

Research on Closing the Achievement Gap Between High and Low Socioeconomic Status (SES) Students

Young people represent 25% of the population at large, but over 40% of those classified as low income (U.S. Department of Education, 2002). Most of the children and youth classified as low income are African American (43%) or Hispanic (40%) and most live in large urban areas (31%). Poverty has clear effects on children both before they enter school and during their tenure in school.

Challenges of Poverty

Evans (2004) suggested that socioeconomic differences that affected children included:

Physical environment challenges, including greater exposure to health risks; poor quality housing and environment; more deterioration in the neighborhood; greater crowding and noise; greater mobility and lack of stability in housing; poorer air and water quality; fewer material resources in the home; and more dangerous neighborhoods.

Social environment challenge, including fewer books and educational materials in the home; fewer household routines; greater incidence of family disruption, violence, and separation from family; child rearing patterns that are associated with stricter and harsher discipline, fewer opportunities to read with parents, and less emphasis on self-directedness, greater exposure to aggressive peers and deviance; less interpersonal trust and less likelihood to subscribe to norms of reciprocity; less exposure to multiple forms of cognitive stimulation and enrichment; more exposure to television; less verbal responsiveness; less parent involvement in education, both at the school and in the home; and less of a sense of belonging to school.

School and classroom environmental challenges. Evans (2004), Carey (2002), Bennett et al. (2004), and Barton (2003) also found that school environments are different among children from low income families and their more affluent peers. They found, for example, that schools with greater portions of low income children were more likely to have lower per pupil expenditures, lower teacher quality, less rigorous curriculum, lower expectations for academic performance and fewer demands to enroll in rigorous course work, and lower parent involvement in terms of volunteering in the school, attending school functions, and being attentive to homework completion

Effect of Raising Income

Dahl and Lochner (2005) found that an income increase of \$1,000 was associated with an increase in mathematics test scores of 2.1% of a standard deviation and in reading test scores of 3.6% of a standard deviation. Results of increased income are even stronger for children from families most impacted by the Earned Income Tax Credit.

Effective Schooling for Children from Low Income Families

The factors associated with poverty are established risk factors that can be harmful to the physical, socioemotional, and cognitive well being of children. Yet many schools are able to address and overcome the challenges associated with poverty to foster high academic performance. Multiple studies of high-performing, high-poverty schools have been conducted both nationally and in various states, and have addressed the elementary, middle, and high school levels.

Many of the studies used specific criteria, such as aggregate test scores for all students at a particular proficiency level or narrowing/closing the achievement gap and sustaining the improvement over time, to identify schools as “high performing.” Several identified schools based on National Assessment of Educational Progress (NAEP) scores. Researchers studied the practices and policies at these schools and often compared them with “average” or “low-performing” schools, also identified using aggregate test scores. Many of the studies employed multiple methods, including surveys, observations, document analysis, interviews, and/or focus groups. Most used a pre-existing framework of school practices and policies as a guide for data collection.

Generally, results showed that schools that serve children and youth from high poverty backgrounds are most successful when:

- Curriculum was rigorous and focused on the future (college or career preparation) and not just on finishing high school and when expectations for student performance were high;
- Support was immediately provided to keep students on track through an early warning system rather than to remediate them once they had fallen behind by a grade;
- Teachers were well prepared and are assigned based on capability and need rather than on seniority or preference;
- Administrators, teachers, and counselors accept responsibility for student success, stayed on pace, and collaborated often;
- Environments were safe and orderly;
- Data were used to improve curriculum and instruction and to understand need for differential instruction and not just for tracking student performance over time;
- Adults formed professional communities, had a strong work ethic, deliberately shared practices that worked, spent time in collaboration, and connected development to analysis of student needs;
- Morale and climate were positive in the school, and adults felt that they had influence on decisions;
- Class sizes were geared toward need rather than uniform;
- Curriculum was aligned to standards and assessments;
- New teachers were socialized into the high academic focus environment and assisted with instruction;
- Goals were consistent and consistently understood;
- Barriers to taking higher-level coursework were removed; and
- The focus was on academic achievement and not rule-following.

Specific Research Results

Barton (2003) identified correlates of achievement and gaps in achievement. The analysis drew upon the National Center for Education Statistics (NCES) and Mathematica Policy Research report entitled “Monitoring School Quality: An Indicators Report, data from Child Trends, and other research reports. Several caveats were mentioned including that the final products are results of what researchers have thought important to pursue, whether there were enough studies of a particular factor to enable a reasonable degree of consensus, the quality of the research, and the qualifications of the individual researchers and analysts. Fourteen correlates of elementary and secondary school achievement were identified. Factors are likely to be related to each other.

Correlates	Are there gaps between minority and majority student populations?	Are there gaps between students from low income families and higher income families?
School		
Rigor of curriculum	Yes	Not available
Teacher preparation	Yes	Yes
Teacher experience and attendance	Yes	Yes
Class size	Yes	No
Technology-assisted instruction	Yes	Yes
School safety	Yes	Yes
Before and Beyond School		
Parent participation	Yes	Yes
Student mobility	Yes	Yes
Birthweight	Yes	Not available
Lead poisoning	Yes	Yes
Hunger and nutrition	Yes	Yes
Reading to young children	Yes	Yes
Television watching	Yes	Yes
Parent availability	Yes	Yes

Williams et al. (2005) conducted a regression analysis of the correlates of student achievement in schools that have between 65% and 75% of students characterized as low income. Two hundred fifty-seven schools in 145 districts participated; 5,500 teachers and 257 principals responded to surveys. The practices associated with high performance were: (1) prioritizing student achievement (high expectations, well-defined plans for instructional improvement, priority on school achievement goals and federal adequate yearly progress goals, and setting measurable goals for exceeding the mandated subgroup growth targets for improved achievement; (2) implementing a coherent, standards-based curriculum and instructional program (schoolwide instructional consistency within grades, curricular alignment from grade-to-grade, classroom instruction guided by state academic standards, curriculum materials in mathematics and language arts aligned with the state’s standards, along with district expectations for student performance aligned with the district curriculum and evaluation of the principal based on the

extent to which instruction in the school aligns with the curriculum); (3) using assessment data to improve student achievement and instruction (using assessment data from multiple sources to evaluate teachers' practices and identify teachers who need instructional improvement, development of strategies to follow up on the progress of selected students, district evaluation of principals based on student achievement, and support for site-level planning related to improving achievement); and (4) ensuring availability of instructional resources, including teachers with regular or standard certification for teaching in California, sufficient and up-to-date instructional materials, support for supplementary instruction for struggling students and for facilities management, teacher experience of at least 5 years, and principal experience. The principal and district played key roles in school success. Schools also performed better when mathematics and language arts curricula were aligned with state standards, instruction was focused on achievement, schools had adequate facilities and textbooks, and provided resources for struggling students.

Kober (2001) found effects of similar variables. She noted that the achievement gap was not due to differences in innate ability, nor the result of biased test questions. Racial-ethnic differences in family income contributed to the achievement gap but did not entirely explain it. School factors that contributed to the gap included limited participation of minority students in rigorous courses, watered down instruction, less-qualified or experienced teachers, teachers with lower expectations, resource disparities between high-minority schools and other schools, concentrations of low-income and minority students in certain schools, school climate less conducive to learning, student performance anxiety, negative peer pressure, and disparities in access to high-quality preschool. Societal, community, and home factors that contributed to the gap included effects of poverty on learning, legacy of discrimination, limited learning supports in homes and communities, and access to parenting education. Promising strategies for closing the gap were increasing participation of minority students in challenging academic courses; investing in teacher professional development; implementing comprehensive, research-based models for school improvement; lowering class size in high-minority schools; expanding access to high-quality preschool programs; providing extended learning time and intensive supports for students who were having difficulty; and strengthening parent and community support for learning.

Kannapel and Clements (2005) studied Kentucky schools that were high performing and high poverty, comparing eight elementary schools that closed the achievement gap to matched schools that had not. Results of audits were compared and follow up studies using interviews and surveys were conducted. Researchers found that schools scored highest on the School Culture standard which included such indicators as safe and orderly environment, high expectations for student performance, teachers accepting their professional role in student success and failure, assigning staff according to their strengths, communicating regularly with families, caring about students, valuing and celebrating student achievement, being committed to equity, and appreciating diversity. Schools also scored high on the standard addressing Student, Family, and Community Support. There was variation on all other indicators. A set of characteristics were developed to show commonalities. The characteristics were: (1) schoolwide ethic of high expectations for faculty, staff, and students; (2) caring, respectful relationships; (3) strong academic, instructional focus; (4) systems for assessing individual students on a regular basis;

(5) collaborative decision making led by non-authoritarian principals; (6) strong work ethic and high faculty morale; and (7) recruitment, hiring, and assignment strategy for teachers. Researchers were surprised that the leadership factor did not emerge in the way that was anticipated; high performing schools did not score particularly well on the state-recommended practices for planning, documentation, and school-based decision making; schools did not score well on the use of technology; and districts did not play as strong a role as anticipated.

O'Day and Bitter (2003) conducted a review of schools in Washington state that were identified for improvement, comparing those who made progress with those that did not. They found that a school's ability to develop a coordinated and coherent instructional program was a key factor in its ability to meet and surpass academic growth targets. The planning process alone did not have a discernible impact, but the strategies adopted or mandated contributed differentially to later coherence. In addition, the internal capacity at the school site, especially the collaboration and professional community among teachers and the instructional leadership, played a major role in the school's ability to develop instructional coherence. Quality and depth of planning varied greatly as did the quality and capacity of external evaluators. Even when quality was strong, planning did not always translate into practice. Delays in state dispersal of funds hampered both the planning and implementation activities. School personnel did not find either the severe negative sanctions or awards salient. Researchers recommended that states recognize the influential role districts play in facilitating or constraining improvement, and should incorporate mechanisms into the accountability policies to encourage positive and productive actions at the district level. State and local policies should encourage and support instructional coherence at school sites. District personnel and external support providers should place priority on helping schools develop internal capacities and a coherent instructional program. Help from external agents should also be geared to this and monitored for effectiveness. There should be a common focus on student learning fostered through instructional collaboration and professional learning communities, and districts should pay particular attention to the deployment and development of instructionally strong leaders and teachers in low performing schools.

Finally, Ceci and Papierno (2005) cautioned: "Many forms of intervention, across different domains, have the surprising effect of widening pre-existing gaps between disadvantaged youth and their advantaged counterparts—if such interventions are made available to all students, not just to the disadvantaged. Whether this widening of gaps is incongruent with American interests and values requires an awareness of this gap-widening potential when interventions are universalized and a national policy that addresses the psychological, political, economic, and moral dimensions of elevating the top students—tomorrow's business and science leaders—and/or elevating the bottom students to redress past inequalities and reduce the future costs associated with them." (p. 149)

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