See also Access to Education; Achievement Gap; Cultural Capital; Educational Equity; Human Capital; Parental Involvement; Peer Effects; Socioeconomic Status and Education

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Socioeconomic Status and Education

Although the concept of socioeconomic status (SES) is addressed more widely outside economics than within it, an expansive body of research across disciplines documents the educational utility of SES. Specifically within the field of economics of education, SES is a key input to the education production function often applied to consider how various resources measured among students, within classrooms, and across schools and communities can affect student outcomes. What interests economists of education is to go into the "black box" of education and determine how SES inputs matter in terms of affecting traditional student outcomes such as educational achievement or attainment and workplace performance. Outputs linked to SES in the education production function have, however, also included physical and mental health and, more recently, socioemotional noncognitive skills. The sections that follow include discussions of how SES is measured, how SES is contextualized, what inequalities arise in education based on SES, and broadening the notion of SES.

Measuring SES

Although researchers often disagree about how best to operationalize SES, it is typically considered as a three-part construct used to group people with similar economic, educational, and occupational characteristics. Income is the most commonly measured economic component of SES. Income as SES is extremely prominent in the discussion of SES: It is what commonly guides school finance. That is, the number of economically disadvantaged students (often measured by students/families receiving some sort of governmental assistance—e.g., receiving free or reduced-price lunches) in a school is commonly used to measure school need. Schools with lower SES students tend to receive additional revenue from state and federal governments as a way of offsetting lower local funding sources. As a side note, however, measures like free or reduced-price lunch only serve as a proxy for lower SES. Rarely do school districts have precise figures concerning family incomes to make these calculations. Therefore, calculating SES often comes with many measurement challenges.

As a second way to measure SES, education and degree status undergird employable skills and are often coupled with income. Occupational prestige is generally the third component of SES because it entails social position recognized by others. It is often the case that in large-scale survey datasets of families (e.g., the Early Childhood Longitudinal Study), a composite measure of SES is created based on all three components (income, education, and occupation). These are not readily available in administrative data. All of these different indicators of SES, however, capture a different dimension of the resources available to a person and operate through different mechanisms to affect outcomes. Test score gaps between low- and high-resource children are much more pronounced, for example, when SES is measured by income rather than by the educational attainment of parents.

SES and social class are related terms often used interchangeably, although they are not synonymous. SES connotes the materialist prospects of upward mobility, while social class suggests a much more rigidly structured inborn class status. Accordingly, the predominant narrative on social class draws

on gradient approaches that focus on the effects of relative SES across three more or less distinguishable social class groups: (1) the upper class, (2) the middle and working classes, and (3) the lower class. Yet the diversity in contemporary America has erased some of what were once more obvious if not impermeable markers of social class. Religious affiliation, voting patterns, and even skin color are much less clearly the essential class indicators they once were, making more fine-grained analyses of SES increasingly important, even as growing economic inequality appears to be widening the distance separating the rungs on the proverbial ladder toward upward social mobility.

Contextualizing SES

Research discipline aside, SES may be the most widely used contextual variable in research on educational and life success. For decades, student performance and SES have been veritably bound together in research on the measure and production of subject matter cognition and social mobility. Myriad studies confirm that SES is among the most powerful predictors of student test score performance, years of completed schooling, and human flourishing. How SES affects these outcomes is the focus of this subsection.

Family SES

Neoclassical economists originally introduced human capital theory to explain how parents are uniquely positioned to invest their own socioeconomic resources in the skills development of their children, fostering in them tastes and preferences for schooling. The widely read Coleman Report of 1966 marked the onset of a large body of studies adhering closely to human capital theory in investigations of family SES—all of which showed the influence of SES on educational outcomes.

Early childhood parenting practices and communication styles, for example, matter greatly and are patterned along SES lines. A lack of school-specific knowledge is often what differentiates high- and low-SES parents in their approaches to raising children. According to one well-known study, by age 3 the children of professionals had vocabularies of twice as many words as the children of parents receiving social assistance, which, in turn, bolstered advantaged children's IQ. High-SES families have more money to invest in their children's human capital through the purchase of learning materials, more time to read to their children at home, and more energy to devote to parenting. Other research suggests that high-SES parents employ what has been called a strategy of "concerted cultivation" to instill in their children a distinct sense of entitlement that facilitates upward mobility. Parents' participation in social networks that include the parents of other similarly resourced school children may make available crucial information about school policies, teachers, and many of the students' peers, empowering families to channel their resources as effectively as possible into children's educational success.

Classroom SES

When examining SES at the classroom level, research in economics upholds the importance of classroom effects, which materializes as the influence of one student on the outcomes of other students in the same room. Parents, educators, and researchers have long believed that peer quality is one of the most important determinants of student outcomes. Given how influential family SES is on achievement, there may be a spillover effect onto others in the same classroom based on individual SES levels. Having answers to the influence of SES as a classroom input would inform the debates on school choice, busing, and tracking.

The Coleman Report was the first major national study to demonstrate that a student's achievement is more highly related to the SES characteristics of other students in the school than any other school characteristic. To evaluate peer effects, this report focused on the composition of Black and White students in the classroom as a primary correlate that could affect a student's achievement. From this analysis, the authors reported higher achievement levels for low-SES Black students who attended middle-class schools, thereby suggesting that family background of students is a significant factor in the achievement of their peers. Along the same lines, Eric Hanushek attempted to determine a relationship between the varying proportions of Black students in a classroom (as a proxy of SES) and the subsequent effect on student achievement. Here again, the socioeconomic composition of the classroom proved to be a critical determinant of educational outcomes. More recently, Patrick McEwan examined various classroom-level measures including average classroom parental levels of educational attainment and average classroom family income. He found that these measures predicted differences

in reading and math achievement scores. Michael Gottfried relied on a sample of urban students in a large U.S. district to examine the relationship between peer SES and student achievement. In this study, peer SES was determined by the number of students receiving free or reduced-priced lunch. The findings indicated that a greater number of students receiving free or reduced-priced lunch led to lower classroom achievement. Of all the possible peer effects examined in this study (SES, peer behavior, gender, English Language Learners, special education), the effect sizes were the largest for peer SES.

Neighborhood SES

Some argue that an overemphasis on family SES has led to not enough focus on the neighborhood and community settings in which children increasingly live in concentrated wealth or poverty. While children are enveloped within families and spend a substantial portion of their waking hours in schools and classrooms, they also reside in neighborhoods often segregated by SES and basic elements of social capital, including trust, successful cooperation among community members, and networks of civic engagement. In the language of economists, such "externalities" are bidirectional and reciprocal, moving from family to community and from community to family. For example, while family SES is strongly associated with the starting point of children's achievement in kindergarten, neighborhood SES has been shown to be even more strongly associated with achievement progress after children enter formal schooling. Indeed, SES may produce differential effects across family, school, and community domains and across stages of children's development.

Gottfried examined measures of neighborhood SES and its relationship to individual students' absence from school. Using U.S. Census Bureau data, he linked the schooling records of individual students in an East Coast school district to home residential characteristics. Therefore, he defined neighborhood SES along multiple dimensions, including percentage of residential block at or below poverty, average residential block income, median age of residents on the residential block, average household size, percentage of the block that is owner occupied, and percentage of block residents who are Black. The findings indicated that when students lived in higher SES neighborhoods, they were more likely to attend school. These findings were distinguishable across student gender lines, race/ethnicity, and SES. In short, neighborhood disparities in property value, community resources, environmental health, and crime exacerbate achievement/attainment disparities between high- and low-SES children.

Inequality and SES

It has been well documented that the variation in student educational outcomes can be attributed to several key socioeconomic measures, including parents' annual income, education, and occupational status. Since the 1980s, stagnating or increasing rates of poverty alongside widening income inequality have exacerbated the gaps in educational achievement and attainment. The gap between rich and poor children's math and reading scores is now substantially wider than it was 30 years ago. Moreover, many prominent social scientists have shown that the correlation between SES and race is inevitably linked to diminished access to quality education for underrepresented minorities and therefore to patterned racial inequality in educational outcomes. Only 15% of White children under the age of 18 were living in low-SES households in 2005 compared with almost one third of all Black and Hispanic children. As early as kindergarten, gaps in achievement by class and race already approximate 1 year of learning in both mathematics and reading, and these gaps tend to persist as children continue through school. By the fourth grade, low-SES students eligible for school lunch subsidies score approximately 1 year below the national math score average. These differences persist through eighth grade. Recent research shows that trends in the test scores of low- and high-income children parallel trends in income itself, such that income-based gaps in test scores are now twice as large as test score gaps between Blacks and Whites. Attainment gaps persist at the secondary and postsecondary levels. Low-SES and historically underrepresented minority students are much more likely to drop out of school and experience decreased health and occupational status than their high-SES counterparts. These findings prefigure similar SES and racial gaps in educational attainment at the college level, where low-income and minority students are considerably less likely to receive a bachelor's degree or higher 5 years after entering college.

From SES to Wealth

While researchers have focused extensively on SES (which is often assumed to capture the full range of

educationally relevant family resources), broader measures of wealth are rarely operationalized empirically in considerations of important educational and life outcomes. There are a few exceptions, but it still holds true that wealth—variously defined as assets, net worth, and ownership of financial products—is broadly overlooked in research in the economics of education. This is a striking oversight given that emergent sociological research shows that wealth has a large and measurable impact, above and beyond SES, on a child's future success. Even after parental education, occupation, and income are controlled, parental wealth bolsters test score performance among children of ages 5 to 14. Wealth is also a strong predictor of years of completed schooling, college enrollment, and college attainment.

Wealth may affect educational outcomes through a variety of mechanisms, in part depending on the sources of wealth and the age of the child. In young adulthood, for example, wealth may become an especially critical factor in shaping one's socioemotional learning and subsequent educational trajectory. One way in which wealth may affect outcomes is by providing a safety net during times of income instability, underscoring the importance of liquid forms of wealth. It could also be that the returns to wealth are just as influential through their effect on children's socioemotional attributes that may derive from the presence of distinct and visible manifestations of wealth throughout the course of family life. The socioemotional returns to wealth, however, are yet to be investigated in research.

Disparities in wealth are far greater than disparities in annual income and other conventional measures of SES. In 2009, the median wealth of White households was 19 times that of Black households and 15 times that of Hispanic households. Moreover, wealth differences persist at every income level. Even though the wealthiest 10% of households in America experienced a loss in assets beginning in 2005, their share of overall wealth rose subsequently. Those in the top 10% were relatively less affected by the bursting of the housing market bubble in late 2007, and the Great Recession that followed, than the 90% positioned on the class rungs below. Indeed, the United States has the most unequal distribution of wealth among the Western democracies. By not accounting for a family's wealth, researchers are overlooking an important factor that provides advantages including long-term financial security and social prestige, which may contribute to student development, social mobility, and overall well-being. Although focusing on SES is necessary, it has not proven sufficient for meeting the educational challenges of the 21st century.

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See also Education Production Functions and Productivity; Peer Effects

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Special Education Finance

Special education consists of specialized instructional and related services provided to students with disabilities who are determined to be eligible under the federal Individuals with Disabilities Education Act (IDEA). This law dates back to 1975, when the original federal Education for All Handicapped Children Act was passed by the U.S. Congress. Renamed the IDEA in the 1990 reauthorization, the law provides a legal entitlement to educational services for children from birth through 2 years (under Part C of the statute) and of ages 3 through 21 years (under Part B). Under the IDEA, states and local education agencies are required to provide each eligible child with a disability a *free appropriate public education* and develop an individualized education program, a comprehensive service plan based on the child's educational needs as determined by a team of educators, parents, and medical professionals. Furthermore, the *least restrictive environment* provision of the IDEA requires that children with disabilities be served to the maximum extent appropriate with children who are not disabled. Because of the specialized services received by children with disabilities, there are important funding implications for schools, school districts, states, and the federal government. This entry provides information on the magnitude of special education spending in the United States and estimates of per-pupil spending on students with disabilities relative to their nondisabled counterparts, and discusses how these spending patterns have changed over time. It also includes a description of how the federal and state governments distribute revenues to support special education services across the nation.

Special Education Spending

In 2009–2010, 13% of public school children in the United States received special education services, and the latest comprehensive study of special education expenditures in 1999–2000 by Jay Chambers, Thomas B. Parrish, and Jenifer J. Harr indicates that the nation spent on average about two times as much (1.93) on a special education student as on a general (nonspecial) education student (see Table 1). This spending ratio was estimated based on an extensive and comprehensive set of surveys of districts, schools, and teachers, all of which were designed to gather information about programs and services provided to random samples of students who were eligible for special education services across the United States.

From these surveys, Chambers and his colleagues estimated that during 1999–2000, $12,639 was spent to educate the average special education student (including general and other education services), while $6,556 was expended on the average general education student. The spending ratio is the total amount expended to educate the average special education student relative to that spent on the average general education student (in the case of the 1999–2000 spending ratio, 1.93, it is $12,639 divided by $6,556). Roughly two thirds (about 64%, or $8,080) of the $12,639 total spent per special education student was spent on special education instructional or related services. The remainder of this total was expended on a combination of general education services ($4,394) and other special needs programs ($165) for special education students who were also receiving services for low-income or English learners. Table 1 summarizes all of these key data and calculations to estimate the spending ratio and relative amounts of spending on special education services and students.

In Table 1, it is important to distinguish between special education spending (i.e., *dollars expended on special education instructional and related services*)