's conclusion for the immense effect of family background on a child's achievement had a major impact on how many people viewed—and still do view—the extent to which schools can be the equalizer for children from disadvantaged lower-income environments pertaining to acquiring knowledge and skills for success in school and their future social and economic adult lives. Coleman also found that school resources such as per pupil expenditures, school size, science labs and other aspects of the facility, curriculum, and volumes in the library had minimal impact on achievement (Hanushek, 2016; Hoxby, 2016). Peer influence was found to be an important factor for a given student's quality of education (Coleman et al., 1966). Peer influence was measured by variables such as average hours of homework done per week, preparation and planning to go to college, discipline problems and related issues, mobility, attendance, and the proportion of students having encyclopedias at home (Coleman et al., 1966).

Regarding school segregation, the study found that the majority of U. S. public school students attended segregated schools. More than 65% of Black children in the first grade attended schools that were 90% to 100% Black. Eighty-seven percent of these first graders attended schools that were 50% or more Black. About 80% of White first graders went to a school that was 90% to 100% White. One-race schools—Black or White—were the norm in the South and existed in all regions of the U. S. in the fall of 1965 when Coleman collected his data. However, predominantly Black schools in the South did not have significantly fewer resources than predominantly White schools (Coleman et al., 1966). This was a surprising finding to many.

The Equality of Educational Opportunity study was commissioned by the Civil Rights Act of 1964. It sampled 567,148 students in first, third, sixth, ninth, and twelfth grades; 3,941 principals; and 44,193 teachers in approximately 4,000 schools in the following regions: Northeast, Midwest, South, Southwest, and West for metropolitan districts. For nonmetropolitan districts three region descriptors were used: South, Southwest, and North and West as one entity. Most of the data were collected in the fall of 1965, with the final report released in early July of 1966 (Coleman et al., 1966).

A major problem in drawing conclusions from such variables as family background and other aspects of a child's non-school environment is that the results of the EEO study are often criticized, because most of Coleman's analyses used correlation model(s) as compared to present day statistical models that more effectively identify causation. As Hoxby (2016, p. 66) noted, "Coleman may have not come to inaccurate conclusions, but his methods were so flawed that the conclusions were not justified from his study." Even taking into account Coleman's statistical analysis, for the huge effect of family background on achievement, Hanushek (2016) noted:

> The finding in the Coleman Report that family-background factors powerfully affect student achievement is not and never has been disputed. Virtually all subsequent analyses have found measures of family background (parents' education, family structure, and so forth) to be a significant explanation of achievement differences. (p. 23)

The EEO study and Coleman's conclusions have received immense review of reanalysis over the past fifty years (e.g., Mosteller & Moynihan, 1972; Alexander & Morgan, 2016). It should be noted that Coleman et al. (1966) cautioned throughout the Report the limitations and conclusions. In reference to general characteristics of school environment, he stated that "… the child experiences his environment as a whole, while statistics measure necessarily fragments of it" (p. 37). Another example of his cautioning is "Great collections of numbers such as are found in these pages—totals and averages and percentages, obscure rather than sharpen and illuminate the range of variations they represent" (p. 8).

The remainder of this article addresses what is now known about selected variables studied by Coleman and their impact on children today. The achievement gap, racial composition of schools, the impact of expenditures, the influences of teachers, family background effects, and peer influence are discussed. Further, the charter school movement and early childhood education programs are reviewed in the context of making education more equitable for children from minority and low-income environments. Lastly, the author reflects on the Coleman Report and happenings over the past fifty years to address issues prompted by the Report.

Achievement Gap

"After 50 years the achievement gap between white and black students has barely narrowed" (Camera, 2016, p. 1). This conclusion is extremely disappointing, at best, and must be viewed as an unmet challenge to be more vigorously pursued in the future. In essence, the Black-White achievement gap has changed little since Coleman's Report. The personnel at the CUNY (City University of New York) Institute for Educational Policy noted regarding the Black-White achievement gap that:

> The first NAEP (National Assessment of Education Progress) assessments, from the early 1970s, documented a substantial gap in test performance in reading and math between Black students and White students. Since then, this achievement gap has appeared to be fluid, narrowing in the 1970s and 1980s but flattening since 2004 (Barton & Coley, 2010). Black students on average score below White students by one standard deviation, which amounts to the difference between the performance of a 4^{th} grader and an 8^{th} grader. (Miksic, 2014, p. 1)

For the income gap (between children for low SES families compared to children from high SES families) the achievement differences are even higher according to the Institute. The NEA's (National Education Association) 2016 review of the 2013 NAEP results in the context of achievement gaps revealed that Black and Hispanic children performed significantly lower than White children, with children classified as Asian/Pacific Islanders performing higher than Whites. Lastly, Hanushek (2016) opined that using 2013 NAEP achievement data for mathematics, the average twelfth grade Black student was at the nineteenth percentile of the White student distribution. In summary, school personnel in the U. S. have had minimal success overall in closing the achievement gap.

Racial Composition of Schools

Fewer Black children are in segregated schools today than when Coleman collected his data in 1965. From the late 1960s to the late 1980s, federal court judges desegregated many public schools, especially in the South. In 1968, the U. S. Supreme Court ruled in Green v. New Kent County (Virginia) that all deliberate speed with respect to dismantling the segregated dual school systems (two separate sets of schools in a district, one Black and the other White) meant "now." Segregated districts must become unitary—one school district for all children, Black and White, enjoying the rights of the Equal Protection Clause of the 14th Amendment of the U. S. Constitution. Becoming unitary could release a court ordered district from federal jurisdiction if it removed the vestiges of the old dual segregated system "root and branch," a relatively high threshold. (This was later changed by the Supreme Court to "extent practicable" in the 1991 Board of Education v. Dowell [Oklahoma City] case—an easier threshold to meet.) Further, the court in the 1971 case Swan v. Charlotte-Mecklenburg Board of Education (North Carolina) approved busing as an acceptable means for dismantling segregated schools.

Since the late 1980s, segregated Nonwhite schools have risen from 5.7% to 18.6% of all public schools. (A segregated Nonwhite school has 0-10% White children.) Segregated Nonwhite schools are most frequently Black, Latino, or a combination thereof (Orfield, Jongyeon, Frankenberg, & Siegal-Hawley, 2016). Using the metric of percentage of Black students in 90%-100% Nonwhite schools, New York (65.8%) and Illinois (59.6%) are the most segregated states. The figure for Louisiana is 33.2% and for Florida 34.4%, two southern states that were bastions of dejure (by law) segregation before Brown (1954) now much lower than two northern states (Orfield et. al., 2016). Recent data compiled by the GAO (Government Accountability Office, 2016) depict a trend similar to that identified by Orfield and his associates. GAO data from 2000 – 2001 to 2013 – 14 show that K-12 public schools with "high percentages" of Black and Hispanic students grew from nine percent to sixteen percent.

Whites now represent fewer than 50% (and decreasing) of public school children in the U. S., with Blacks being 15% and Latinos 25% and growing. Segregated Nonwhite schools today often experience unequal educational opportunities on factors such as advanced placement courses and other higher academic courses than non-segregated schools. Assuming that racial diversity in and of itself provides an advantageous public school environment, it is an advantage many children in the U. S. do not experience (Orfield et. al., 2016).

Impact of Expenditures (Does Money Matter?)

The statement "money does not matter" in relationship to student achievement is inaccurate. Research does not indicate that money never matters or that it cannot ever matter (Hanushek, 2016). There has to be a necessary *floor* or base amount of money for schools to operate and stay open. The pertinent question is: What is the adequate basic amount? State legislators continue to debate this issue, as do school administrators, board of education members, and the general citizenry. How equitable a given state's funding formula for public school aid often comes under attack depending on how *equalizing* it is to leveling the playing field for children from low-income environments.

Everything else being equal, more money by itself does not necessarily prompt increased achievement. Hanushek (2016, p. 24) aptly notes, "How money is spent is much more important

than how much is spent. Just providing more funds to a typical school district without any change in incentives and operating rules is unlikely to lead to systematic improvements in student outcomes." According to Hanushek, the precise ways money needs to be utilized in order to improve student achievement efficiently and effectively needs to be examined by all stakeholders. Up to this moment, we are not in agreement of the answers for this issue.

Personnel and related *people* costs often account for upward to 85% of a district's operating budget. Add to that the costs related to facilities, grounds, transportation, and food service, there are not a lot of discretionary funds available. Getting increased funding levies approved via a vote of the people for more money to operate schools is very difficult in most communities. Adding to the funding situation is the dire financial conditions of numerous state governments. In sum, additional funds for new and enhanced educational programs can be difficult to attain.

Impact of Teachers (Do Teachers Matter?)

Teacher qualifications was one of the variables Coleman included in school resources, inferring that family background explained more about a student's achievement than teachers. However, Coleman did note, that teachers had a greater impact at higher grade levels and far more for minority than majority students (Coleman et al., 1966). Current research (Goldhaber, 2016) indicates that in general the following factors pertaining to teachers have little impact on student achievement: (a) competency as defined by state certification, (b) advanced degree(s), (c) the college or university attended, (d) the quantity of mentoring or professional development received, and (e) years of experience exceeding five.

Measures of a teacher's effectiveness *in the classroom* do greatly impact student achievement in that classroom and subsequent years for the students. In disadvantaged urban schools, an excellent teacher in a single year can produce additional gain for students worth one full year's learning compared to students in the same school with an ineffective teacher (Hanushek, 2016). Students in an effective teacher's classroom also receive benefits that carry into adulthood. Value added measures of teachers do predict student outcomes (e.g., more likely to graduate, go to college, and earn higher wages as an adult) long into the future (Chetty, Friedman, & Rockoff, 2014). In essence, teacher quality can have a huge impact on student achievement.

How Family Background Influences Student Achievement

Coleman, et al. (1966) found that family and peers had an effect on student achievement that was distinct from the influence of schools or neighborhoods. Examples of variables composing family background in the EEO study are parents' educational desires, parents' education, size of family, structural integrity of the home, items in the home, and reading materials in the home. (Coleman did not directly measure the income of parents.) In many cases today, wealthy parents buy homes in neighborhoods in school districts that have high achieving schools, whereas low-income parents cannot. The point is that wealth of a family may be the major predictor variable for children from these homes generally being high achievers as compared to some set of specific family background indicators. Further, wealthy parents often provide their children with educationally enriched activities outside of the school day and other times schools are not in session in the form of summer camps, museum trips, private tutors, and so forth. These

opportunities compliment and supplement the school's educational activities. Parents struggling economically often do not have the time or resources to enroll their children in these enrichment activities that support and extend the school's programs. The point is that wealthy parents can generally provide more out-of-school time learning opportunities (OLT)—also referred to as expanded learning opportunities (ELO).

A New York Times article by Dell' Antonia (June 5, 2016) entitled *The Families That Can't Afford Summer* aptly describes the impact wealth—or lack thereof—has on a child's learning and ultimately the income achievement gap. Dell' Antonia states:

> In summer, the lack of affordable childcare and the achievement gap collide for lower-income families. Most kids lose math skills over the summer, but low-income children also lose, on average, more than two months of reading skills—and they don't gain them back. That puts them nearly three years behind higher-income peers by the end of fifth grade, and the gap just keeps getting wider. Researchers credit the summer slide for about half of the overall difference in academic achievement between lower and higher-income students. (p. 4, SR)

A study conducted by Lewis and Burd-Sharps (2016) concluded that graduating on time from high school is highly related to a student's neighborhood of residence, even when the student attends via a school choice program high school outside of her/his neighborhood. The more disadvantaged (e.g., high poverty rate and low medium household income) the child's neighborhood, the more likely she/he will not graduate on time (in four years).

Besides wealth (which includes earned income of parents/guardians), other family background factors important today for children's school achievement are how frequently adults read to their children and other *word-rich* experiences in the home, educational level of the parent(s), parent expectations for learning at school and home, promotion of literacy and mathematics skills outside of school, parent linkage with the teacher, and support of the school's efforts. Nutrition, family structure (e.g., single parent homes and cohabitation of parents causing instability), and parental incarceration are also factors that impact student achievement.

Peer Influence on Students Today

Separate from—and prior to—the 1966 EEO study, Coleman (1961) wrote *The Adolescent Society* based on a study he did in the Chicagoland area. His major conclusion was that when children become adolescents, they often switch their normative point of influence from parents and other adults in their lives to their peers. The point being made is that peers often have a greater influence with adolescents for their behavior than parents and other significant adults in their life.

In the past several decades much of the research on peer group influence has been in the area of substance abuse—alcohol, drugs, and smoking—and selection of group membership such as gangs. Peers continue to generally have a strong influence on other adolescents' behaviors, although not always a controlling one. Macionis (2012) surmised that peer groups allow an adolescent to *escape* from the direct supervision of adults. He states that,

> It is not surprising, then, that parents often express concern about who their child's friends are. In a rapidly changing society, peer groups have great influence, and the attitudes of young and old may differ because of a "generation gap." (p. 112)

Coleman's conclusions in the EEO Study are similar. There is no reason to believe today that, in general, his findings on peer influence for adolescents have significantly changed.

Schools of Choice

Coleman made no mention of private education in the EEO Study. Coleman did infer that public schools have a monopoly, with choice only being available to those parents who can afford to buy a private school education. In a major study of private schools that included catholic schools, Coleman, Hoffer, and Kilgore (1981) found that students enrolled in Catholic high schools learned more and had higher graduation rates than their public school counterparts. In particular, minority students appeared to benefit from the Catholic school experience (West, 2016).

Schools of choice represent an opportunity for children to attend a school different from the school to which they are usually assigned for attendance. There are various forms of school choice available to students depending upon state of residence. Conceptually, schools of choice offer an opportunity for parents to select where their children are educated as opposed to being assigned to a school by district policy. In essence, schools of choice break the monopoly that a public school has on which school a student attends.

Lottery-based admission processes used by many school choice programs allow for research into the effects of school choice. Specifically, the random selection process is similar to an experimental design in that there is a control group (those not accepted) and experimental group (those accepted). While there is considerable disagreement of results, there is little evidence that in general students attending schools of choice have significantly higher achievement. However, students that have attended schools of choice are more likely to graduate from high school and enroll in college than their public peers (West, 2016).

A very important conclusion regarding schools of choice by West (2016) is that

> The chief beneficiaries of policies that expand parental choice appear to be in urban minority students—precisely the group that Coleman argued has the least choice in a public school system in which school assignment depends on where a family lives. (p. 54)

In 2014, nineteen states operated one or more school voucher programs. Approximately 140,000 students participated. Forty-three states presently have charter schools. Enrollments represent approximately five percent of U. S. students (West).

Early Childhood Education

Many educators, legislators, and members of the general citizenry believe that establishing formal education programs for children prior to kindergarten would be dollars well spent. The Head Start program initiated as a part of President Johnson's Great Society program in the 1960s

is the major federally funded preschool program in the U. S. Head Start—at best—has mixed reviews of its effectiveness, with many studies questioning its sustainable effects. There have been, and are, effective preschool programs such as Perry Preschool Program in Ypsilanti, Michigan, The Chicago Child/Parent Centers, and the New Jersey Abbott Preschool Program (Egalite, 2016). Whitebook, McLean, and Austin (2016) offer a recent criticism of preschool programs when they state that

> … our system of preparing, supporting, and rewarding early educators in the United States remains largely ineffective, inefficient, and in equitable, posing multiple obstacles to teachers' efforts to nurture children's optimal development and learning as well as risks to their own well-being. (p. 4)

Considerable research exists pertaining to the necessary components of an effective preschool program. Such components are:

1. State-of-the-art curriculum that addresses the whole child, inclusive of strong academic, social/emotional, and physical development components accompanied with meaningful and summative assessment.
2. Well-trained (and receiving continuous training) teachers who provide engaged interaction and a supporting and nurturing learning environment.
3. Meaningful family engagement.
4. Small student teacher ratios, full day, five days a week structure, and multiple years' attendance (Wechsler, Melnick, Maier, & Bishop, 2016).

Reflections

It has always been my belief that public schools can make a positive difference—including achievement—in the lives of minority and low-income students. (I resent when people declare school personnel cannot make such a difference.) In 1968, I entered the workforce as a full-time educator, and also began my graduate studies. My doctorate was completed in 1972, and I worked full-time except for a one-year residency requirement when I was a full-time graduate student. Through readings and discussions, the Coleman Report's influence on my graduate studies was immense. At that time underachieving minority and low-income children were referred to as *disadvantaged*, with much attention given to determining how to best meet their needs. The achievement gap, for the most part, was not yet fully acknowledged or pursued by public schools, per se.

From 1972-1978, I was a central office administrator in the Kalamazoo, Michigan Public Schools where we started releasing disaggregated achievement test results by race and gender in 1973. We were one of the first districts nationally to do so. This was very controversial, but the achievement gap needed to be made known to everyone and attacked head on. We also included student achievement data as a portion of a multiphase approach to teacher evaluation, although there was not a specific percentage assigned to it. There was even a crude "value added" formula for the student achievement component of elementary teachers. Progress was made on closing the achievement gap by race (Black-White), but it was minimal in the context of the gap's size. Further, the key processes that prompted the successes had not become part of the culture. The

teachers' union and some members of the public opposed these accountability efforts. When key staff and board of education members changed over time, the critical processes were diminished.

In 1978, I left to become a professor where I remain today, but continued to study the achievement gap and related issues. The point is I know firsthand the difficulty, politically and educationally, of closing the achievement gap. I also know that there are many high achieving minority and low-income students, although far too few.

As a school administrator, professor, and consultant, I have worked with hundreds of schools in six states. I have seen school personnel be truly successful with minority and low-income children. (I have also witnessed grossly ineffective staff and schools.) The schools that experienced the most success were elementary Learning Centers in the Dallas Independent School District. Four of the fourteen Learning Centers were among the top ten schools in the district (there were over 150 elementary schools). These four Learning Centers served minority and low-income students and were very effective in meeting the children's needs (Bartz, 2003). These schools had many resources and were relatively expensive, but the most important characteristics cost nothing extra. Unwavering high expectations for all children in an environment that treated each child with dignity and respect anchored the culture of these schools.

Today, with the huge and sophisticated state databases for student achievement, we can identify high minority-low-income schools with very high achievement, although they may be the exception to the norm. It is important to learn from these examples of high achieving schools which practices work, why they work (causation), and how to transfer these practices to other schools. Have these schools closed the achievement gap? Maybe not, but they are proof that minority-low-income schools can be successful. This country must commit to ratcheting up the priority and efforts to close the achievement gap to enhance equality of educational opportunity for all students.

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