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# On the Relationship between Poverty and Curriculum

Henry M. Levin

# ON THE RELATIONSHIP BETWEEN POVERTY AND CURRICULUM

HENRY M. LEVIN*

*Poverty and educational failure have been inextricably linked in American education. Students from low-income backgrounds experience relatively low levels of academic achievement and fewer years of educational attainment relative to students from higher-income categories. This Article analyzes the degree to which this educational disadvantage is due to differences in curriculum, where curriculum is defined as the overall opportunities and experiences that students face in their schools. Differences in educational success and experiences of the poor are compared with those of students with greater economic advantages at the preschool, elementary-secondary, and post-secondary levels. Poverty is shown to be related not only to poor educational outcomes, but also to such educational disadvantages as lower per pupil expenditures, inferior teacher resources, and segregation from students with greater educational and material resources. The Article addresses how the odds of educational success for the poor might be turned around through strategies to modify school experiences in their favor. Particular attention is paid to academic acceleration through relying more heavily on educational enrichment strategies as a replacement for educational remediation.*

## INTRODUCTION

Education has long been the mechanism that democratic societies use to more nearly equalize life chances among those born into different social circumstances. Capitalist societies are characterized by large differences among families in income and wealth that clearly influence the experiences and later opportunities available to their children.[1] Presumably these unequal conditions can be largely overcome if high-quality education is provided to all citizens that will enable fairer access to adult economic, political, and social opportunities.

Virtually all democratic societies sponsor educational systems that embrace the young from an early age through late adolescence, requiring compulsory attendance to ensure that all students receive a strong educational foundation that will contribute to more equitable and productive futures for individuals and society. To a large degree this conception of education dates back to the rationale of the famous educator Horace Mann, who established a system of common schools.[2] As the distinguished Secretary of the Massachusetts Commission to Improve Education (later the State Board of Education), Mann issued annual reports on the virtues of the common school. In his 1848 report, he stated his belief that "[e]ducation, then, beyond all other devices of human origins, is the great equalizer of the conditions of men—the balance-wheel of the social machinery.... [I]t prevents being poor."[3] The persuasive power of this view was reinforced with human capital theory in the 1964 Economic Report of the President, which heralded the U.S. War on Poverty.[4] The Report stated without qualification: "If children of

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1. *See* Claudia Goldin & Larry Katz, *Education and Income in the Early 20th Century: Evidence from the Prairies*, 60 J. ECON. HIST. 782, 809–10 (2000).

2. *See generally* Horace Mann, *Report No. 12 of the Massachusetts School Board*, *in* THE REPUBLIC AND THE SCHOOL: HORACE MANN ON THE EDUCATION OF FREE MEN 79 (Lawrence A. Cremin ed., 1957) (providing a representative discussion of the common school concept).

3. *Id.* at 87.

4. EXECUTIVE OFFICE OF THE PRESIDENT, ECONOMIC REPORT OF THE PRESIDENT TOGETHER WITH THE ANNUAL REPORT OF THE COUNCIL OF ECONOMIC ADVISORS 75 (1964), *available at* http://fraser.stlouisfed.org/publications/ERP/issue/1208/download/5731/ERP_1964.pdf.

poor families can be given skills and motivation, they will not become poor adults."[5] Investments in human capital in the children of low-income families will increase their skills and productivity so that their incomes will rise and will also benefit the welfare and educational success of their future children.

Unfortunately, more than forty years after this clarion call and the War on Poverty, both adult poverty and child poverty are still with us. Despite such major federal educational efforts as Head Start and Title I of the Elementary and Secondary Education Act of 1965 and its reauthorizations, child and adult poverty have maintained themselves at relatively high and stubborn rates in our affluent society. According to the National Center for Children in Poverty, of the seventy-three million children from birth to age eighteen, almost thirteen million were living in poverty in 2006—almost one out of five.[6] The poverty criterion of the federal government (about $20,000 a year for a family of four) refers to the income needed to meet the most basic needs.[7] To meet reasonable basic family expenses the Center has found that an income of twice this level would be necessary.[8] Thus, another 21% of children are found above the poverty line, but still in precarious income circumstances.[9] When families in poverty and the precarious income group are combined, they account for almost 40% of the child population.[10] And since the year 2000, the proportion of children from low-income and poor families has been rising.[11]

The purpose of this Article is to examine how schools treat students from low-income populations. In particular, to what degree does school curriculum ameliorate or undermine their educational progress, and what can be done to support their educational success? In Part I, I will provide a brief review of the educational status of children from poor and low-income families. This will be followed in Part II by a presentation of what is known about their schools, and particularly the school curriculum. Finally, Part III will review school curriculum interventions that have shown evidence of improved

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5. *Id.*
6. National Center for Children in Poverty, Basic Facts About Low-Income Children: Birth to Age 18, at 1 (Sept. 2006), http://www.nccp.org/media/lic06b_text.pdf.
7. *Id.*
8. *Id.*
9. *Id.*
10. *See id.*
11. *See id.*

outcomes for children from poverty backgrounds and will discuss their policy implications.

## I. POVERTY AND EDUCATIONAL SUCCESS

Since the publication of the Coleman report in 1966,[12] the powerful effect of family income and socioeconomic status ("SES") has been fully recognized in public policy. Coleman found that measures of family affluence seemed to have a much larger impact on student achievement than any characteristics that were associated with schools.[13] Of course, to the degree that children from low-income and minority backgrounds were attending inferior schools because of residential housing patterns, lower educational spending, and discrimination, it was not fully possible to separate out the effects of family background from the overlapping influence of school quality.[14] But more recent studies have found that family SES still dominates the statistical explanation of student achievement.[15]

### A.  *Preschool Disadvantages in Academic Readiness*

Even at kindergarten entry, it appears that there is a yawning chasm in both student achievement and school readiness skills by family income. Children in the bottom fifth of family income often score considerably lower in reading, mathematics, and general

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12. JAMES S. COLEMAN ET AL., U.S. DEP'T OF HEALTH, EDUC., & WELFARE, EQUALITY OF EDUCATIONAL OPPORTUNITY (1966).

13. *See id.* at 8.

14. *See, e.g.,* Samuel Bowles & Henry Levin, *The Determinants of Scholastic Achievement—An Appraisal of Some Recent Evidence*, 3 J. HUM. RESOURCES 3, 3 (1968) (criticizing the findings of the Coleman report based on its failure to control for social background in its analysis).

15. For example, one study found that family variables accounted for over 90% of the variance in student achievement with the remainder divided between school and neighborhood influences. Caroline Hoxby, *If Families Matter Most, Where Do Schools Come In?, in* A PRIMER ON AMERICA'S SCHOOLS 89, 96–98 (Terry M. Moe ed., 2001). SES is a general term that is usually used to reflect the income, occupation, and education of parents. Often this information is not available or known by survey respondents, so proxies are used such as reading materials in the home, a list of family possessions, and other observables. SES overlaps substantially with race. For example, in a study of preschool children it was found that 34% of black children and 29% of Hispanic children were in the bottom 20% on a SES scale, but only 9% of white students were. VALERIE LEE & DAVID BURKAM, ECON. POLICY INST., INEQUALITY AT THE STARTING GATE: SOCIAL BACKGROUND DIFFERENCES IN ACHIEVEMENT AS CHILDREN BEGIN SCHOOL 2 (2002). For an excellent discussion of the impact of family SES, including income, on student achievement, see RICHARD ROTHSTEIN, ECON. POLICY INST., CLASS AND SCHOOLS (2004). For approaches to improving educational results for children from low-SES families through changing family capacity and behavior, see Henry M. Levin & Clive Belfield, *Families as Contractual Partners in Education*, 49 UCLA L. REV. 1799 (2002).

knowledge than students in all other quintiles.[16]    On average, kindergarten entrants in the bottom 20% of SES show academic achievement that is 60% below that of the top quintile.[17]  Researchers Betty Hart and Todd Risley performed a highly acclaimed study of language and vocabulary of children in families of different SES.[18] They found that children of welfare families were exposed to far less vocabulary and less rich vocabulary than children of either working class or professional families.[19]    Children in welfare (poverty)[20] families experienced only about one-third of the vocabulary per unit of time than children from professional families.[21]

## B.    Elementary-Secondary Educational Disadvantages

At the elementary and secondary level, eligibility for free or reduced-price lunch is based upon the poverty criterion and is used by schools as a measure of poverty among their enrollments.[22]  Basing its measurements of poverty on the free or reduced-price lunch levels of schools, the National Assessment of Educational Progress ("NAEP") is a national survey that has been used for almost four decades to ascertain the academic performance of the nation's students.[23]  An analysis of NAEP data for reading in 2003 found that at fourth grade

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16. W. Steven Barnett & Clive R. Belfield, *Early Childhood Development and Social Mobility*, FUTURE OF CHILD., Fall 2006, at 73, 75.

17. LEE & BURKAM, *supra* note 15, at 2.  These differences are viewed as large and important with respect to their implications for academic progress. *See generally* Donald A. Rock & A. Jackson Stenner, *Assessment Issues in the Testing of Children at School Entry*, FUTURE OF CHILD., Spring 2005, at 15 (reviewing various studies examining the achievement gap and their methodologies).

18. *See* BETTY HART & TODD RISLEY, MEANINGFUL DIFFERENCES IN THE EVERYDAY EXPERIENCE OF YOUNG AMERICAN CHILDREN, at xv (1995).

19. *Id.* at 10–15.

20. Dependence on welfare is considered a poverty measure.  The exact amount a family may earn and still qualify for Temporary Assistance for Needy Families ("TANF") varies widely across states.  Nevertheless, the intent of TANF, the U.S. welfare program, is to serve low-income (needy) families.  For income eligibility thresholds, see Urban Institute, TANF Income Eligibility Thresholds, http://www.urban.org/Uploadedpdf/900772_FastFact.pdf (last visited May 2, 2007).  For the purposes of TANF, see Administration for Children & Families, U.S. Department of Health & Human Services, Fact Sheet— Office of Family Assistance (OFA), http://www.acf.hhs.gov/opa/fact_sheets/tanf_printable.html (last visited May 2, 2007).

21. HART & RISLEY, *supra* note 18, at 10–15.

22. *See* Child Nutrition Programs—Income Eligibility Guidelines, 71 Fed. Reg. 13,336 (Mar. 15, 2006).

23. For an overview of the NAEP, see National Center for Education Statistics, Overview:  The Nation's Report Card, http://nces.ed.gov/nationsreportcard/about (last visited Apr. 21, 2007).

about 30% of students met the proficiency standard.[24] The average state proficiency rating was about 32% at the eighth-grade level. But proficiency rates of students in poverty were 23 to 25 percentage points below those of nonpoverty students at fourth grade and about 22 to 24 percentage points below nonpoverty students at eighth grade.[25] These represent dramatic differences. Comparisons of economically disadvantaged students and other students on writing assessments showed equally large disparities.[26]

A 1996 publication of the National Center for Education Statistics of the U.S. Department of Education explored statistically the relation between education and urban poverty.[27] In virtually every situation, schools with high levels of poverty showed substantially poorer results than other schools. Children in schools with high concentrations of poverty enrollments had lower percentages of students who graduated from high school on time as well as lower graduation rates.[28] Although high school dropout rates are not typically calculated for students according to poverty criteria, the high proportion of minority students in poverty gives some indication of poverty dropout rates.

A recent study estimates that African-American males had a rate of graduation after four years of high school of about 48% compared to a 74% rate for white males and a 70% graduation rate for the overall population.[29] Comparable figures for African-American females and for white females were 59% and 79%, respectively.[30] As of 2001, the rate of students who do not receive a high school diploma is estimated to be about six times higher for the lowest SES quintile

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24. PATRICIA L. DONAHUE ET AL., NAT'L CTR. FOR EDUC. STATISTICS, U.S. DEP'T OF EDUC., THE NATION'S REPORT CARD: READING 2003, at 117 (2005), *available at* http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2005453.

25. JENNIFER SLOAN MCCOMBS ET AL., ACHIEVING STATE AND NATIONAL LITERACY GOALS, A LONG UPHILL ROAD: A REPORT TO CARNEGIE CORPORATION OF NEW YORK 17–38 (2005).

26. *Id.* at 30.

27. *See* LAURA LIPPMAN ET AL., NAT'L CTR. FOR EDUC. STATISTICS, U.S. DEP'T OF EDUC., URBAN SCHOOLS: THE CHALLENGE OF LOCATION AND POVERTY 1 (1996), *available at* http://nces.ed.gov/pubs/96184all.pdf.

28. *See id.* at 20.

29. JAY P. GREENE & MARCUS A. WINTERS, MANHATTAN INST. FOR POLICY RESEARCH, CIVIC REPORT NO. 8, LEAVING BOYS BEHIND: PUBLIC HIGH SCHOOL GRADUATION RATES 3 (2006), *available at* http://www.manhattan-institute.org/pdf/cr_48.pdf.

30. *Id.* at 11.

compared to the highest SES quintile.[31]     A comparison of standardized test scores shows a thirty percentile difference between the two quartiles four years after eighth grade.[32] As a national expert on school dropouts summarized, "Research has consistently found that socioeconomic status, most commonly measured by parental education and income, is a powerful predictor of school achievement and dropout behavior."[33]

## C. Post-Secondary Educational Disadvantages

Even if children from poverty complete high school, their post-secondary participation is likely to be considerably poorer than that of nonpoverty students.[34] If we compare the bottom and top 10% of students on an income measure, almost 98% of the top 10% graduate from high school relative to only about 57% of those in the bottom 10% of income.[35] Among the top 10%, about 80% attend college, compared to only about 20% of the bottom 10%.[36] Half of the highest 10% in income graduate from college, but only about 6% of those in the bottom 10%.[37] The average number of years of schooling received by the two groups is about eleven years for the lowest 10% and almost fifteen years for the highest 10%.[38]   Further, when participating in post-secondary education, students from low SES are far more likely to go to community colleges and less-selective four-year colleges than their higher SES colleagues.[39]   Throughout the lifespan, lower SES is consistently associated with poorer academic performance and less educational attainment.  The question thus is the extent to which school practices perpetuate this disparity in educational performance of students from differing socioeconomic strata.

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31. *See* JOHN WIRT ET AL., NAT'L CTR. FOR EDUC. STATISTICS, U.S. DEP'T OF EDUC., THE CONDITION OF EDUCATION 2004, at 138 (2004), *available at* http://nces.ed.gov/pubs2004/2004077.pdf.

32. Cecilia Elena Rouse & Lisa Barrow, *U.S. Elementary and Secondary Schools: Equalizing Opportunity or Replicating the Status Quo*, FUTURE OF CHILD., Fall 2006, at 99, 102.

33. Russell W. Rumberger, *Dropping Out of Middle School: A Multilevel Analysis of Students and Schools*, 32 AM. EDUC. RES. J. 583, 587–625 (1995).

34. *See* Robert Haveman & Timothy Smeeding, *The Role of Higher Education in Social Mobility*, FUTURE OF CHILD., Fall 2006, at 125, 129–36.

35. *Id.* at 132.

36. *Id.*

37. *Id.*

38. *Id.*

39. *Id.* at 139.

## II. IS CURRICULUM THE CULPRIT?

Despite the rhetoric of equal educational opportunity and the democratizing effect of the common school on "leveling the playing field," it is clear that children who are born into poverty or low-income circumstances are less likely to experience school success than other children. With a lower probability of school success, their chances of economic, political, and social success are also seriously compromised. It is often asserted that schools attended by low-income children are inferior in many respects to those attended by other children and that this is at least a partial cause for the poorer educational results.[40] Later, this Article will review some of these differences and their consequences. But first, it will ask if curriculum provided for children in poverty is systematically less challenging and less fulfilling academically from that provided for other children. Before we can answer that question, we have to define curriculum.

Curriculum is often viewed as a list of courses or subjects and their organization and supporting materials.[41] It is also commonly assumed that teachers tend to follow mechanically the "curriculum" so that these components define what a student is exposed to in the classroom.[42] Certainly, this understanding reflects a traditional view of curriculum, and the term is often used in this context when the question is raised: "What is your curriculum?" But most analysts of schools view this definition as a highly limited one.[43] Depending upon the teacher, some subjects may be emphasized and others may not. Some teachers will add other topics that they consider important and develop examples and illustrations that make the topics come to life in certain ways. Other teachers will simply follow the textbook, review the readings and subtopics, and administer standard tests. Some students will receive more attention and reinforcement for success than other students, exposing them to a different educational experience. It has also been argued by some that there is an overt curriculum and a hidden curriculum.[44] The formal curriculum is a

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40. For a further discussion, see *infra* note 69 and accompanying text.

41. *See* 2 ENCYCLOPEDIA OF EDUCATION 530 (James Guthrie ed., 2d ed. 2003) (defining "curriculum").

42. *See generally* WILLIAM SCHMIDT ET AL., WHY SCHOOLS MATTER, at xix (2001) (documenting U.S. mathematics and science curricula and finding "very dramatic results on the strength of the relationship of curriculum to learning").

43. *See* Deborah Loewenberg-Ball & Sharon Feiman-Nesmer, *Using Textbooks and Teachers' Guides: A Dilemma for Beginning Teachers and Teacher Educators*, 18 CURRICULUM INQUIRY 401, 401–23 (1988).

44. For a classic work that demonstrates the differences, see PHILIP H. JACKSON, LIFE IN CLASSROOMS (1968). A good general work on curriculum and its controversies is

listing of goals, topics, and assignments. The hidden curriculum is the actual content of the student experience which may be characterized by activities and interactions that are profoundly different from the formal dimensions.[45]

For this reason, the conventional view of curriculum is too limited to ask how it might affect the educational experience and outcomes for low-income or poor children. Rather, we need to address all of the major dimensions of schools that account for children's experiences, including material resources, teacher behavior, student tracking, and student segregation. Together, these factors define the larger curriculum that a child is exposed to within the school.

## A. Per Pupil Expenditures

The most important single measure of material resources is the amount of money spent on the education of each child. This amount can be analyzed with respect to the amount of per pupil expenditure per year or an assessment of the overall amount of public resources invested in each child.[46] Although much attention has been devoted to the amount spent per year for different types of children,[47] what is rarely discussed is the difference in public resources by virtue of the additional years of public investment in schooling that children from higher-income families receive. According to Haveman and Smeeding, the difference in number of years of schooling achieved between children from the top quartile and bottom quartile of income (adjusted for family needs) is about 2.5 years.[48] This discrepancy would account for a difference in public investment per child of about $25,000 between the two quartiles.[49] Assuming the same proportions

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DANIEL TANNER & LAUREN TANNER, CURRICULUM DEVELOPMENT: THEORY INTO PRACTICE (4th ed. 2006). For an overall exchange on curricular issues, see ISSUES IN CURRICULUM: A SELECTION OF CHAPTERS FROM PAST NSSE YEARBOOKS (Margaret J. Early & Kenneth J. Rehage eds., 1999).

45. *See* JACKSON, *supra* note 44, at 41–81.

46. For further discussion, see David Greenberg & John McCall, *Teacher Mobility and Allocation*, 9 J. HUM. RESOURCES 480 (1974).

47. *See, e.g.,* JAY CHAMBERS ET AL., TOTAL EXPENDITURES FOR STUDENTS WITH DISABILITIES, 1999–2000: SPENDING VARIATION BY DISABILITY (2003), *available at* http://www.csef-air.org/publications/seep/national/Final_SEEP_Report_5.PDF.

48. Haveman & Smeeding, *supra* note 34, at 132.

49. In the 2002–03 school year, total expenditures by public school districts amounted to $9,644 per student. A conservative estimate, then, of current per pupil expenditures is $10,000. *See* PATRICK ROONEY ET AL., NAT'L CTR. FOR EDUC. STATISTICS, U.S. DEP'T OF EDUC., THE CONDITION OF EDUCATION 2006, at 85 (2006), *available at* http://nces.ed.gov/pubs2006/2006071.pdf.

of children in each quartile, the approximately eighteen million children in the bottom quartile will have an aggregate public investment in their education that amounts to about $450 billion less than the children in the top quartile. Using a rate of return on educational investment which empirical studies have estimated to be approximately 10%,[50] this difference alone would result in annual income differences for the two quartiles of about $45 billion or a difference in income per capita of about $2,500 a year from this source alone. When looking at the differential financial support for the education of low-income children, the important source of difference from fewer years of publicly supported schooling is often overlooked.

The United States has a highly decentralized educational system with constitutional authority vested in the fifty state constitutions, and all states but Hawaii discharge their educational obligations through local educational agencies of which there are about 14,000.[51] In recent years, more than 90% of educational funding has been derived from state and local sources rather than from the federal government.[52] Therefore, generalization about per pupil spending depends heavily on the incomes of the states and the formulas for funding education as well as the tax resources available to local educational agencies. As might be expected, per pupil expenditures at both the state and local educational agency levels (e.g., school districts) are heavily dependent on family income levels.[53] Higher-income jurisdictions spend more on education for each child than those with more meager resources. In addition, there is evidence that the link between income and educational expenditure is rising, resulting in greater inequalities over time among entities with

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50. LISA BARROW & CECILIA ELENA ROUSE, DO RETURNS TO SCHOOLING DIFFER BY RACE AND ETHNICITY? 1 (2005).

51. THOMAS D. SNYDER & ALEXANDRA G. TAN, NAT'L CTR. FOR EDUC. STATISTICS, U.S. DEP'T OF EDUC., DIGEST OF EDUCATION STATISTICS, 2004 tbl.87 (2005), http://nces.ed.gov/programs/digest/d04/tables/dt04_087.asp.

52. JASON HILL & FRANK JOHNSON, NAT'L CTR. FOR EDUC. STATISTICS, U.S. DEP'T OF EDUC., REVENUES AND EXPENDITURES FOR PUBLIC ELEMENTARY AND SECONDARY EDUATION: SCHOOL YEAR 2002–2003, at 7 tbl.2 (2005), http://nces.ed.gov/pubs2005/2005353.pdf.

53. Thomas A. Downes & Mona P. Shah, *The Effect of School Finance Reforms on the Level and Growth of Per-Pupil Expenditures*, 81 PEABODY J. EDUC. 1, 23–25 (2006), *available at* www.leaonline.com/doi/abs/10.1207/s15327930pje8103_1; Caroline M. Hoxby, *How Much Does School Spending Depend on Family Income? The Historical Origins of the Current School Finance Dilemma*, 88 AM. ECON. REV. 309, 309–14 (1998).

different incomes.[54]    Unfortunately, lower-income states have a higher incidence of students in poverty than higher-income states, representing an additional source of lower educational investment in low-income and poor students.[55]

Thus, the main question is whether the federal and state governments have invested adequate *additional* funding in the education of low-income and poor students to offset the lower educational investments more generally.  Recent appropriations for Title I of the Federal No Child Left Behind Act have been about $12 billion.[56]    Of the approximately fifty million elementary and secondary students in the United States, about 17% are considered poor, and 21% are considered near-poor.[57]  Thus, even if Title I appropriations were strictly devoted to the education of each child rather than administrative and testing requirements, the additional spending would be about $800 for each poor or near-poor child.  That amount would be about 10% of the average per pupil expenditure in 2002 to 2003.[58]  In contrast, studies of the statistical cost functions to calculate what would be necessary to reach adequate levels of performance for students in poverty suggest that it would take a doubling of expenditures or more.[59]  In contrast, it is probable that the modest level of federal assistance does not even compensate for the fact that many students in poverty are in poorer states and school districts with lower than average overall expenditures.  When one considers all sources of funding, evidence suggests that the resource

54. DOUGLAS REED, ON EQUAL TERMS: THE CONSTITUTIONAL POLITICS OF EDUCATIONAL OPPORTUNITY 12–35 (2001), *available at* http://www.loc.gov/catdir/ samples/prin031/2001016372.html.

55. *See* Bureau of the Census, U.S. Department of Commerce, Small Area Income & Poverty Estimates, 2003, http://www.census.gov/cgi-bin/saipe/national.cgi?year=2003& ascii=#SA91 (last visited Apr. 2, 2007).

56. The 2004 fiscal year federal appropriation for Title I was $12,342,000. *See* PAUL M. IRWIN, CONG. RESEARCH SERV., REPORT NO. RS21947, K–12 EDUCATION PROGRAMS: APPROPRIATIONS SUMMARY 2 (2004), *available at* http://www.senate.gov/ ~hutchison/RS21947.pdf.

57. These percentages are taken from a report by the National Center for Education Statistics of the U.S. Department of Education. JOHN WIRT ET AL., NAT'L CTR. FOR EDUC. STATISTICS, U.S. DEP'T OF EDUC., THE CONDITION OF EDUCATION 2003, at 95 tbl.2-1 (2003), *available at* http://nces.ed.gov/pubs2003/2003067.pdf. "Near-poor" students are defined as those with household incomes from 100% to 199% of the poverty threshold. PETER TICE ET AL., NAT'L CTR. FOR EDUC. STATISTICS, U.S. DEP'T OF EDUC., TRENDS IN THE USE OF SCHOOL CHOICE: 1993 TO 2003, at 49 (2006), *available at* http://nces.ed.gov/pubs2007/2007045.pdf.

58. National Center for Education Statistics, U.S. Department of Education, Fast Facts, http://nces.ed.gov/fastfacts/display.asp?id=66 (last visited Mar. 25, 2007).

59. *See* Andrew Reschovsky & Jennifer Imazki, *Achieving Educational Adequacy Through School Finance Reform*, 26 J. EDUC. FIN. 373, 373–96 (2001).

base for addressing the education of children in poverty is below the level provided for nonpoor children.[60] Further, this spending outcome contradicts the research findings showing that considerably higher amounts must be spent on the education of poor children to raise their performance to adequate levels.

## B.   *Teacher Resources*

The educational experience of low-income students is not only limited by the financial resources available to their schools. It is especially limited by the quality of the teachers that those schools are able to attract. Lower funding means that states and districts pay lower salaries than jurisdictions with higher-income families where there is typically less poverty. Not only are schools impacted by high levels of student poverty in economic situations where less is likely to be spent for each child, but they are also limited in their ability to attract and hold the most qualified and experienced teachers. For example, because of the high turnover of teachers in high-poverty schools, openings for new teachers regularly occur in these schools.[61] But, as those teachers gain experience, they leave for schools with higher salaries, better working conditions, and more middle class students.[62] The National Center for Education Statistics found that among schools in the bottom quarter of poverty enrollments, only one of ten teachers had three years or less experience, but in the top quarter of poverty concentration, the number of teachers with this limited experience was more than one out of five.[63] An intensive

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60. The Education Trust in Washington, D.C., has produced some very helpful reports showing the fiscal disadvantages that higher-poverty schools experience among the states. *See* EDUC. TRUST, THE FUNDING GAP 2005: LOW INCOME AND MINORITY STUDENTS SHORTCHANGED BY MOST STATES 1–11 (2005), *available at* http://www2.ed trust.org/NR/rdonlyres/31D276EF-72E1-458A-8C71-E3D262A4C91E/0/FundingGap2005. pdf; KEVIN CAREY, THE FUNDING GAP 2004: MANY STATES STILL SHORTCHANGE LOW-INCOME AND MINORITY STUDENTS (2004), *available at* http://www2.edtrust.org/ NR/rdonlyres/30B3C1B3-3DA6-4809-AFB9-2DAACF11CF88/0/funding2004.pdf; KEVIN CAREY, THE FUNDING GAP 2003: LOW-INCOME AND MINORITY STUDENTS STILL RECEIVE FEWER DOLLARS IN MANY STATES (2003), *available at* http://www2.edtrust.org/ NR/rdonlyres/EE004C0A-D7B8-40A6-8A03-1F26B8228502/0/funding2003.pdf.

61. Donald Boyd et al., *Explaining the Short Careers of High-Achieving Teachers in Schools with Low-Performing Students*, 95 AM. ECON. REV. (PAPERS & PROC.) 166, 166–71 (2005); Greenberg & McCall, *supra* note 46, at 480–85.

62. This phenomenon also seems to occur in the distribution of teachers with respect to race. *See* Charles Clotfelter et al., *Who Teaches Whom? Race and the Distribution of Novice Teachers*, 24 ECON. EDUC. REV. 377, 377–92 (2005).

63. *See* Donald Boyd et al., *The Preparation and Recruitment of Teachers: A Labor-Market Framework, in* A QUALIFIED TEACHER IN EVERY CLASSROOM? 149, 156 (Frederick M. Hess et al. eds., 2004).

study of teachers in New York schools found that about 9% had not passed tests required for teacher certification in schools where all students were proficient in English language arts, but 35% had not met this standard in schools where 20% or more of students had not met proficiency standards.[64] Almost all scholars on the subject agree that teacher quality is an important determinant of student learning, though debate persists on the best measures of teacher quality. Regardless, high rates of teacher turnover exact a toll on school stability and pose costs for obtaining replacements. Likewise, teacher inexperience and lack of certification are correlated with poorer student performance.

## C.   School Peers

Studies increasingly recognize that the character of fellow students or peers influences the educational attainment of other students.[65] There are many potential reasons for this. When enrollments are characterized by students with high educational aspirations and high motivation for academic achievement, the overall atmosphere will be abuzz with activities, attitudes, and student interactions that support those goals and carry over to individual students. At the same time, such environments promote high teacher expectations and create desirable teaching situations that are often sought by the best teachers,[66] and they may also provide political support by advantaged parents to strengthen academic resources for their children's schools.[67] All of these influences represent contextual effects associated with peers with academically oriented values and behavior more closely associated with higher-SES families. Thus, families tend to seek out schools where most of the students come from these backgrounds because they know that the enriched academic environment will benefit their children.[68]

Conversely, a school with high proportions of children from poverty and low-income backgrounds is more likely to confer the

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64. *Id.* at 157.

65. *See* Eric A. Hanushek et al., *Does Peer Ability Affect Student Achievement?*, 18 J. APPLIED ECONOMETRICS 527, 527–44 (2003).

66. *See supra* Part II.B.

67. *See* RICHARD KAHLENBERG, ALL TOGETHER NOW: CREATING MIDDLE-CLASS SCHOOLS THROUGH PUBLIC SCHOOL CHOICE 61–67 (2001).

68. For a summary of studies that support this perspective and interpretation, see Henry M. Levin, *Educational Vouchers: Effectiveness, Choice, and Costs*, 17 J. POL'Y ANALYSIS & MGMT. 373, 373–92 (1998). For a unique experiment and discussion, see Jack Buckley & Mark Schneider, *What Do Parents Want from Schools? Evidence from the Internet*, 24 EDUC. EVALUATION & POL'Y ANALYSIS 133, 133–44 (2002).

academic problems of concentrated poverty, low achievement in peer interactions, low teacher expectations, lower academic challenges, and fewer parents who demand academic resources.[69] That is, peer and contextual effects are closely related to the SES concentrations in different schools. They work negatively in schools with large numbers of high-poverty enrollments and positively in schools with large numbers of high-income enrollments. Unfortunately, a very high proportion of children from families in poverty or with low incomes attend schools with other students in the same categories, and especially black, Latino, and Native American students.[70] For example, the percent poor in 2002 to 2003 in schools attended by black, Latino, and Native American students was respectively 49%, 48%, and 39%, compared with 23% for white students.[71] One potential consequence of concentration of poverty, as measured by the proportion of students eligible for free or reduced-price lunches in a school district, is found in dramatic declines in high school graduation rates as the proportion of students in poverty increases.[72]

Finally, it is important to note that low-income students attend schools in which there is considerable student turnover and enrollment instability.[73] Poor families face dire conditions in the

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69. KAHLENBERG, *supra* note 67, at 47–76.

70. For a distressing account of school desegregation since the *Brown v. Board of Education*, 349 U.S 294 (1955), decision, see generally CHARLES CLOTFELTER, AFTER *BROWN*: THE RISE AND RETREAT OF SCHOOL DESEGREGATION (2004).

71. GARY ORFIELD & CHUNGMEI LEE, WHY SEGREGATION MATTERS: POVERTY AND EDUCATIONAL INEQUALITY 1–47 (2005), *available at* http://www.civilrightsproject. harvard.edu/research/deseg/Why_Segreg_Matters.pdf. The pernicious impact of racial segregation on student achievement is documented in a convincing manner by the sophisticated statistical analysis in Eric A. Hanushek & Steven G. Rivkin, *School Quality and the Black-White Achievement Gap* (Nat'l Bureau of Econ. Research, Working Paper No. 12,651, 2006), *available at* http://www.nber.org/papers/w12651.

72. Christopher B. Swanson, *Sketching a Portrait of Public High School Graduation: Who Graduates? Who Doesn't?, in* DROPOUTS IN AMERICA 30, 31–40 (Gary Orfield ed., 2004). More research has been done on the impact of racial segregation on student achievement than on economic segregation. *See, e.g.*, Russell W. Rumberger & J. Douglas Willms, *The Impact of Racial and Ethnic Segregation on the Achievement Gap in California High Schools*, 14 EDUC. EVALUATION & POL'Y ANALYSIS 377, 377–96 (1992).

73. There are no reliable national data on this phenomenon, partly because student mobility is measured differently in different school districts. There are studies, however, in particular jurisdictions. *See, e.g.*, Eric A. Hanushek et al., *Disruption Versus Tiebout Improvement: The Costs and Benefits of Switching Schools*, 88 J. PUB. ECON. 1721, 1721–46 (2004) (finding that in Texas public schools, one-third of all children switched schools at least one time between grades four and seven, not including transition from one school level to another, and that there is not only a negative effect on academic performance of movers, but also a negative impact on other students in schools with higher mobility, an impact that is greater for lower-income and minority students than other students); Judy A. Temple & Arthur J. Reynolds, *School Mobility and Achievement—Longitudinal*

housing market because of their meager financial resources. Often they must make temporary arrangements for shelter, including the use of public facilities designed for families without regular housing. Unstable housing situations translate into unstable school situations since affordable housing with acceptable conditions may not be found continually in the same neighborhood. Such mobility seems to undermine academic performance, not only for those students who move, but also for those who remain in classrooms experiencing high mobility.[74]

On average, it appears that children in poverty attend schools that are less well-endowed with educationally pertinent resources than schools other children attend. Their schools are likely to have less financial support, less-qualified teachers, and fewer student peers from nonpoverty backgrounds. These students are also likely to experience disruptive moves from one school to another and be present in schools with high mobility.[75] These conditions do not augur well for their educational success. But, even these educational disadvantages tell only part of the story. The next Part will focus on the differential student experience that these resources promote by addressing the academic content and learning environment of low-income and poor students.

## III. LEARNING ENVIRONMENTS

This Part begins by referring to my own personal experience in trying to understand why students who are economically at-risk fare so poorly educationally. In the 1980s, as today, there were two forms of segregation of low-income students. The first was that such students were often segregated in neighborhoods characterized by poverty, and neighborhood school enrollments reflected such segregation patterns so that students from poor households were in

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*Findings from an Urban Cohort*, 37 J. SCH. PSYCHOL. 355, 355–77 (1999) (finding in a study of Chicago schools that between kindergarten and seventh grade, 73% of students switched schools at least once, and almost one-quarter changed three or more times, and that children of less-educated parents (presumably lower income) moved more frequently, and about half of the lower test scores of the movers were associated with moving); Russell W. Rumberger & Katherine A. Larson, *Student Mobility and the Increased Risk of High School Dropout*, 107 AM. J. EDUC. 1, 1–35 (1998) (finding that in a national sample of high school students, even a single nonpromotional move doubled the chances of dropping out).

74. Hanushek et al., *supra* note 73, at 1721–22.

75. *Id.* at 1721.

schools with other students of similar backgrounds.[76] This situation is even more acute today due to the tendency over time toward greater concentration of the poor in schools with other poor students.[77] The second form of segregation of low-income students was that the poor were found in schools with greater economic diversity, but also segregated educationally through placement in "low-track" classes. Low-track classes refer to those where the learning objectives are restricted and the level of academic rigor is compromised in order to accommodate what are considered to be lower levels of capability in economically at-risk populations.[78]

Most of the research on tracking has been confined to secondary schools where the assignment of students to specific learning tracks has usually been done more explicitly than at elementary or middle school levels.[79] Although tracking is also found in large elementary schools where there are many classrooms at each grade level, it is more likely to be found in the form of grouping practices within secondary school classrooms.[80] Such practices evaluate students according to their existing proficiencies in reading and mathematics and place them with similar students in group activities. Tracking is most common for reading, where slow learners are placed in reading groups and other group activities with other slow learners.[81] In general, fewer demands are placed upon such groups in terms of the difficulty and amount of reading material, so that their progress is often programmed at slower rates than for other students. To a great extent, children from low-income backgrounds with less exposure to

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76. *See* DOUGLAS S. MASSEY & NANCY A. DENTON, AMERICAN APARTHEID: SEGREGATION AND THE MAKING OF THE UNDERCLASS 148–53 (1993); *see also* Steven Rivkin, *Residential Segregation and School Integration*, 67 SOC. EDUC. 279 (1994) (explaining how continuing patterns of residential segregation contribute to the persistence of school segregation).

77. ORFIELD & LEE, *supra* note 71, at 14–18.

78. JEANNIE OAKES, KEEPING TRACK: HOW SCHOOLS STRUCTURE INEQUALITY 3–14 (2d ed. 1985).

79. For prominent works on this subject, which question tracking and its efficacy, see SAMUEL R. LUCAS, TRACKING INEQUALITY: STRATIFICATION AND MOBILITY IN AMERICAN HIGH SCHOOLS (1999); OAKES, *supra* note 78; see also Adam Gamoran, *Classroom Organization and Instructional Quality*, in CAN UNLIKE STUDENTS LEARN TOGETHER? GRADE RETENTION, TRACKING, AND GROUPING 141, 141–55 (2005) (arguing that grouping students by ability level is not a neutral practice for suiting individual needs); Adam Gamoran, *Instructional and Institutional Effects of Ability Grouping*, 59 SOC. EDUC. 185, 185 (1986) (describing tracking practices and their effects in a first-grade classroom). An important critique of the detracking literature is TOM LOVELESS, THE TRACKING WARS (1999).

80. LUCAS, *supra* note 79, at 36–39.

81. *See* OAKES, *supra* note 78, at 3.

written materials and reading in the home are assigned to the lower groups.[82]

In the early 1980s, I undertook a study of the rising demographics of so-called disadvantaged students, particularly the increase in numbers of such students and their continuing poor educational results despite twenty years of a War on Poverty.[83] A major question that arose in this study was why so little educational progress had been made despite government efforts to increase the opportunities of disadvantaged students. This question motivated me to visit inner-city elementary schools with high concentrations of poverty students (largely minorities and immigrants) in twelve cities around the United States to simply observe their educational process. What I saw was extremely disheartening. Teachers devoted considerable time to decoding sounds of printed materials and relatively little to comprehension. Vocabulary lists were memorized without the words being used in significant contexts. Mathematical skills (for example, place value in arithmetic calculations with decimals) were taught mechanically without any attempt to provide a conceptual understanding. Students spent considerable time practicing these skills by filling out worksheets that provided low-level exercises that required only perfunctory responses rather than thought and contemplation. I saw almost no writing assignments. Those that I did see, for example posted on classroom walls, comprised three or four simple sentences on assigned themes such as "What I want to do on spring vacation."

Student mobility was high in these schools as families moved in and out of neighborhoods, and attendance patterns for significant numbers of the students were spotty. Considerable time in classrooms was devoted to discipline and classroom management. Many teachers seemed dispirited and complained of inadequate

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82. *Id.* at 4.

83. *See* HENRY M. LEVIN, EDUCATIONAL REFORM FOR DISADVANTAGED STUDENTS: AN EMERGING CRISIS 5 (1986). President Johnson announced the War on Poverty in his 1964 State of the Union speech. This led to passage of federal legislation such as the Economic Opportunity Act designed to reduce the national poverty rate, which was then 25%. For a general overview of the War on Poverty, see ROBERT DALLEK, LYNDON B. JOHNSON: PORTRAIT OF A PRESIDENT 148–57 (2004). I undertook this study to try to familiarize myself up close with why so little had been accomplished educationally for the poor in the two decades of programs. I was not an expert on educational practice and believed that the best approach was to observe it and ask questions rather than to read about it in books. At that time I had no intention of creating an alternative educational approach. I was simply motivated by curiosity. However, my impatience with what I saw impelled me to codify what seemed wrong and to respond with a different approach.

materials and poor school leadership as well as little support from parents. Homework assignments were not returned on a regular basis, and many parents did not attend parental events or parent meetings with teachers. Half of the schools had no active parent association.

In contrast, five suburban and middle class schools that I visited showed much more challenging academic work. Students were constantly asked to discuss readings and were required to write out their ideas or understandings on a regular basis. They were also encouraged to create stories or to rewrite stories that they had read with different endings. They were asked to discuss specific characters in their readings and why the characters behaved in the way that they did. They were given many more applications of mathematics and more word problems, and in some fifth- and sixth-grade classes they were asked to produce and exchange with other students word problems that used the mathematical tools that they had learned. School populations were stable with many students enrolled for their entire elementary years in the same school, and there was little turnover among teachers. The parent-teacher organizations were extremely active, sponsoring many events for the school and raising funds for special needs.

The differences between the two types of schools were obvious and clearly indicated differences in opportunities to learn. Almost all schools had reading groups in the primary grades that were sorted according to reading proficiency. I observed that the lower reading groups worked more on fundamentals such as decoding sounds and memorizing vocabulary lists and did less reading than the higher groups. Also, overall, the lower groups accomplished considerably less reading and read at a much less challenging level. My findings were supported by Aaron Gamoran, who found that reading gaps used as a basis for assignment to groups became wider among groups over the school year.[84]

Although my observations were casual and preparatory to establishing a new approach for the education of at-risk students—the Accelerated Schools Project,[85] as will be discussed later—I observed some basic features differentiating educational opportunities in schools enrolling low-income and middle- or higher-income students.

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84. *See* Aaron Gamoran, *The Stratification of High School Learning Opportunities*, 60 SOC. EDUC. 135 (1987).

85. For a brief overview of the Accelerated Schools Project, see Henry Levin, *Accelerated Schools for Disadvantaged Students*, 44 EDUC. LEADERSHIP 19, 19–21 (1987).

These observations comport well with the more formal research literature on this subject. Most of that literature addresses differences in secondary schools and the use of tracking.[86] We must bear in mind the previous conclusion that students in schools with high proportions of low-income students have been identified as having fewer resources as reflected in per pupil spending, less qualified teachers, and less exposure to classrooms with economically and academically advantaged peers.[87]

In addition, low-income students face both an actual curriculum and hidden curriculum that is less rigorous and challenging.[88] They are more likely to be taught to memorize facts or rules than to be provided with skills for problem analysis and solution. A higher proportion of class time is devoted to record-keeping and discipline, leaving less time for instruction. Also, low-income students are exposed to a very different set of values and images of their ultimate educational futures.[89] In a study of high schools, Gamoran found that teachers of lower-ability groups (a category that overlaps substantially with minorities and lower-income students) tend to spend less time on instruction, teach less complex topics, follow a slower pace covering less material, and provide simpler answers to student questions than for higher-ability groups.[90] Such students also have less access to higher-track classes and advanced placement classes, even when their qualifications are equal to those of higher-income students. In many cases low-income schools lack these opportunities.[91]

All of these features, discussed above, can be summarized by "opportunity to learn."[92] Opportunity to learn is a general term that

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86. There is also, however, an important literature on heterogeneous versus homogeneous grouping at the elementary level. *See, e.g.*, Robert Slavin, *Ability Grouping and Student Achievement in Elementary Schools: A Best Evidence Synthesis*, 57 REV. EDUC. RES. 293 (1987).

87. *See supra* Part II.

88. Kathleen Wilcox, *Differential Socialization in the Classroom: Implications for Equal Opportunity*, *in* DOING THE ETHNOGRAPHY OF SCHOOLING: EDUCATIONAL ANTHROPOLOGY IN ACTION 268, 301–04 (George Spindler ed., 1982).

89. For work on "hidden curriculum," see *id.* at 268.

90. Gamoran, *supra* note 84, at 136.

91. In a very sophisticated statistical study of advanced placement participation for Texas, the most important determinant of the very large difference in participation rates between white and minority students was low income. *See* Kristin Klopfenstein, *Advanced Placement: Do Minorities Have Equal Opportunity?*, 23 ECON. EDUC. REV. 115, 130–31 (2004).

92. "Opportunity to learn" refers to the availability of courses, qualified teachers, educational materials, facilities, and support personnel that are integral to learning. *See generally* LINDA DARLING-HAMMOND, THE RIGHT TO LEARN: A BLUEPRINT FOR

refers to the availability of educational learning resources such as teachers, courses, materials, and facilities. The term comprises the available educational resources, learning climate, organizational allocation of students, and instructional treatment (quantity and quality) received by students.[93] Some of the lesser opportunities for the poor are attributable to being in less affluent school districts or states that differentially fund schools according to differences in state and local resources.[94] Another explanation is neighborhood segregation by residential housing where children of low-income students are likely to have classmates with similar backgrounds and vice versa.[95] The opportunity gap may also be explained by the segregation that occurs within schools with formal or informal tracking and grouping systems where those placed in higher-ability groups or tracks cover more material and at a deeper level with better-qualified teachers than those in lower-ability groups.[96] Unfortunately, income is an important predictor of previous academic exposure and the measure of ability that determines how a student is tracked. Paradoxically, this type of academic practice means that differences in academic achievement grow over time between students in lower and higher groups or tracks.[97]

Thirty years ago one could point out deliberate school policies that mechanically accounted for the allocation of students among different overriding tracks that encompassed all subjects.[98] This was simply a policy that made sense on the basis of student abilities: the notion that students with similar learning capacities would benefit from instruction that matched their proficiencies. Student grouping within classrooms was also premised on this assumption.[99] Students of different abilities were viewed as having better chances if placed with other students of similar abilities, and teachers could plan

CREATING SCHOOLS THAT WORK (1997) (outlining methods for improving the effectiveness of education and the opportunity to learn).

93. THE SOCIAL ORGANIZATION OF SCHOOLS 45 (Maureen T. Hallinan ed., 1987); *see also* Maureen T. Hallinan, *Tracking: From Theory to Practice*, 67 SOC. EDUC. 79, 79–84 (1994) (examining the negative effects of tracking as a practice in schools). For an analysis of the concepts of opportunity to learn, see DARLING-HAMMOND, *supra* note 92, at 1–36; Lorraine M. McDonnell, *Opportunity To Learn as a Research Concept and a Policy Instrument*, 17 EDUC. EVALUATION & POL'Y ANALYSIS 305 (1995).

94. DOUGLAS REED, ON EQUAL TERMS: THE CONSTITUTIONAL POLITICS OF EDUCATIONAL OPPORTUNITY 125–36 (2001).

95. ORFIELD & LEE, *supra* note 71, at 14–18.

96. Gamoran, *supra* note 84, at 135–36.

97. *Id.* at 142–52.

98. *See* LUCAS, *supra* note 79, at 2–6.

99. *Id.*

lessons and instructional strategies especially tailored to a relatively homogeneous class of pupils rather than try to accommodate large differences in knowledge and ability. The fact that measures of ability seemed to overlap with income and race was bothersome but unavoidable in selecting this logical pedagogical approach.[100]

Over time, overarching curriculum tracking—the placement of students in different tracks such as honors, academic, general, remedial, or other labels for all of their courses—has almost disappeared.[101] This system has typically been replaced by individual student placement in specific courses according to the student's level of ability, prior course experience, or interest. Under such a system, students can enroll in courses at the level that is deemed most appropriate for their aptitudes and interests.[102] This structure enables varied placements across subjects. Yet, according to Samuel Lucas, the overall system of social class stratification by specific course[103] has been retained, largely because of the proactive role of middle class parents insisting that their children be placed in the higher-level courses despite lower placements recommended on the basis of official criteria.[104] Lower-income and minority parents are much less likely to request higher placements than the ones their children are relegated to by the schools.[105]

The learning consequences are that lower-track students receive a more diluted exposure to subjects, even when course titles are similar, and less is expected of them.[106] It also means that honors students take more advanced courses, such as creative writing and critical analysis of literature, while less accomplished students are assigned to courses that develop minimal skills, such as remedial reading courses.[107] This phenomenon is exacerbated by the fact that the most highly qualified teachers prefer to teach high-ability students in advanced tracks, pressuring schools and school systems to give them such assignments under the threat of leaving.[108] It is widely known among educators that school districts offer such assignments as an inducement to attract and retain the best teachers. Schools with low-income and minority students have difficulty in holding

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100. *Id.*
101. *Id.* at 1.
102. *Id.* at 6–8.
103. Lucas studied English and mathematics courses. *Id.*
104. *Id.* at 59.
105. *Id.* at 131–32.
106. *See* OAKES, *supra* note 78, at 67–92.
107. *Id.*
108. *Id.* at 69.

experienced teachers as they seek assignments with "better" students.[109]

## A. The Stubbornness of School Culture

Obtaining adequate resources and qualified teachers for students from low-income origins is an important challenge that can be addressed through fiscal policies as well as labor market incentives for teachers. Organizational changes are possible, particularly in areas susceptible to modification, such as detracking and reducing the use of homogeneous grouping in classrooms. The effects of tracking on students attending segregated schools are more difficult to address without a major strategy to desegregate schools. That is, schools segregated by neighborhood income and race may have the same underlying educational effects as tracking by income and race because neither type of school has opportunities for exposure of students to more advanced courses or more advantaged peers and the positive impact of more advantaged peers on the learning environment. Even more injurious may be the prevailing attitudes of teachers about the learning possibilities for low-income students that derive from teacher and school culture.[110]

School culture describes both the sameness and the uniqueness of each school.[111] When one enters almost any school one is struck by how familiar it is. There is something palpable about the place that just says "school," a place to provide a site for teaching and learning. Most schools share a similar design for classrooms and common areas, organize the day in predictable ways, and develop recognizable patterns for relationships among the students and adults. The concept of culture, whether used to describe schools or larger societies, is not easy to define. It is something that surrounds us, gives meaning to our world, and is constantly being constructed both through our interactions with others and through our reflections on life and our world.[112] Culture is so implicit in what we do that it dulls our knowledge that it is there. Anthropologist Clyde Kluckhohn

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109. *See supra* Part II.B.
110. A good general source that documents such attitudes and provides suggestions for altering them is Christine Sleeter, *Preparing Teachers for Culturally Diverse Schools*, 52 J. TCHR. EDUC. 94 (2001).
111. This section draws heavily from Christine Finnan & Henry M. Levin, *Changing School Cultures*, *in* IMAGES OF EDUCATIONAL CHANGE 87 (Herbert Altrichter & John Elliott eds., 2000).
112. *See generally* CLYDE KLUCKHOHN, MIRROR FOR MAN: THE RELATIONS OF ANTHROPOLOGY TO MODERN LIFE 17–44 (1949) (discussing the relationships of culture and anthropology to contemporary situations).

said of culture that it is like fish and water—fish will be the last creatures to discover water.[113] It surrounds and nurtures us, even when we can't see it.[114]

School culture comprises basic beliefs and assumptions that shape school activities. If school culture is to be truly changed, these basic beliefs and assumptions must be addressed. The first is the school's expectations for children. The basic beliefs and assumptions of a school's culture undergird a tacit acceptance that the students, as a whole, are capable of performing at a certain level academically, physically, and emotionally. No school explicitly states that it has low expectations for children, but studies comparing schools serving students in at-risk situations and those serving middle class and upper middle class students point to markedly different expectations of students of similar ability levels at the different schools.[115] The signs of different expectations are subtle but evident, even at the elementary school level. Schools serving lower-income students often stress following directions, while the middle class students are charged with critical analysis of school subjects.[116] Teachers of low-income students often place more emphasis on discipline, and children's experiences are circumscribed because of concerns that they will not behave appropriately if given challenging or enriching experiences or provided with too much independence.[117]

A second feature of a school culture's basic beliefs and assumptions includes children's expectations for their own school experience. Student expectations for their own school experience are shaped both by the explicit and subtle messages that they receive from adult members of the school community and by the trust placed in education by their community. Examinations of the chronic school failure of indigenous ethnic and racial minority students point to the development of an oppositional culture among such students.[118] This theory holds that minority students, usually high school students, believe that the notion of achieving economic success through school success is a cruel hoax. Minority students see in their community the results of years of inequity, and they develop an opposition to all

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113. *Id.* at 11.
114. *Id.*
115. OAKES, *supra* note 78, at 113–36.
116. *Id.*
117. Wilcox, *supra* note 88, at 286–87.
118. Signithia Fordham & John Ogbu, *Black Students' School Success: Coping with the Burden of Acting White*, 18 URB. REV. 176, 182–83 (1986).

avenues to mainstream success.[119] Other minorities—those arriving in the United States as immigrants—often succeed in school, largely because they live in communities that brought with them a belief in education as a route to success, and these students also do not have a history of subordination in the United States.[120]

A third set of basic beliefs and assumptions includes expectations for adults. The expectations for adult members of the school community depend largely on the characteristics of the students. Expectations for teachers are shaped by the students they teach,[121] and expectations for parents draw largely from the characteristics of their children.[122] Teachers and administrators working in schools serving at-risk children often feel inferior to their colleagues in more affluent schools. Typically, the staff and administrative turnover at schools serving at-risk students is great.[123] The lower expectations for children feed the lower expectations the staff have for themselves. The staff members are often reluctant to try new ideas because they are afraid that the ideas will not work with "our children."[124] Moreover, schools often require their teachers to simply comport with instructional policies and approaches established at the district or school level by others, inducing an overwhelming feeling of powerlessness to change the reality.[125]

Fourth, differences in expectations for parents are also evident. Schools with high expectations for all students treat parents as partners in the education of the children. Parental opinion is valued, and involvement in their children's education is taken for granted. Where expectations for children are low, however, expectations for parents are also low. Instead of having their opinion valued, parents

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119. *See id.*

120. *See id.*

121. A full discussion of this phenomenon is found in MARGARET LECOMPTE & ANTHONY G. DWORKIN, GIVING UP ON SCHOOL: STUDENT DROPOUTS AND TEACHER BURNOUTS 2–3, 38–41 (1991).

122. *See* CHRISTINE FINNAN & JULIE D. SWANSON, ACCELERATING THE LEARNING OF ALL STUDENTS: CULTIVATING CULTURE CHANGE IN SCHOOLS, CLASSROOMS, AND INDIVIDUALS 90–91 (2000).

123. Anthony Fong finds this turnover in high minority and poverty schools in both local and national teacher markets. *See* Anthony B. Fong, Essays on Sorting, Mobility, and Attrition in the Teacher Labor Market 3–8 (2006) (unpublished Ph.D. dissertation, Teacher's College, Columbia University) (on file with the North Carolina Law Review).

124. *See* LUCAS, *supra* note 79, at 15–16.

125. For a fuller discussion of these sources of powerlessness for teachers of the poor, see William Ayers, *Work That Is Real: Why Teachers Should Be Empowered, in* EMPOWERING TEACHERS AND PARENTS: SCHOOL RESTRUCTURING THROUGH THE EYES OF ANTHROPOLOGISTS 13, 15 (G. Alfred Hess, Jr. ed., 1992).

of children in these schools are seen as a problem and a hindrance to their child's development.[126]

Opinions about acceptable educational practices form a fifth set of basic beliefs and assumptions about school culture. A school's culture also provides support for the educational practices used in the school. The nature of these practices is related to expectations for students and adults and to the mission of the school.[127] Where expectations for students and teachers are low, beliefs about appropriate educational practices lead to an emphasis on rote memorization and basic skills.[128]

School cultures fostering high expectations for students and teachers emphasize active learning and challenging curriculum.[129] Schools that base their mission on an identifiable philosophy of education (e.g., Montessori schools, bilingual schools, back-to-basics or open classroom schools) can assume that opinions on acceptable educational practice are shared by all members of the school community, and this philosophy shapes all school practices.[130]    In    many    schools,    the    culture    allows    for considerable variation among teachers on how and what to teach. This arrangement does not usually arise from a respect for diverse teaching strategies but from limited discourse among teachers and a lack of communication with parents on effective teaching.[131]

These are only examples of some of the distinct dimensions of school culture that affect the learning environment, educational activities, and the educational interactions with children. These differences in school culture, particularly as they play out among schools with students drawn from different social class backgrounds,

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126. *Id.* at 15 ("The structure of schooling combines with a defeatist and cynical school culture to render teachers silent, passive, and powerless in their own worlds."). A good analysis of the general perspectives within which parents of low-income students are viewed is found in BETH BLUE SWADENER & SALLY LUBECK, CHILDREN AND FAMILIES "AT PROMISE": DECONSTRUCTING THE DISCOURSE OF RISK 37 (1995). *See also* SARAH L. LIGHTFOOT, WORLDS APART: RELATIONSHIPS BETWEEN FAMILIES AND SCHOOLS 8 (1978) (describing teachers' varying perspectives on the role of family life and its effect on students in the classroom).

127. *See* FINNAN & SWANSON, *supra* note 122, at 94–99.

128. *Id.* at 94.

129. *Id.*

130. *See id.* at 94–100.

131. SUSAN MCALLISTER SWAP, ENHANCING PARENT INVOLVEMENT IN SCHOOLS 7–15 (1987). For a more in-depth analysis concerning how teaching strategies can be affected by familial involvement, see JOYCE EPSTEIN, SCHOOL, FAMILY AND COMMUNITY PARTNERSHIPS (1999).

have important consequences for school practices and learning. What is particularly challenging is that so much of school culture and practices that may have injurious consequences are not mounted deliberately, but are just conventionally accepted with little thought or deliberation. It is this acceptance and subtlety that make those aspects of school culture so stubborn to change.

One way that differences in school culture manifest themselves is in the adaptation of teachers and schools to the social class origins of their students. John Meyer has summarized this succinctly in asserting that schools have an institutionalized social definition that is widely accepted among both teachers and the wider population of citizens that specific groups of schools are expected to produce. This expectation is at least partially based on the social class origins of the students.[132] In this respect, the evidence from a careful anthropological study of two first-grade classrooms provides provocative supportive evidence.[133] Two schools were chosen about fifteen miles apart, one serving children from a working class population and the other from a professional and managerial population.[134] The teachers had similar levels of experience and teaching backgrounds, and the ostensible goals of the curriculum appeared to be similar.[135] But even at first grade it was clear that the teachers responded to the social origins of the pupils and neighborhood in their pedagogical approaches.[136]

The first-grade teacher in the upper-middle class school stressed the behavior that would serve occupational and social preparation required of children being prepared for universities and professional positions.[137] The first-grade teacher in the working class school focused on behavior that was more common in blue collar and routinized white collar employment.[138] The researchers studied

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132. *See* John W. Meyer, *The Charter: Conditions of Diffuse Socialization in Schools, in* SOCIAL PROCESSES AND SOCIAL STRUCTURES: AN INTRODUCTION TO SOCIOLOGY 564, 565 (W. Richard Scott ed., 1970) ("Our central argument is that an organization's impact on the values . . . of the people it processes may be less affected by the structure of the organization itself than by its relation with and definition in its larger social context.").

133. A detailed chapter is devoted to this study in MARTIN CARNOY & HENRY M. LEVIN, SCHOOLING AND WORK IN THE DEMOCRATIC STATE 110–43 (1985).

134. *Id.* at 112.

135. *Id.* at 113.

136. *See id.* at 112.

137. *Id.* at 128.

138. Class-based socialization is a common theme in the literature on occupational preparation by families and other social institutions. The classic work addressing this subject is MELVIN L. KOHN, CLASS AND CONFORMITY: A STUDY IN VALUES 109–24 (1969).

teacher language, expectations, and work required of students in the two classrooms.[139] They found strong identifiable patterns in such dimensions as present versus future role orientations, emphasis on internal versus external motivation, and academic achievement.[140]

In general, it is widely recognized that professional occupations require much more attention to planning, strategy, and future consequences; in contrast, routinized occupations require more attention to mastering mechanical and repetitive details.[141] The first-grade study showed a strong pattern of expectations and language on the part of the teachers that reflected these patterns among their students.[142] The teacher in the school with students from professional households referred to doing good work to succeed in the future eight times as often as the teacher of working class students.[143]

Good work in professional occupations is heavily motivated by internal norms and desire for accomplishment, while working class occupations are driven relatively more by external incentives or rewards for good work.[144] This pattern was also observed in the two classrooms with the teacher of the working class students emphasizing a system of student control with rewards and punishments controlled by the teacher.[145] In contrast, the first-grade teacher in the school with students from higher social origins emphasized the adoption of internal norms and behavior for accomplishment and the value and pride of doing good work.[146]

Academic achievement followed a similar pattern where the first-grade teacher in the school drawing upon students from professional families was more demanding in the quality of classwork and homework than the teacher addressing working class students.[147] Further, the teacher in the classroom with students from higher

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139. CARNOY & LEVIN, *supra* note 133, at 117–28.

140. *Id.* at 117–18.

141. *See generally* U.S. DEP'T OF LABOR, DICTIONARY OF OCCUPATIONAL TITLES (4th ed. 1991) (providing a comprehensive survey of job characteristics and requirements). For an analysis of changes in skill and educational requirements associated with occupational changes, see generally David R. Howell & Edward N. Wolff, *Trends in the Growth and Distribution of Skills in the U.S. Workplace, 1960–1985*, 44 INDUS. & LAB. REV. 486 (1991).

142. CARNOY & LEVIN, *supra* note 133, at 121–22.

143. *Id.* at 122.

144. Analysis of these relationships is found in Richard C. Edwards, *Individual Traits and Organization Incentives: What Makes a 'Good' Worker?*, 11 J. HUM. RESOURCES 51, 51–68 (1976).

145. CARNOY & LEVIN, *supra* note 133, at 125.

146. *Id.*

147. *Id.*

occupational status backgrounds placed much greater emphasis on verbal presentations of students with an expectation of longer answers and better choice of language than the short responses expected of the working class students.[148] The teacher in the school with higher social class students even gave explicit instruction in how to make a good oral presentation and engaged students in more factual presentations than the teacher in the working class school.[149] The pervasive assumptions and expectations that can cause teachers and administrators to treat low-income students differently is not easily remedied. Although much is said about high expectations for all students, Part III.B will proceed to discuss a specific approach to reorienting schools' approach.

## B.   Changing the Odds of Success

The major national thrust to improve the education of low-income students is the federal legislation, the No Child Left Behind Act of 2001 ("NCLB").[150] NCLB attempts to prod schools to raise the academic proficiency levels of all students.[151] In the process it aims to reduce the achievement gap between low-income and higher-income students, between whites and minority students, and between regular students and those with special needs or handicaps.[152] NCLB attempts to achieve these goals by requiring the states to set targets for annual improvements in student achievement so that all students will meet state academic standards in at least reading/language arts and mathematics by the year 2014.[153] These targets include progress measures for the overall student enrollment of a school as well as for minority groups, English language learners, low-income students, and special education pupils.[154] Second, it requires the states to test students in most grades to ascertain whether they are meeting their adequate yearly progress ("AYP") goals for the school as a whole

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148. *Id.* at 123–25.

149. *Id.*

150. Pub. L. No. 107-110, 115 Stat. 1425 (2002) (codified at 20 U.S.C. §§ 6301–6578 (Supp. II 2002)). For an extensive analysis of the consequences of NCLB and alternatives, see generally Symposium, *NCLB and Its Alternatives: Examining America's Commitment To Closing Achievement Gaps*, Teacher's College at Columbia University (2006), *available at* http://www.tc.edu/centers/Equity Symposium/symposium06/resource.asp.

151. *See* 20 U.S.C. § 6301 (Supp. II 2002) ("The purpose of this subchapter is to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments.").

152. *See id.*

153. *Id.* § 6311(b)(2)(F).

154. *Id.* § 6311(b)(2)(C)(v).

and for the separate groups.[155] The Act requires state plans to institute a system of accountability, which can include sanctions for failing to meet their goals.[156]

Schools that do not make state-defined AYP for two consecutive school years are identified as requiring improvement for the following year.[157] Such schools must be provided with technical assistance and are required to develop a two-year plan to turn around the school.[158] Students in such schools have the option to transfer to other schools in the district that are not in the "needs improvement" category.[159] If the school does not make AYP for one full year after being identified as a school requiring improvement, the school must offer not only choice of transfer to successful schools, but the option of supplemental educational services for students from low-income families.[160] These services may include free tutoring or additional academic help for students through summer school or after-school and Saturday sessions.[161] Families are to be given a choice of tutoring providers.[162] Although NCLB also requires a qualified teacher[163] using state standards in every classroom, it does not address directly the class-related experiences that low-income students receive in segregated schools with teachers who, themselves, are socialized to different expectations for different groups of students.

NCLB has the strengths of focusing on equity in the distribution of educational services such as qualified teachers and achievement outcomes in basic skills and subjects, but it is largely a mechanical or accounting approach to the challenge. For example, teachers and schools have pressures on them to meet AYP, and this results in teachers teaching narrowly to the test or creating a curriculum of test preparation. Subjects that are not tested receive short shrift, as do deeper approaches to learning such as problem solving, student research, and verbal presentation.[164] What is needed is a much

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155. *Id.*
156. *Id.* § 6311(b)(2)(A)(iii).
157. *Id.* § 6316(b)(1)(A).
158. *Id.* § 6316(b)(3)(A).
159. *Id.* § 6316(b)(1)(E)(i).
160. *Id.*
161. *Id.* § 6316(e)(12)(C).
162. *Id.* § 6316(e)(1).
163. *Id.* § 6316(b)(3)(A)(iii).
164. *See* LINDA M. MCNEIL, CONTRADICTIONS OF SCHOOL REFORMS: EDUCATIONAL COSTS OF STANDARDIZED TESTING 5 (2000). *See generally* David M. Koretz, *Limitations in the Use of Achievement Tests as Measures of Educators' Productivity*, 37 J. HUM. RESOURCES 752, 753 (2002) (arguing that an "overly simplistic

deeper approach to change that will entail providing for all students with the more challenging education currently provided only to the most educationally privileged students, an education that goes much further than what is measured and evaluated for NCLB.

Indeed, that seems to be the challenge, to create schools for low-income students that have similar resources and much of the same successful pedagogy that is used to educate students from middle- and upper middle-income households. I am not suggesting the same precise approach for all children because I believe that culture, language, and ethnicity can be incorporated into this pedagogy in such a way that the child's culture is used to connect academic learning to the child's experience.

But why is the pedagogy for at-risk students viewed as something that must be different than for other students? The United States' treatment of low-income students is premised on the notion of remediation for such children. This premise is based upon the observable fact that children from impoverished circumstances reach school with a poorer academic foundation for school success and fewer resources in their homes, families, and communities to support academic progress as documented earlier.[165] The logical approach has been to call for remediation to accommodate low-income students' academic needs. But what does this term actually mean in the schools?

*Webster's New International Dictionary* describes *remediation* as the "act or process of remedying" where *remedy* is defined as "something that relieves or cures a disease" or "something that corrects or counteracts an evil."[166] Although the correlation between "disease," "evil," and education may not be readily apparent, they are accurate metaphors for what happens in the educational remediation of low-income and minority students. Presumably, children who are put into remedial programs are children who arrive at school with defects in their development that require repair of their educational faults. Even this metaphor falls short of its own meaning, however, because the typical child is never repaired but remains in the repair shop for many years in enclaves labeled as Title I, or special

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reliance on achievement tests in accountability systems can produce perverse incentives and seriously inflated estimates of gains in student performance").

165. *See, e.g.*, HART & RISLEY, *supra* note 18, at 2 ("American society still sees many of its children enter school ill-prepared to benefit from education. . . . We recognize now that by the time [impoverished] children are 4 years old, intervention programs come too late and can provide too little experience to make up for the past.").

166. WEBSTER'S NEW INTERNATIONAL DICTIONARY 1920 (3d ed. 1993).

education, or other categorical programs. Furthermore, contrary to gaining needed academic prowess, this approach stigmatizes the child with a label of inferiority and constrains academic development to the limitations of the remedial pedagogy. Low-income children fall further behind the academic mainstream the longer they are in school.

It is not difficult to see why the remedial approach does not work in expanding the large set of skills that society expects of our children in their educational development. This pedagogy requires endless practice of the most basic skills, slowing down the pacing of the curriculum, and reducing its depth and breadth. Emphasis is on highly repetitive drill and practice and work sheets. Meaningful applications and problem solving are proscribed from the basic skills regimen as beyond the capabilities of the children, and engagement of the experiences and culture of the child are also rarely considered as strengths for learning. In particular, remediation rarely considers the challenges of decisionmaking, problem solving, search for relevant information, research, and the more complex skills that are necessary for higher-level competencies of workers, citizens, and post-secondary study. Although educational remediation was designed with the best of intentions under the rationale that one must learn to crawl before learning to walk, the academic crawling exercises do not lead to proficiency in academic walking and running.[167] As mentioned earlier, the academic gap is maintained or widened over the years of schooling.[168]

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167. Remedial approaches have been widespread since the passage of the Elementary and Secondary Education Act of 1975 with its provision under Title I to provide compensatory educational resources for students from economically disadvantaged backgrounds. For descriptions of approaches that have been used to remediate the education of at-risk children, see generally GARY NATRIELLO ET AL., SCHOOLING DISADVANTAGED CHILDREN: RACING AGAINST CATASTROPHE (1990). Substantial additional spending for remediation, provided by Title I of the Elementary and Secondary Education Act of 1965, Pub. L. No. 89-10, § 1, 79 Stat. 27 (codified as amended in scattered sections of 20 U.S.C.), has had little impact on reducing the achievement gap between low-income children and other children. See MARTHA S. MCCALL ET AL., ACHIEVEMENT GAPS: AN EXAMINATION OF DIFFERENCES IN STUDENT ACHIEVEMENT AND GROWTH (2006), *available at* http://www.nwea.org/assets/research/national/409_AchivGapStudyFinallowres_111006a.pdf. Indeed, this was the impetus for the federal No Child Left Behind Act of 2001 with its focus on making all students proficient and eliminating achievement gaps by income, racial, and other groupings. See 20 U.S.C. § 6301 (Supp. II 2002). For evidence on the poverty gap, see LIPPMAN ET AL., *supra* note 27, at 24–25. For long-term trends and persistence of the gap by poverty and race, see generally MARIANNE PERLE ET AL., NAT'L CTR. FOR EDUC. STATISTICS, U.S. DEP'T OF EDUC., NAEP 2004 TRENDS IN ACADEMIC PROGRESS: THREE DECADES OF STUDENT PERFORMANCE IN READING AND MATHEMATICS (2005).

168. MCCALL ET AL., *supra* note 167, at 1.

A better strategy for success is not to slow down low-income and minority students' development and learning through repetition of the lowest level skills, but to incorporate those skills into more meaningful educational experiences that will accelerate these students' growth and development to bring them into the academic mainstream. Such an approach must also incorporate student experience in terms of culture and language to place new knowledge in a meaningful context.[169]

## C. Accelerated Strategies

There are many potential ways of accelerating the education of low-income students, but the greatest challenge is to convince teachers, parents, and the educational community that the entire school must implement deep changes beyond those associated with conventional practices. Acceleration and enrichment for all students challenge dominant school cultures in which teachers and the larger community have assumed that low-income students require a less demanding education than the academic enrichment approaches assumed for students from higher-income backgrounds.[170]

One of the first interventions to accelerate the education of all students through enrichment was the Accelerated Schools Project ("ASP").[171] Starting in 1985 that project worked to transform schools with large numbers of at-risk students by shifting them from a focus on remediation to acceleration.[172] The ASP change strategy embodies both a philosophy and a process for school change, emphasizing powerful learning experiences as a continuing practice for all

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169. The importance of using experience as a strength to build on is central to the pedagogy of John Dewey. See his development of this theme in JOHN DEWEY, EXPERIENCE AND EDUCATION (14th prtg. 1971) (1938). For an analysis of how experience education implicates issues of language, see generally KENJI HAKUTA, MIRROR OF LANGUAGE: THE DEBATE ON BILINGUALISM (1986).

170. MARY HAYWOOD METZ, CLASSROOMS AND CORRIDORS: THE CRISIS OF AUTHORITY IN DESEGREGATED SECONDARY SCHOOLS 3–14 (1978); see also supra Part III.A.

171. For more information about the Accelerated Schools Project, see Henry Levin, Accelerated Schools: The Background, in ACCELERATED SCHOOLS IN ACTION 3 (Christine Finnan et al. eds., 1996).

172. For the best single source on the Accelerated Schools process, see generally WENDY HOPFENBER ET AL., THE ACCELERATED SCHOOLS RESOURCE GUIDE (1993). Organizational design issues are found in Henry M. Levin, Raising School Productivity: An X-Efficiency Approach, 16 ECON. EDUC. REV. 303 (1997). For a conceptual framework of the Accelerated Schools Project, see CHRISTINE FINNAN & JULIE D. SWANSON, ACCELERATING OF ALL STUDENTS: CULTIVATING CULTURE CHANGE IN SCHOOLS, CLASSROOMS, AND INDIVIDUALS (2000). The website for the Accelerated Schools Project is http://www.acceleratedschools.net.

students.  ASP's three principles are to establish in the school a *unity of purpose, empowerment with responsibility, and a teaching and learning approach that builds on the strengths of students, teachers, and parents.*[173]  *Unity of purpose* refers to an active collaboration among parents, teachers, students, support staff, administrators, and the local community to formulate and achieve high-level goals and activities for all students.[174]  *Empowerment coupled with responsibility* refers to building capacity and accountability for the decisions in both home and school that will address school challenges in reaching these goals and undertake solutions to those challenges.  It also means pursuing a unified, problem-solving process in the governance of the school.[175]  *Building on strengths* refers to utilizing all of the learning resources that students, parents, other school staff, and communities can muster to design and implement academic enrichment in the form of powerful learning strategies.[176]  Powerful learning takes place by using a combination of instructional activities, curriculum content, and organizational approaches at both classroom and school levels that build on student talents, experiences, cultures, and curiosities.

For example, a learning unit on architecture in the sixth grade might entail the teaching of principles of design and a project requirement that each student or student group design a particular architectural project.  Activities will include the mathematics of measurement and proportion, including decimals and fractions; specific scientific principles that address weight-bearing characteristics of materials and designs with student computations of feasibility; artistic depictions and dimensions; readings on great architects and architecture; video presentations of architects and their designs followed by class discussion; development of designs for a building with a particular function and site; presentations by local architects of their works; use of computer software for design and renderings; and drafting of reports for the client on the design and its rationale as well as oral presentations of the report.  Students from immigrant backgrounds can also utilize architecture from their countries of origin accessible by computer research.

An eleventh-grade study of Shakespeare might culminate in students preparing a short theatrical work in the Shakespearian style and presenting it before another student group with discussion of the ideas behind it.  In the primary grades, the study of specific animals

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173. See Levin, *supra* note 171, at 15–17.
174. *Id.* at 15.
175. *Id.* at 16.
176. *Id.*

such as bears can entail teacher and student reading of bear literature, calculations of food requirements for individual bears and groups, study of the bear environment, videos of the bear life cycle for discussion, writing of simple stories about bear adventures with drawings, short skits on bears, discussion of ecological issues surrounding the bear, and a docent-led trip to a local zoo to study the bears. All of these units integrate many approaches to learning and instruction using different talents and building on curiosity. Many of these activities utilize resources from the community, expanding the resource base that schools can draw upon. The projects also embrace collaborative work activities among students that enable them to benefit from exchanges with peers. They embed basic skills practice into a framework of meaningful application that engages the student and provides incentives to build and use basic skills. The best accelerated classrooms look no different than the best gifted and talented classrooms in traditional schools.

Experience in more than 1,000 schools over a twenty year period and independent evaluations of Accelerated Schools have shown excellent results.[177] The major challenge has been one of implementation where the existing school culture and practice of remediation are inconsistent with the premises of Accelerated Schools, as well as contradictory external requirements pressed on schools such as NCLB.[178] In some cases, the major bottleneck is a lack of resources for the professional development required to build capacity for creating expertise in powerful learning. The problem of implementation seems to beset virtually all of the comprehensive school reform models and accounts for the slow pace of progress in adopting strategies that have proved effective.[179] Schools need much

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177. For a national evaluation, see HOWARD BLOOM ET AL., EVALUATING THE ACCELERATED SCHOOLS APPROACH (2001). For an evaluation that compared six Accelerated Schools in one city with comparable schools that did not receive the intervention, see Steven M. Ross et al., *Two- and Three-Year Achievement Results from the Memphis Restructuring Initiative*, 12 SCH. EFFECTIVENESS & SCH. IMPROVEMENT 323, 323–46 (2001).

178. *See* Christine Finnan & Henry M. Levin, *Accelerated Schools and the Obstacles to School Reform*, *in* TRANSLATING THEORY AND RESEARCH INTO EDUCATIONAL PRACTICE 127, 127–50 (Mark Constas et al. eds., 2006). For a recent and comprehensive study of the failure of schools to implement whole school reforms, see GEORGES VERNEZ ET AL., EVALUATING COMPREHENSIVE SCHOOL REFORM MODELS AT SCALE: FOCUS ON IMPLEMENTATION (2006), *available at* http://www.rand.org/pubs/monographs/2006/ RAND_MG546.pdf.

179. Implementation refers to the actual adoption and application of the concepts and practices that are integral to a particular educational approach. The Rand Corporation carried out an analysis of eight different comprehensive school reform models with an attempt to measure the degree of implementation. The implementation of models

greater investment in professional development than the few days a year that are normally provided to master new approaches.

A somewhat different accelerated strategy is a school-wide focus on accelerating achievement in particular subjects.[180] A good example of this approach is that of the middle and high schools in Nassau County, New York.[181] Sixth-grade students had been entering the community's middle school with wide variance in mathematics achievement. The school accommodated these differences by tracking students largely according to their initial test proficiencies. The consequence was that both test scores and mathematics course challenges undertaken by students reflected their initial proficiencies and reinforced these differences over subsequent grades.[182] With the support of its district, the school decided to revise its strategies in sixth to eighth grades in the middle school to get all students into algebra by eighth grade. To accomplish this goal, the school created heterogeneously grouped classes at a high level for all students, with special workshops to assist struggling students to master the high-track mathematics required by the school for all students.[183]

A sophisticated evaluation model was employed to test the consequences of this accelerated reform for both student achievement results and for undertaking advanced mathematics courses at the high school level, where classes were also detracked.[184] In general, no matter how the data on students was categorized—by socioeconomic level, ethnicity, or fifth-grade test scores—students who experienced the accelerated approach took about twice the number of advanced mathematics courses in high school with test results at higher levels than equivalent groups had achieved under the tracking regimen of the past.[185] These results were substantially superior to those in

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according to the specifications of the developers was quite disparate with wide variability and relatively low fidelity to what was recommended. *See* MARK BERENDS ET AL., IMPLEMENTATION AND PERFORMANCE IN NEW AMERICAN SCHOOLS 16–18 (2001); Amanda Datnow, *Power and Politics in the Adoption of School Reform Models*, 22 EDUC. EVALUATION & POL'Y ANALYSIS 357, 357–74 (2000).

180. Details on the intervention and the evaluation results reported here are found in Carol Corbett Burris et al., *Accelerating Mathematics Achievement Using Heterogeneous Grouping*, 43 AM. EDUC. RES. J. 105, 117–21 (2006).

181. *Id.*

182. *See id.* at 119.

183. *Id.* at 111.

184. The evaluation used a logistic regression to compute the probability of students taking advanced math courses while controlling for key variables often associated with school achievement such as previous math achievement, student socioeconomic status, and ethnicity. *See id.* at 116.

185. *Id.* at 117.

comparable communities over the same period of comparison.[186] By accelerating the instruction of all students, the middle and high school had substantially surpassed both previous performances under a traditional tracking system, as well as outperformed similar schools.[187]

There are many ways to implement acceleration, but there must be a determined effort to replace remediation with a different sort of instruction that engages the student in interests and activities that go beyond repetition and memorization as an end in itself.[188] At the high school level, the most promising attempts combine small school size, high levels of personalization, high academic expectations, rigorous academic demands, strong counseling, parental engagement, extended-time school sessions, and highly competent and appropriate personnel.[189] Research and experimentation have also resulted in many instructional strategies in the classroom that bring about greater learning and greater equity in educational outcomes for all students.[190]

The focus on accelerating the learning of low-income students must be central to educational reforms on their behalf. As outlined earlier, however, there are many debilitating circumstances that undermine the education of such students. These obstacles should be overcome by other interventions in conjunction with accelerated and enriched curricular and instructional approaches. Such improvements include smaller class sizes where appropriate, higher teacher salaries and other emollients to attract and retain a larger pool of talent, more substantial professional development for teachers, careful selection and evaluation of teachers, greater attention to attracting and developing strong school leadership, and use of technologies when useful for powerful learning. Priority should also be given to enriched

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186. *Id.* at 126.

187. *Id.* at 124.

188. For promising attempts in high schools, see JANET QUINT, MEETING FIVE CRITICAL CHALLENGES OF HIGH SCHOOL REFORM (2006), *available at* http://www.mdrc.org/publications/428/full.pdf.

189. *See, e.g., id.* at 30–41; *see also* Institute for Student Achievement Program, http://www.studentachievement.org (last visited Apr. 2, 2007) (containing information about principles aimed at encouraging student achievement).

190. *See* OAKES, *supra* note 78, at 261–300 (providing a range of examples). *See generally* ELIZABETH G. COHEN & RACHEL A. LOTAN, WORKING FOR EQUITY IN HETEROGENEOUS CLASSROOMS:  SOCIOLOGICAL THEORY IN PRACTICE (1997) (describing the concepts of complex instruction and equitable classrooms and placing these concepts within the context of larger issues of stratification and the sociology of the classroom).

preschools for three and four year olds and support for improving housing, nutrition, dental care, health care, and parenting.[191]

## CONCLUSION

Are we making progress in providing the types of educational experiences that will bring students from low-income families into the academic mainstream? My own impression is that we are making slow progress. Litigation and political pressures are creating greater equity in educational spending and teacher allocations among schools. States and school districts are considering or adopting policies to improve the working conditions and salary incentives that will make teaching in schools with low-income students more attractive for highly qualified teachers. School practices are also changing in the right direction. In the early 1980s the concept of accelerated education was one strictly applied to higher-income and gifted and talented students.[192] Today it is common to hear the term used to aspire to a system where all students experience rigorous academic study and newer educational practices that support such a goal.[193] As might be expected, school culture is slow to change, but it should change as we achieve more success in showing what can be accomplished in the education of low-income students. As such, I am cautiously optimistic with regard to all of these dimensions of progress, although impatient at the slow pace of change.

But there are three major public policies that are working in the opposite direction. First, as emphasized initially by James Coleman and reinforced by the more recent work of Richard Rothstein, without major improvements in the circumstances of the poor with regard to their housing, income, health services, neighborhood safety, and parenting practices, their children will continue to lag educationally. Although some of this gap can be compensated for by good schools, there is little evidence that all of it can. We need to focus on strong families and strong communities at the same time we focus on strong schools, a priority that seems to be of low order.

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191. Effectiveness of such programs is widespread in both the short term and long term, the latter referring to the effect of such programs on adult success. For a summary of much of this evidence, see generally Barnett & Belfield, *supra* note 16.

192. Levin, *supra* note 171, at 3.

193. *See generally* CHRISTINE FINNAN & JULIE D. SWANSON, ACCELERATING THE LEARNING OF ALL STUDENTS (2000) (providing a comprehensive description of the multiple uses of accelerated learning as well as the changes that must take place for students to benefit from accelerated learning principles); L. SCOTT MILLER, AN AMERICAN IMPERATIVE: ACCELERATING MINORITY EDUCATIONAL ADVANCEMENT (1995) (detailing various aspects of educational progress by relating to minority students).

Second, the narrowness of the accountability measures of NCLB and other test instruments reduces much of instruction to test preparation at a superficial level in the few subjects tested and instruction tailored to the narrow format that is used in the test. This practice especially deprives students from poor families of the richer and more satisfying education that enables fuller human development and that will enable them to respond more fully to the demands society will impose on them. Students from more affluent backgrounds are attending schools with greater educational opportunities and have family and community resources that can make up for such deficiencies. The solution is to develop and apply wider-spectrum assessments that can evaluate a larger range of subjects and such important human attributes as creativity, problem-solving, discourse, artistic performance, and the like.

Finally, I am most pessimistic about the present directions with regard to reducing the profound segregation of students by race and income and the pernicious academic consequences of such racial and class isolation. Recent court decisions and national policies have set a low priority on achieving the academic benefits resulting from peer interactions among students of different races and social class origins. In my view, we need to place a much greater policy emphasis on increasing student diversity in educational settings to capture both the academic benefits of peer effects as well as the democratic benefits of student participation in a world of many different cultures and origins, but common educational aspirations.