Policy Information Report

The Family: America's Smallest School

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Preface

All parents have witnessed their children doing things, good and bad, which remind them of themselves. These incidents serve as powerful reminders of the critical role parents play as teachers. Indeed, "the apple does not fall far from the tree," as the foundation established and nurtured at home goes a long way in ensuring student achievement in school as well as success in later life. The important educational role of parents, however, is often overlooked in our local, state and national discussions about raising student achievement and closing achievement gaps.

One of the four cornerstones of *The Opportunity Compact*, the National Urban League's *Blueprint for Economic Equality*, is the *Opportunity for Children to Thrive*. Through this guiding principle, we assert that every child in America deserves to live a life free of poverty that includes a safe home environment, adequate nutrition and affordable quality health care. We further assert that all children in America deserve a quality education that will prepare them to compete in an increasingly global marketplace.

For the *Opportunity to Thrive* to be realized, and for us as a nation to reach the ambitious educational goals that we have set for ourselves, we must keep clear in our minds that our family is our first and smallest school.

The authors of this report, Paul Barton and Richard Coley, tell us how we benefit from paying attention to the role of our families. They examine many facets of children's home environment and experiences that foster cognitive development and school achievement, from birth throughout the period of formal schooling. They stress that we should think of strengthening the roles of both schools and families, that schools need parents and communities as allies, and that recognizing the importance of the role families play should in no way lessen the need to improve schools.

The report also reveals the complexity of any effort to strengthen the role that families play in educating children, the many levels on which such efforts need to take place, and the sensitivity that is necessary whenever we contemplate the formation and functioning of families — our most important institution, and at the same time our most private one.

The National Urban League commends Educational Testing Service for this timely and critically important report and joins it in urging parents, educators, administrators and policymakers to consider its findings.

Marc H. Morial
President and CEO
National Urban League

Acknowledgments

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The family and the home are both critical education institutions where children begin learning long before they start school, and where they spend much of their time after they start school. So it stands to reason that improving a child's home environment to make it more conducive to learning is critical if we are to improve the educational achievement of the nation's students and close the achievement gaps. To do this, we need to develop cooperative partnerships in which families are allies in the efforts of teachers and schools. The kinds of family and home conditions that research has found to make a difference in children's cognitive development and school achievement include those highlighted below.[1]

The Parent-Pupil Ratio. The percentage of two-parent families has been in long-term decline. Single-parent families are rapidly becoming a significant segment of the country's family population.

- Forty-four percent of births to women under age 30 are out-of-wedlock. The percentage is much higher for Black women and much lower for Asian-American women. While the percentage decreases as women's educational attainment rises, the rate for Black and Hispanic college-educated women remains high.
- Sixty-eight percent of U.S. children live with two parents, a decline from 77 percent in 1980. Only 35 percent of Black children live with two parents. In selected international comparisons, the United States ranks the highest in the percentage of single-parent households, and Japan ranks the lowest.

Family Finances. Income is an important factor in a family's ability to fund the tangible and intangible elements that contribute to making the home an educationally supportive environment. At all income levels, however, parents have important roles to play in facilitating their children's learning, many of which are not dependent upon the availability of money.

- Among racial/ethnic groups, Asian-American families, on average, have the highest median family income; Black families have the lowest.
- On average, White and Asian-American families with children have higher incomes than White and Asian-American families without children. The opposite is true for Black and Hispanic families, however; and these families have much lower average family incomes than their White and Asian-American counterparts. There are also large differences in family income across the states, ranging from median family incomes in excess of $70,000 in several northeastern states to less than $40,000 in New Mexico, Mississippi, and Washington, D.C.
- Nationally, 19 percent of children live in poverty. The percentages increase to nearly a third or more of Black, American Indian/Alaskan Native, and Hispanic children. Among the states, the percentage ranges from a low of 9 percent in New Hampshire to a high of 31 percent in Mississippi.
- Nationally, 11 percent of all households are "food insecure." The rate for female-headed households is triple the rate for married-couple families, and the rate for Black households is triple the rate for White households. One-third or more of poor households are food insecure.
- Rates of parent unemployment are high, and are alarmingly so for some groups. Nationally, one-third of children live in families in which no parent has full-time, year-round employment. This is the case for half of Black and American Indian/Alaskan Native children. More than 40 percent of children in Alaska, New Mexico, Louisiana, and Mississippi live in such families.

Literacy Development. Literacy development begins long before children enter formal education, and is critical to their success in school.

- There are substantial differences in children's measured abilities as they start kindergarten. For example, average mathematics scores for Black and Hispanic children are 21 percent and 19 percent lower, respectively, than the mathematics scores of White children.
- By age 4, the average child in a professional family hears about 20 million more words than the average child in a working-class family, and about 35 million more words than children in welfare families.

[1] Readers will find sources for the data and definitions of the variables discussed in this section in the main body of the report.

- Sixty-two percent of high socioeconomic status (SES) kindergartners are read to every day by their parents, compared to 36 percent of kindergartners in the lowest SES group. White and Asian-American children, those who live with two parents, and children with mothers with higher education levels were also more likely to have a parent read to them daily than their counterparts who were Black or Hispanic, lived with one parent, or had mothers with lower educational levels.

Child Care Disparities. The availability of high-quality child care is critical when parents work outside the home.

- About half of the nation's 2-year-olds are in some kind of regular, nonparental day care, split among center-based care; home-based, nonrelative care; and home-based relative care. Black children are the most likely to be in day care.
- Overall, 24 percent of U.S. children were in center-based care that was rated as high quality, 66 percent were in medium-quality center-based care, and 9 percent were in low-quality center-based care. Of those in home-based care, 7 percent were in high-quality settings, 57 percent were in medium-quality settings, and 36 percent were in low-quality care. More than half of Black, Hispanic, and poor 2-year-olds were in low-quality home-based care.

The Home as an Educational Resource. The resources available at home — books, magazines, newspapers, a home computer with access to the Internet, a quiet place for study — can have a lasting influence on a child's ability to achieve academically.

- As of 2003, 76 percent of U.S. children had access to a home computer, and 42 percent used the Internet. Black and Hispanic children lagged behind, however.
- Eighty-six percent of U.S. eighth-graders reported having a desk or table where they could study, just above the international average but well below the averages of many countries.
- Thirty-five percent of eighth-graders watch four or more hours of television on an average weekday. Comparisons by race/ethnicity reveal considerable differences in viewing habits: 24 percent of White eighth-graders spend at least four hours in front of a television on a given day, while 59 percent of their Black peers do so.
- A comparison of eighth-graders in 45 countries found that U.S. students spend less time reading books for enjoyment and doing jobs at home than students in the average country participating in the study. On the other hand, U.S. eighth-graders spent more time, on average, watching television and videos, talking with friends, and participating in sports activities. They also spend almost one more hour daily using the Internet.
- One in five students misses three or more days of school a month. Asian-American students have the fewest absences. The United States ranked 25th of 45 countries in students' school attendance.

The Parent-School Relationship. A significant body of research indicates that when parents, teachers, and schools work together to support learning, students do better in school and stay in school longer. Parental involvement in student education includes everything from making sure children do their homework, to attending school functions and parent-teacher conferences, to serving as an advocate for the school, to working in the classroom. How involved are parents in their children's education? Are schools helping to facilitate parental involvement, and doing what they can to effectively partner with parents?

- Since 1996, parents have become increasingly involved in their child's school. However, parent participation decreases as students progress through school, and parents of students earning A averages are more likely to be involved in school functions than the parents of students earning C's and D's.

Putting It Together: Estimating the Impact of Family and Home on Student Achievement. How closely can stars in this constellation of factors associated with a child's home environment predict student achievement?

- The analysis provided here uses four family/home factors that previous research has shown to be linked to student achievement. To some degree, each is likely to be related to the others: single-parent families, parents reading to young children every day, hours spent watching television, and the frequency of school absences.

- Together, these four factors account for about two-thirds of the large differences among states in National Assessment of Educational Progress (NAEP) eighth-grade reading scores.

* * * * *

The nation has set high goals for raising student achievement. Schools play a critical role in this effort, and it is appropriate that a serious national effort is being made to improve them. However, family characteristics and home environment play critical roles as well. Reaching our ambitious national goals will require serious efforts to address issues on both fronts.

Recognizing the family as the basic socializing and nurturing institution for children is intuitive. Common sense tells us that the love and attention that babies and children receive, their sense of security, the encouragement they are given to learn, the intellectual richness of their home environment, and the attention that is devoted to their health and welfare are all critical elements in the development of children who are able and motivated to learn. Ironically, however, something so plain and obvious is often overlooked — or taken for granted.

> Even though public officials, PTA speakers, educators … often tell us how important a role the family plays, this message does not translate to a national resolve to improve the family as an educational institution.

Thus began our 1992 report, *America's Smallest School: The Family*.[2] Although the critical importance children's families play in their lives in the years preceding school, during the hours before and after the school day, and throughout the days, weeks, and months of summer and holiday breaks remains apparent, it also stays largely outside current local, state, and national education policy discussions. The purpose of this report is to examine information and evidence regarding the critical role the family plays in the education of the nation's children.

Over the past 15 years, state and national efforts to raise student achievement and reduce achievement gaps have intensified. The public and public officials take the issue of improving education seriously, as is strongly evidenced by the prominence of the No Child Left Behind (NCLB) Act in the national policy agenda. NCLB includes requirements for schools to promote and facilitate stronger school-parent partnerships.

Since *America's Smallest School: The Family* was published, not much seems to have changed with respect to the importance public policy gives to the family's role in children's learning, even as efforts have intensified to raise student achievement and reduce achievement gaps. Nor has there been much progress toward improving many of the conditions that were described in that report. There are, to be sure, efforts to promote the value of early childhood education, new commission reports, and more national leaders pushing for universal pre-kindergarten programs. These efforts all stem from an explicit recognition of the need to supplement family efforts if we are to succeed in improving student learning and reducing achievement gaps.

A new report card by UNICEF on the state of childhood in the world's economically advanced nations paints a bleak picture for the future of education in the United States. In the report, UNICEF compared the United States with 20 other rich countries on their performance in six dimensions of child well-being. The United States ranks in the bottom third of these 21 countries for five of these six dimensions. It ranked 12th in educational well-being, 17th in material well-being, 20th in family and peer relationships, 20th in behaviors and risks, and 21st in health and safety.[3]

Despite these disturbing findings, one can find many good examples of efforts to promote stronger family involvement in children's education, and this report describes some of these. Although our review of current literature identifies many other constructive efforts to improve family and home conditions associated with child development, no major efforts were found to raise the prominence of "before-school" and "after-school" issues, identified in this report, in the very visible state and national efforts to increase achievement and reduce achievement gaps.

This report is about the family, not about the schools, except in those critical areas where the family and school must work together. That said, the authors have no intention of minimizing the need for improving our nation's schools — and it would be a misuse of the report's findings to argue that all of the responsibility for educational improvement rests outside of the schools. Indeed, a number of ETS Policy Information Center reports have argued that both are important in raising achievement and reducing gaps. A comprehensive review of the available facts and evidence on this subject is *Parsing the Achievement Gap: Baselines for Tracking Progress*.[4]

[2] Paul E. Barton and Richard J. Coley, *America's Smallest School: The Family*, Policy Information Report, Policy Information Center, Educational Testing Service, 1992.

[3] See UNICEF, *Child Poverty in Perspective: An Overview of Child Well-Being in Rich Countries*, Innocenti Report Card 7, 2007.

[4] Paul E. Barton, *Parsing the Achievement Gap: Baselines for Tracking Progress*, Policy Information Report, Policy Information Center, Educational Testing Service, October 2003.

It is understandable that education reform efforts would focus on improving schools. In the broader arena of public policy, however, we will have to go far beyond this focus if we hope to significantly improve student learning and reduce the achievement gap. This report highlights some of the important family characteristics and home conditions that research has found makes a significant difference in children's cognitive development and school achievement. Because the home is, indeed, "America's smallest school" — though clearly *not* its least significant one — it behooves us to take whatever steps are necessary to assure the homes of all of our nation's students can provide the critical support children need to achieve. If we are to improve America's academic standing within the global community, and close our all-too-persistent achievement gaps, we must help ensure nurturing home environments and supportive, encouraging family lives for all students.

This is by no means a small endeavor. It will require policy reform, government and social interventions, and above all, cooperative partnerships among schools, families, and communities.

* * * * *

The report is organized as follows:

The Parent-Pupil Ratio. Research indicates an upward trend in single-parent families and large differences in family-composition trends across racial/ethnic and socioeconomic groups. The report examines these changing patterns and explains how they may be leading to a "new inequality."

Family Finances. Many families are stretched thin in meeting the basic needs that will help children become successful students. The report looks at economic trends related to child poverty, parent employment, and food insecurity.

Literacy Development. Children's experiences during the first years of their lives — their interactions with the people and world around them — are critical to their future learning. The report examines the differences in early language development and school readiness among children of different population subgroups. The authors also discuss how reading to young children influences their language development.

The Extended Family: The Child Care Dimension. The report looks at the wide variety of child care available to parents, and the vast differences in the quality of that care.

The Home as an Educational Resource. A home environment that is conducive to learning is critical to children's ability to succeed in school. The authors examine the importance of resources and conditions that support learning in the home (e.g., appropriate reading materials, a home computer with access to the Internet, and a quiet place to study). The authors also look at conditions that can distract students from learning, such as spending too much time watching television, playing computer games, and surfing the Internet. Finally, the authors examine trends related to these factors across different racial/ethnic and socioeconomic groups.

The Parent-School Relationship. The authors examine why it's important for parents to be involved in their children's school and to take a proactive approach to encouraging their children's learning efforts. The authors then highlight trends in these behaviors.

Putting It Together: Estimating the Impact of Family and Home on Student Achievement. The authors explore how a constellation of family and home characteristics can be used to predict student achievement.

Concluding Comments. The authors discuss what family trends imply about the future state of student learning in the United States. They then elaborate on the need to improve conditions in *both* the home and the school.

* * * * *

This report is packed with statistics and research findings, and the authors have drawn upon many sources — from small research studies, to national censuses and data bases, to international surveys. Readers will have different interests, different perspectives, and different needs. The authors hope that the information in this publication will be helpful to a diverse audience — an audience with a common interest in improving student learning and reducing achievement gaps.

Our society relies on parents to nurture and socialize children. It follows then that having two parents participating in the child-rearing effort is better than having just one, even if only from the standpoint of logistics and time: time to talk with children, read to them, help them with homework, get them up and off to school, check their progress with their teachers, and so on.

Two-parent families are more likely than single-parent families to be participating in the workforce and to have middle-class incomes. Today, having a "decent" family income is more dependent than ever on having two parents working. Families headed only by mothers — as the majority of single-parent families are — have, on the average, much lower incomes and fewer benefits that go along with employment (such as medical insurance) than two-parent families. Adequate housing, medical care, and nutrition contribute to children's cognitive development and school achievement.[5] While logic, common sense, and research all lead to the conclusion that children growing up with one parent may have a disadvantage, it is often not an easy subject to discuss.

What Research Reveals

Despite continuing sensitivity about the topic, there is a growing body of research on family structure and its relationship to children's well-being. While the research generally focuses on whether a child lives with one versus two parents, there is some research on the effects of mother-only families; some research on children with divorced parents; some on children with young, unmarried parents; and some research that focuses on the effects on children of growing up with absent fathers. The first comprehensive reporting of this research was undertaken by a committee of the National Research Council (NRC), which synthesized and cited more than 70 studies published between 1970 and 1988. The NRC concluded that:

> High rates of poverty, low educational performance, and health problems are serious obstacles to the future and well-being of millions of children. The problems are much more acute among black children …. The disadvantage of black children relative to white children is due almost entirely to the low income of black family heads … Approximately one-half of black children have the additional burden of having mother-only families. Many begin life with an under-educated teenage mother, which increases the likelihood that they will live in poverty and raises additional impediments to their life prospects.[6]

The most recent and large-scale synthesis of research on single-parent families in the United States is "Father Absence and Child Well-Being" by Wendy Sigle-Rushton and Sara McLanahan, who start with this overview:

> Cohabitation has replaced marriage as the preferred first union of young adults; premarital sex and out-of-wedlock childbearing have become increasingly commonplace and acceptable; and divorce rates have recently plateaued at very high levels. One out of three children in the United States today is born outside of marriage, and the proportion is twice as high among African Americans.[7]

Researchers must consider several issues when assessing the impact growing up in a single-parent family can have on children's academic success. First they need to determine whether children raised in single-parent households are different from those who grow up with two parents in the home in ways that affect learning and academic success. And, if they do, researchers need to then clarify *how* they differ. They must then disentangle the factors that contribute to these differences, which involve separating factors related to low income from those that are entirely due to a growing up in a single-parent family. While research can illuminate issues related to income, it's far more difficult to find scientific evidence of the effect growing up in a single-parent household has on

[5] For a synthesis of research on such family factors, see Barton, 2003.
[6] Gerald David Jaynes and Robin M. Williams, Jr. (Eds.), *A Common Destiny: Blacks and American Society, National Research Council*, National Academy Press, 1989.
[7] Wendy Sigle-Rushton and Sara McLanahan, "Father Absence and Child Well-Being," in Daniel P. Moynihan, Timothy M. Speeding, and Lee Rainwater (Eds.), *The Future of the Family*, Russell Sage Foundation, 2004, p. 116.

learning. We can, however, identify with considerable confidence the overall effects — *always* bearing in mind that we are talking about *averages*, not individual situations.[8]

Sigle-Rushton and McLanahan summarize the results of the simple correlations, which "can easily be interpreted as the probability that a random person, drawn for a given family structure, will experience the outcome of interest." They summarize the results of their research as follows:

- **Academic Success.** "Studies demonstrate quite conclusively that children who live in single-mother families score lower on measures of academic achievement than those in two-parent families." The differences are substantial (in statistical terms, about a third of a standard deviation after controlling for age, gender, and grade level).
- **Behavioral and Psychological Problems.** Father absence is correlated with a higher incidence of behavioral and psychological problems that may include shyness, aggression, or poor conduct.
- **Substance Abuse and Contact With Police.** Father absence is correlated with a greater tendency to use illegal substances, have early contact with the police, and be delinquent.
- **Effect on Life Transitions.** Daughters who grow up in single-parent families are likely to have sexual relationships at an earlier age than those raised from two-parent homes, and are more likely to bear children outside of marriage. Their early partnerships also tend to be less stable.
- **Economic Well-Being in Adulthood.** Research has established a strong link between growing up in a single-mother family and having lower income as adults.
- **Adult Physical Health and Psychological Well-Being.** Adults from single-mother families have lower self-esteem than those growing up in two-parent households. Among women, research reveals a negative correlation between poor adult physical health and growing up with a divorced mother.[9]

While, at first glance, all of these issues may not seem to be related to school achievement, each (e.g., delinquent behavior, drug use, and aggressive behaviors) can adversely affect school achievement. And although these behaviors appear to be separate and distinct issues, they are often related, with one condition resulting in another.

Evidence also links these variables to other school problems. For example, a Bureau of the Census publication reports that the percentage of school-age children of never-married parents were more than twice as likely to repeat a grade than children of married parents (21.1 percent compared to 8.4 percent, respectively); the percentage for children of separated, divorced, or widowed parents was 13.4 percent. Very similar differences were found for the percentage of children who were ever suspended from school. And for both repeating a grade and being suspended from school, the rates were much higher for children in families living below the poverty line than for children living above it.[10]

A recent report from the ETS Policy Information Center found a close relationship between states' high school completion rates and the percentage of children living in one-parent families, after controlling for social economic status (SES). The single-parent family factor, by itself, explained over a third of the variation in high school completion rates (SES, single-parent families, and high student mobility together explained almost 60 percent of the variation).[11] Another recent ETS analysis found that the variation among the states in the prevalence of one-parent families had a strong correlation with the state variation in eighth-grade reading achievement.[12]

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[8] On this matter of disentangling effects, and for a comprehensive look at marriage and children, see the fall issue of *The Future of Children* (titled "Marriage and Well-Being") published by the Brookings Institution (www.futureofchildren.org).

[9] Sigle-Rushton and McLanahan, 2004.

[10] Jane Lawler Dye and Tallese D. Johnson, *A Child's Day: 2003 (Selected Indicators of Child Well-Being)*, Current Population Reports, p. 70-109, U.S. Census Bureau, Washington, D.C., January 2007.

[11] Paul E. Barton, *One-Third of a Nation: Rising Dropout Rates and Declining Opportunities*, Policy Information Report, Policy Information Center, Educational Testing Service, February 2005.

[12] Paul E. Barton and Richard J. Coley, *Windows on Achievement and Inequality*, Policy Information Report, Policy Information Center, Educational Testing Service, 2007.

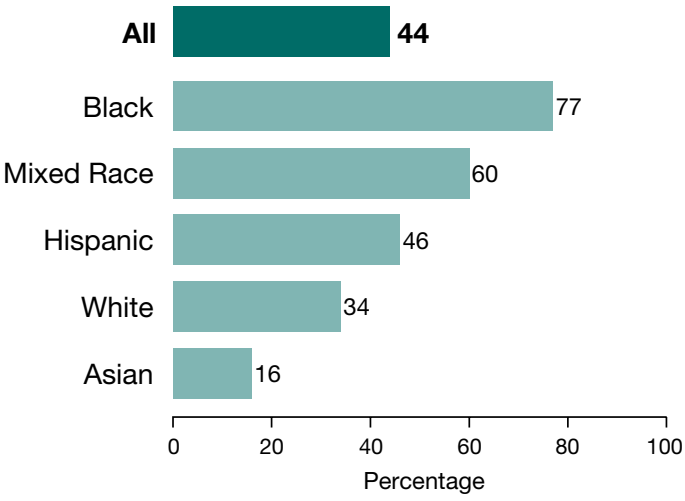
Having documented the correlation between having two parents and student educational achievement, this section now examines data on parenthood trends in the United States.

Out-of-Wedlock Births

Of the 2.3 million births to women under age 30 in 2003-04, about 1 million (or 44 percent) were to unmarried women. Figure 1 shows the percentage of out-of-wedlock births for women in each racial/ethnic group.

Figure 1

Percentage of Out-of-Wedlock Births to Women Under Age 30, by Racial/Ethnic Group, 2003-2004

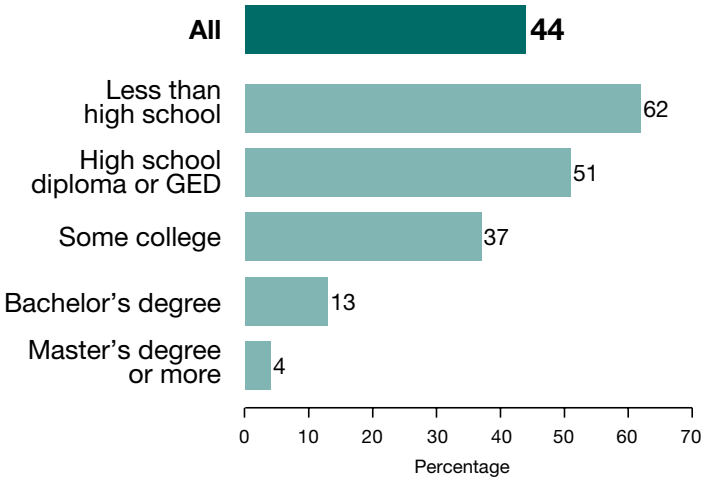


Source: Data from 2004 American Community Surveys, reported in Irwin Kirsch, Henry Braun, Kentaro Yamamoto, and Andrew Sum, *America's Perfect Storm: Three Forces Changing Our Nation's Future*, Policy Information Report, Policy Information Center, Educational Testing Service, January 2007.

These data paint a grim picture of the status of marriage and childbirth in the United States. Seventy-seven percent of Black, 60 percent of mixed-race, and 46 percent of Hispanic births were out-of-wedlock. Most of these out-of-wedlock births were to women with low levels of educational attainment. As shown in Figure 2, overall, the proportion of out-of-wedlock births falls substantially with each additional level of education mothers attain. The proportions are higher, however, for some groups. Among Black mothers, for example, more than half of births to those with a bachelor's degree or higher were out-of-wedlock; this was also the case for 43 percent of births to Hispanic mothers.[13]

Figure 2

Percentage of Out-of-Wedlock Births to Women Under Age 30, by Educational Attainment of the Mother, 2003-2004



Source: Data from 2004 American Community Surveys reported in Irwin Kirsch, Henry Braun, Kentaro Yamamoto, and Andrew Sum, *America's Perfect Storm: Three Forces Changing Our Nation's Future*, Policy Information Report, Policy Information Center, Educational Testing Service, January 2007.

It's important, however, to understand that this dichotomy between in- and out-of-wedlock births oversimplifies the variation of family types. According to the demographer, Harold Hodgkinson:

> Four million children of all ages now live with one or more grandparents, and one million children of all ages are the sole responsibility of their grandparents … A number of factors have created this group, such as parents who are in jail, in drug rehabilitation centers, or those who simply are not capable of raising their children. The problems of raising young children when you are 65 years old are severe — yet, for many grandparents there is no alternative.
>
> The *Statistical Abstract of the United States, 2002*, indicates the following family types were raising children under 18 years old: 46 percent

[13] American Community Survey data, reported in Kirsch, Braun, Yamamoto, and Sum, 2007.

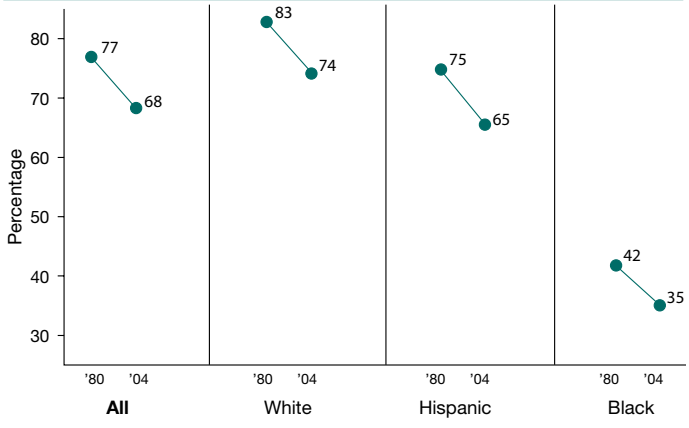
of married couples; 43 percent of unmarried couples; 60 percent of single women; 22 percent of gay couples; and 34 percent of lesbian couples. Several of these categories are new for the Census … and little is known about how many children are being raised by each type. However, many teachers report an increase in the number of children being raised by same-sex couples.[14]

Number of Parents in the Home

What is the trend for children living in two-parent families in the United States? In the nation as a whole in 2004, 68 percent of children were living with both parents, down from 77 percent in 1980. There were substantial declines among the White, Black, and Hispanic populations of children with two parents in the home over that period, as shown in Figure 3. The lowest percentage of children living with two parents was among Black children — just 42 percent in 1980, dropping to 35 percent in 2004. Thus, the majority of Black children live in single-parent homes.

Figure 3

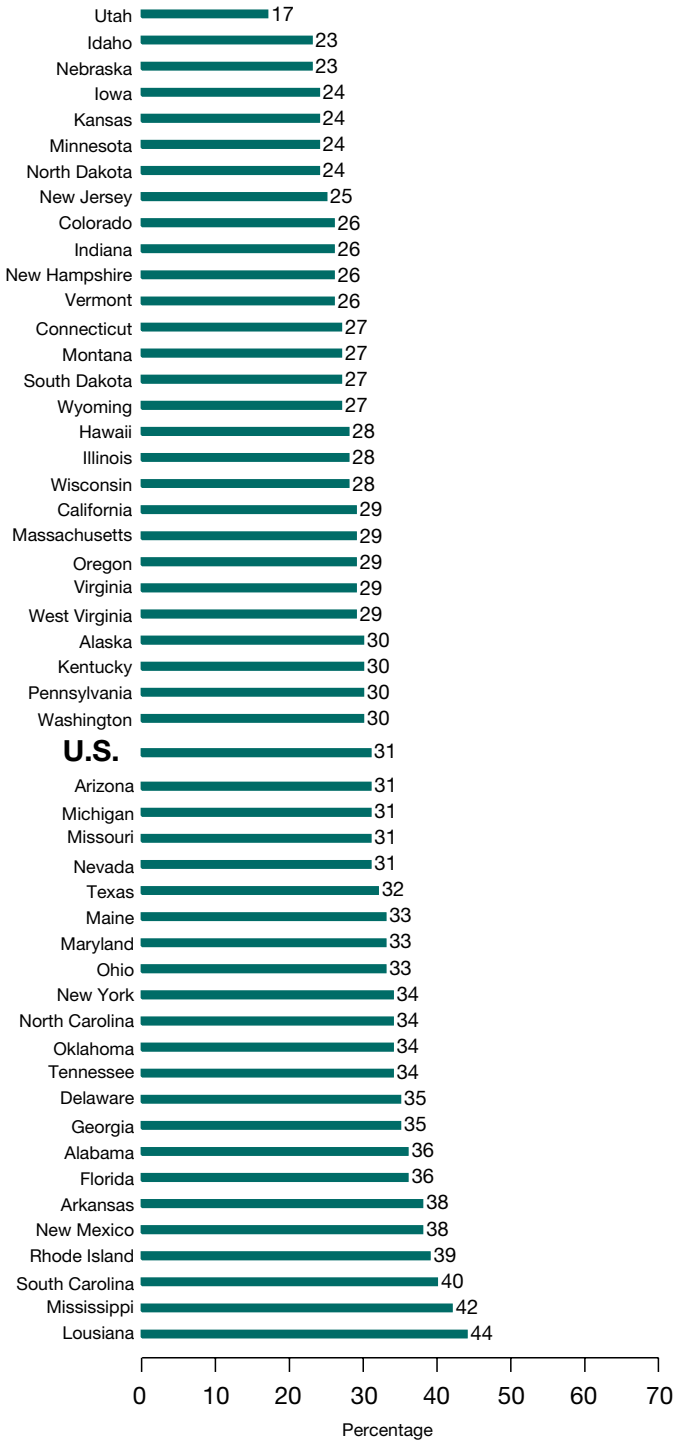
Percentage of Children Under Age 18 Living With Both Parents, by Race/Ethnicity, 1980 and 2004



Source: U.S. Census Bureau, Statistical Abstract of the United States, Table 60, June 29, 2005.

Figure 4

Percentage of Children in Single-Parent Families, by State, 2004



Source: Data on one-parent families from Kids Count State-Level Data Online (www.aecf.org/kidscount/sld/compare_results.jsp?i=721).

[14] Harold L. Hodgkinson, *Leaving Too Many Children Behind: A Demographer's View on the Neglect of America's Youngest Children*, Institute of Educational Leadership, April 2003.

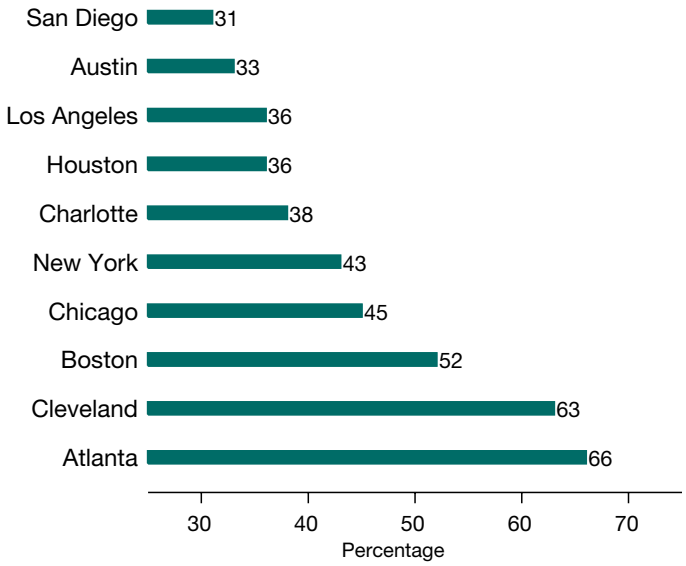
The variation among the states in the percentage of single-parent families is considerable, as shown in Figure 4. The low is 17 percent in Utah, while South Carolina, Mississippi, and Louisiana have percentages of 40 or higher.

A comparison among large cities is shown in Figure 5. San Diego and Austin had the lowest percentages of children in one-parent families, although about one-third of families fall into this category. Atlanta and Cleveland had the highest percentages of single-parent families, with about two-thirds of the cities' families falling into this category.

International comparisons are also available, although there are variations in the years for which data are available. In comparison with nine other countries where data were available, the United States had the highest percentage of one-parent families (28 percent) and Japan the lowest (8 percent). There were substantial increases in all countries in this statistic for the time periods available (see Figure 6). In addition,

Figure 5

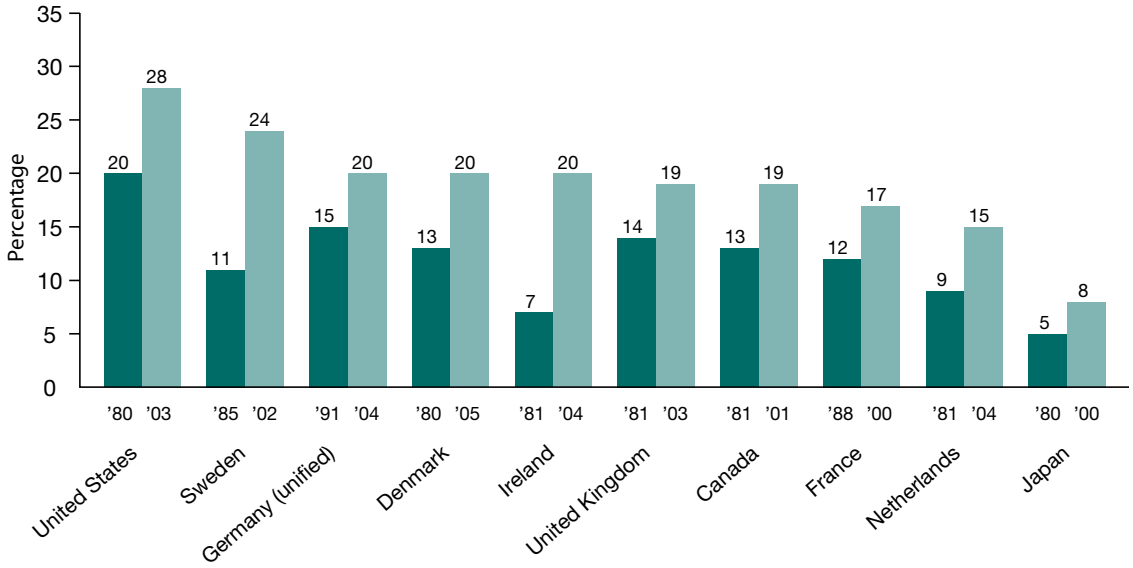
Percentage of One-Parent Families, Selected Cities, 2004



Source: U.S. Census Bureau, 2005 American Community Survey.

Figure 6

Change in the Percentage of Single-Parent Households, Selected Countries, Various Years



Note: Data are for children under 18 (except for Australia and Ireland, where data are for children under 15).
Source: Compiled by the Bureau of Labor Statistics from national population censuses, household surveys, and other sources. Some data are from unpublished tabulations provided by foreign countries (www.childstats.gov/intnllinks.asp?field=Subject1&value=Population+and+Family+Characteristics).

for most of the countries included in this comparison, about one-fifth of families with children were single-parent families. It is clear that the phenomenon of a rising rate of children living with one parent is by no means confined to the United States.

The New Inequality

The nation is very familiar with inequality based on race/ethnicity and income. Reducing and eliminating achievement gaps is national policy in education, and NCLB puts teeth into this policy by requiring the disaggregation of test scores by race/ethnicity and poverty. *It is time to recognize that there is another form of inequality in the circumstance of growing up and getting educated: It is whether a child grows up with two parents in the home, or one.* (Once again, it is important to understand that the authors are speaking in terms of averages.)

This form of inequality cuts across racial and ethnic subgroups and family income status. However, it is disproportionately concentrated in minority and low-income populations. For example, as Figure 3 shows, more than half of Black children are not living with two parents. Efforts to compensate for the disadvantages children experience when growing up in homes lacking the personal and economic resources to support their learning will disproportionately benefit students in minority and poor families. If low income were combined with not living with two parents — recognizing the double deficit — minority students would predominate in any targeted effort to compensate for deprivations and life conditions of the kind that have been shown to hinder educational achievement. The next sections of the report identify some of the family and home conditions that can affect educational achievement.

Most agree that schools must be adequately funded if they are to educate students successfully, although there continues to be significant disagreement over how much funding is sufficient. Families also require resources to function effectively as educating institutions, although it's difficult to pin down exactly what constitutes "adequate resources."

The report does not argue that lower income alone is the source of educational inadequacies in the family, just as its authors would not argue that a lower school budget in itself can be blamed for low student achievement. In fact, the premise of our 2003 report, *Parsing the Achievement Gap*, was that it was necessary to "decompose" income, examining the conditions and behaviors that are shown by research to be correlated with school achievement – which may or may not be "determined" by how much money the family has.

The most thorough examination of the effects of family income on the success of children was performed by Susan E. Mayer. She cautions about ascribing "causation" to simple statistical correlations, and in her analysis sorts out what can be attributed to income alone. While she does find a relationship between family income and success, she says it is smaller than generally thought to be. Also, she suggests that the attributes that make parents attractive to employers may be similar to those that make them good parents.[15]

In *Parsing the Achievement Gap,* we identified factors and conditions, which did not include income, that were related to achievement. Then we looked at how the factors differed in high- and low-income families. The gaps in these factors mirrored the gaps in achievement between children in high- and low-income families. Examples of these factors were birthweight, changing schools, and reading to young children.

This report also highlights ways families can support and encourage learning that do not depend directly on financial resources. These include setting time limits on watching TV, reading to children, and making sure that they get to school. Unfortunately, some important learning supports do require money — and not just nickels and dimes. It takes financial resources to buy books for children to read, shoes for them to wear to school, and a quiet place for them to read and study. And, more so than parents with salaries, parents who earn hourly wages may find it difficult (and cost-prohibitive) to take time off to attend a parent-teacher conference or to do volunteer work at school.

Still other important supports for educational development involve substantial resources: nutritious food, adequate clothing, glasses to correct a child's vision problems, and treatment for children's health problems. Research has shown that these all affect student learning and school attendance. Safety net programs may make a considerable difference, of course, in helping families meet such needs. However, there are large holes in the net, and many families may not have the knowledge and ability to access these programs.

Another problem many families in economic straits face is the need to move from one place to another to find jobs and affordable housing. This often means that their children will have to change schools as well — and that's a problem, since research has shown that changing schools frequently can have a negative impact on student achievement.

The United States has the greatest inequality in the distribution of income of any developed nation — an inequality that has been rising decade by decade. In 2004, according to data from the U.S. Census Bureau, the top and most affluent quintile (or fifth) had 50 percent of the aggregate household income, while the bottom and poorest quintile had 3.4 percent of the income. Put another way, the top-income households had more than 14 times more income than the bottom-income households.[16] As *New York Times* columnist Paul Krugman writes: "We've gone back to levels of inequality not seen since the 1920s."[17]

This section provides several measures of family financial resources and examines the distribution of those resources among population subgroups and among the states. The authors examine median family

[15] Susan E. Mayer, *What Money Can't Buy: Family Income and Children's Life Chances*, Harvard University Press, 1997.
[16] Carmen DeNavas-Walt, Bernadette D. Proctor, and Cheryl Hill Lee, *Income, Poverty, and Health Insurance Coverage in the United States: 2005*, U.S. Census Bureau, August 2005.
[17] "Gilded No More," *The New York Times*, April 27, 2007.

income, the proportion of children who live in poverty, and the proportion who live in families where parent employment is unstable.

While it is hard to disentangle the effects of income from other characteristics associated with social class, it is clear that children from poor families often miss out on many enriching extra-curricular activities that their more affluent peers participate in. For example, only 20 percent of school-age children in families with poverty incomes take lessons of some sort, compared to 31 percent of children in families at or above the poverty line. And only 23 percent of children in poor families belong to clubs, compared to 36 percent of children whose families are at or above the poverty line.[18]

Median Family Income

Large differences exist across states and population subgroups on any measure of income. Here we focus on the median income of families with children under age 18 in the household, and show the variations across states and among racial/ethnic groups. Table 1 shows the 2005 median income for families with and without children, by racial/ethnic groups.

Table 1

Median Family Income for Families With and Without Children, 2005

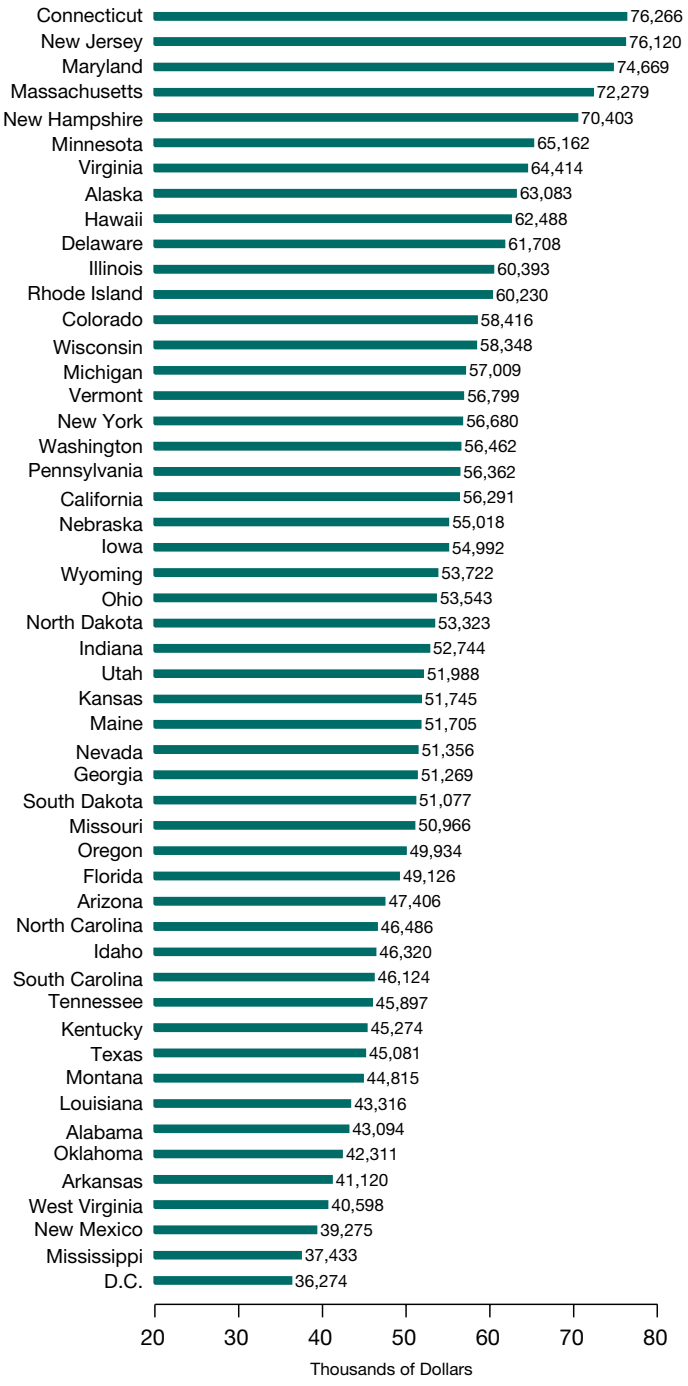
	Total Income	With Children	No Children
All	$56,194	$55,176	$57,258
White, not Hispanic	63,156	66,235	60,979
Black	35,464	31,705	42,079
Asian American	68,957	70,292	67,087
Hispanic	37,867	36,403	41,276

Source: U.S. Census Bureau, Current Population Survey, 2006 Annual Social and Economic Supplement (http://pubdb3.census.gov/macro/032006/faminc/new03_000.htm).

As Table 1 shows, there are large income differences among racial/ethnic groups. On average, Asian-American families have the highest incomes and Black families have the lowest. The table also shows that families with no children have slightly higher incomes, on average, then those with children. There are two noticeable exceptions, however. White and Asian-American families with children have higher incomes than White and Asian-American families with no

Figure 7

Median Annual Family Income for Families With Children, by State, 2005



Source: Income data are from U.S. Census Bureau and the 2005 American Community Survey.

[18] Dye and Johnson, 2007.

children. The opposite is true for Black and Hispanic families: Those with children have lower average incomes than their counterparts with no children.

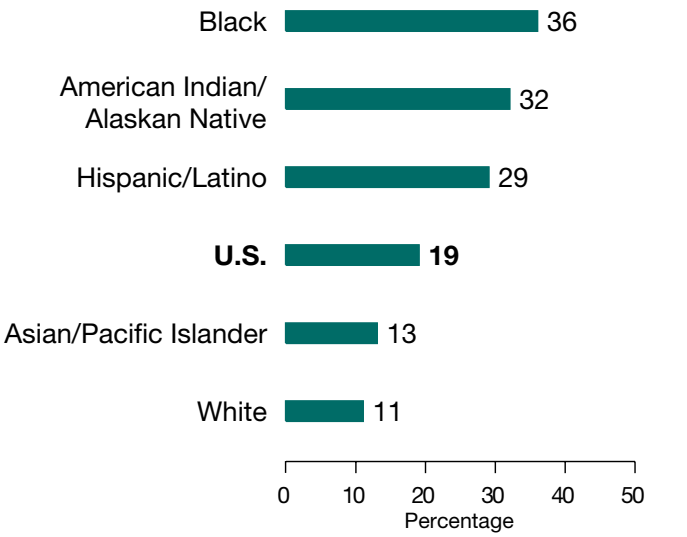
Large differences also show up across the states, as Figure 7 shows. Connecticut, New Hampshire, New Jersey, Maryland, and Massachusetts all have median annual family incomes over $70,000, contrasting sharply with the median incomes in Mississippi and Washington, D.C., which are about half that of the aforementioned states.

Children Living in Poverty

As Figure 8 shows, differences exist in poverty rates among families of different racial/ethnic groups. In 2005, 11 percent of White children under the age of 18 were living in poverty, as were 13 percent of Asian/Pacific Islander children. Those percentages increase to 29 percent of Hispanic/Latino children, and to about one-third of American Indian/Alaskan Native and Black children.

Figure 8

Percentage of Children in Poverty, by Racial/Ethnic Group, 2005

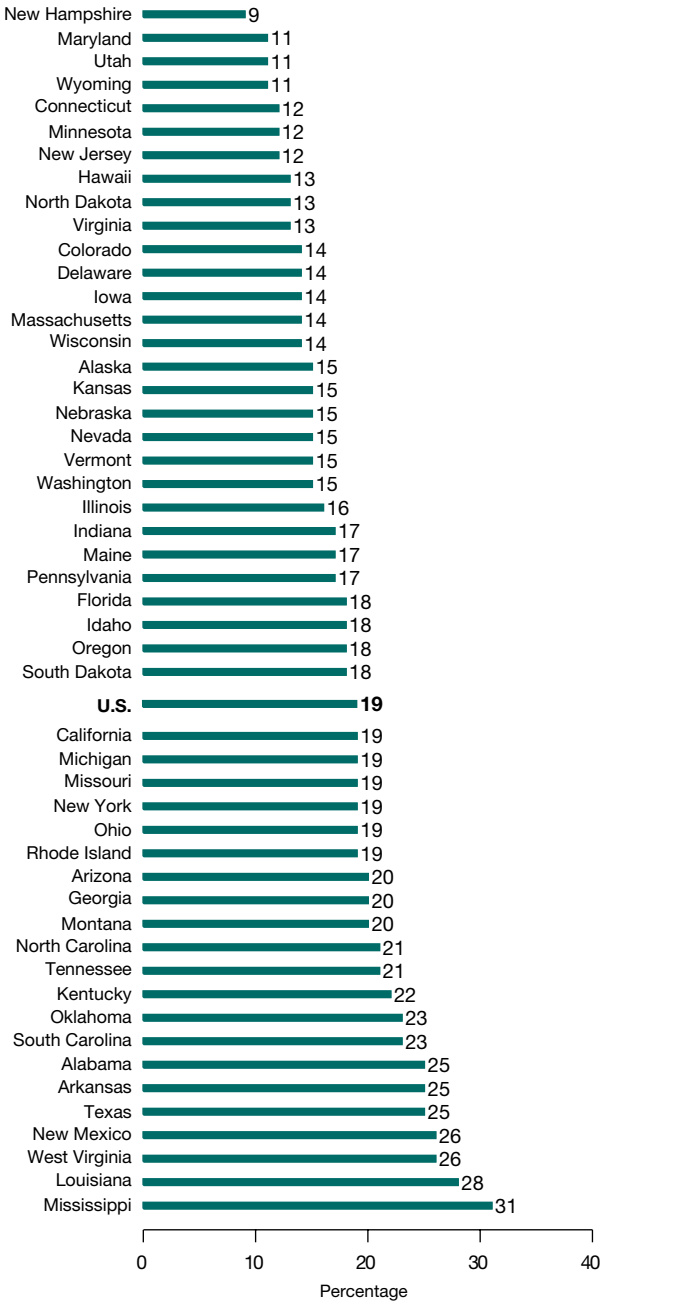


Source: Poverty data are from the American Community Survey, reported in *Kids Count State-Level Data Online* (www.aecf.org/kidscount).

Poverty is also spread unevenly around the country, as Figure 9 shows. While 9 percent of children in New Hampshire were living in poverty in 2005, 31 percent of Mississippi children were living in poverty.

Figure 9

Percentage of Children in Poverty, by State, 2005



Source: Poverty data are from the American Community Survey, reported in *Kids Count State-Level Data Online* (www.aecf.org/kidscount).

Food Insecurity

Despite the existence of federal food aid programs, many U.S. families are unable to adequately feed everybody in the family. According to the U.S. Department of Agriculture, 11 percent of U.S. households (12.6 million families) were classified as "food insecure" at some time during 2005. This means that these households, at some time during the year, were uncertain of having, or unable to acquire, enough food to meet the needs of all household members because they had insufficient money or lacked other food resources.

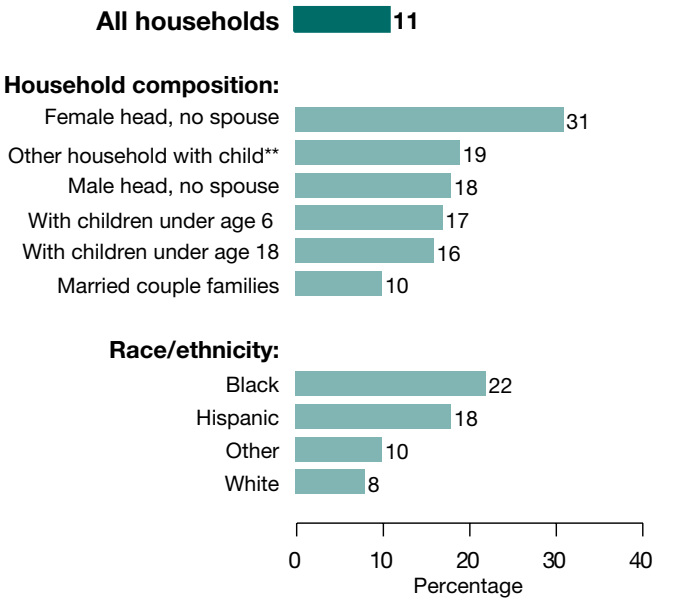
Good nutrition is vital for developing minds and bodies. Researchers using the Early Childhood Longitudinal Study–Kindergarten Cohort to investigate the relationship of food insecurity to achievement found that kindergartners from less food-secure homes scored lower at the beginning of the kindergarten year than other children, and learned less over the course of the school year.[19]

Figure 10 shows the percentage of households who were food insecure in 2005 by demographic groups. The 11 percent average masks the disadvantages experienced by certain population subgroups. For example, nearly one-third of female-headed households were food insecure at some time during 2005, triple the rate for married-couple families. The rate for Black households, at 22 percent, was nearly triple the rate of White households. In addition, nearly one-fifth of Hispanic households were food insecure.

The government further breaks down the food security statistics on households having "low food security" (households able to obtain enough food by using various coping strategies) and "very low food security" (households in which normal eating patterns were disrupted and food intake was reduced due to insufficient money or other resources). In 2005, 7 percent of U.S. households were classified as "low food security," and 4 percent were classified as "very low food security." Again, it is important to remember that this combined 11 percent represents 12.6 million households.[20]

Figure 10

Prevalence of Food Insecurity by Household Characteristics, 2005*



* Food insecurity is defined as households, at some time during the year, that were uncertain of having, or unable to acquire, enough food to meet the needs of all their members because they had insufficient money or other resources for food.
** Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

Source: Data calculated by the Economic Research Service using data from the December 2005 Current Population Survey Food Security Supplement.

Parent Employment

As one would expect, families with low incomes will typically be those that have had less success in the job market. Of course, income can come from other sources, and for those most in need, a substantial portion will come from the safety-net programs, such as food stamps, unemployment insurance, and welfare. Beyond providing a steady income, parents who maintain steady employment also model socially responsible behavior for children to follow.

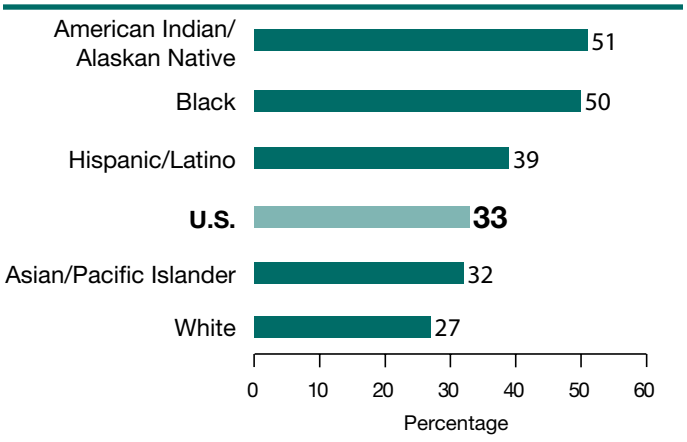
Figure 11 shows the percentage of children who live in families where *no* parent has full-time, year-round employment, broken out by racial/ethnic group. Overall, these percentages are high, and for some groups the rates are alarming. While 27 percent of

[19] Joshua Winicki and Kyle Jemison, "Food Insecurity and Hunger in the Kindergarten Classroom: Its Effect on Learning and Growth," *Contemporary Economic Policy*, Vol. 21, No. 2, April 2003, pp. 145–157.
[20] U.S. Department of Agriculture, Economic Research Service, *Food Security in the United States: Conditions and Trends* (www.ers.usda.gov/Briefing/FoodSecurity/trends.htm).

White children live in families where neither parent has full-time year-round employment, half of American Indian/Alaskan Native and Black children and one-third of Hispanic children are in this situation.

Figure 11

Percentage of Children in Families Where No Parent Has Full-Time, Year-Round Employment, by Racial/Ethnic Group, 2005



Source: Employment data from the American Community Survey, reported in *Kids Count State-Level Data Online* (www.aecf.org/kidscount).

Employment trends also vary significantly from state to state. Iowa, Nebraska, and Utah have the lowest percentage (26 percent) of children living in families where no parent has full-time, year-round employment. At the opposite end of the scale, on average, 43 percent of children in Mississippi live in such a family. [21]

Taken together, the measures presented here paint a bleak picture of family resources for many of the nation's families — and the children in their care. While education and public policy generally give strong support to improving student learning and reducing achievement gaps, the task of greatly raising the income floor or reducing economic inequality throughout the nation has not been addressed. Income inequality is growing in the United States, not declining. But while national debates about income inequality become polarized, local pragmatic measures may resonate at the community level — measures that could help ameliorate the negative effects of inadequate family income. These measures could focus on specific identifiable needs and conditions that are clearly involved in school achievement — reaching out beyond instruction in the classroom (in the tradition of the school lunch and breakfast programs that recognize that hungry children can't learn and that nutrition is a factor in cognitive development).

School systems and communities could develop systematic strategies to identify needs that can influence learning, and set about meeting those needs — aided possibly by higher levels of government. How about providing free books to impoverished families, or health exams along with necessary medical, dental, and vision care for conditions that affect achievement? Perhaps schools could provide students with their own study spaces (with desks, computers, reference books, paper, and pencils) and offer after-school evening meals. A canvass across the nation would disclose a variety of approaches that are now being used to help children. The programs and services already instituted in schools throughout the country offer a rich source of information and experience.[22]

But let us not forget the services already available that many families don't take advantage of. For example, Medicaid now covers many children's health needs, but many of the parents who qualify for the program haven't enrolled their children. A first and very productive step toward helping families support and facilitate their children's academic success would be to educate parents about the programs and services available to help, and encouraging their use.

[21] State employment data are from the American Community Survey reported in *Kids Count State-Level Data Online* (www.aecf.org/kidscount)

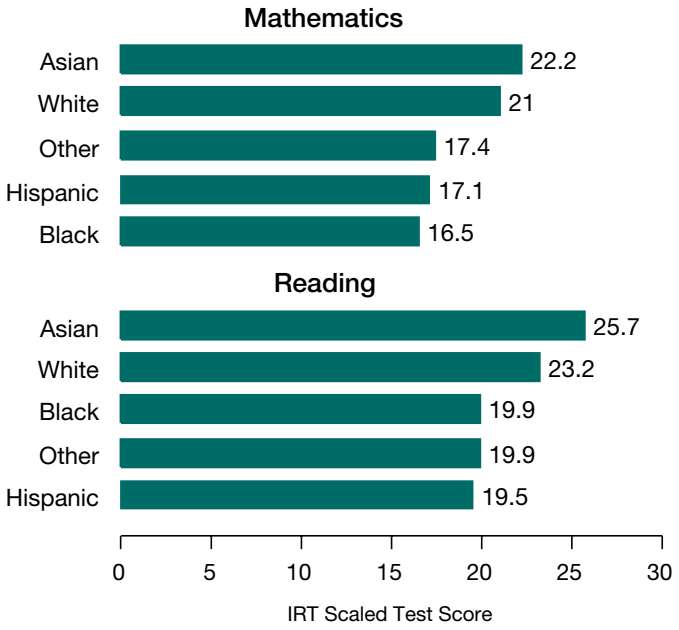
[22] A central source of information is the Coalition of Community Schools at the Institute for Educational Leadership.

We now have a good assessment of the achievement of young children when they first enter the school system, thanks to the Early Childhood Longitudinal Study. Known as the ECLS-K, the study was conducted by the U.S. Department of Education's National Center for Education Statistics and began with the kindergarten class of 1998–99. Educators have long had information about student achievement beginning at the fourth grade, through the National Assessment of Educational Progress (NAEP). What hasn't been known is: (1) how much of the achievement gap that is observed among different groups of students at the fourth grade already existed when these students were entering kindergarten, and (2) what are the factors that might be responsible for the early learning gaps?

Many elements in the home environment influence cognitive development and learning. With ECLS-K we can now determine how large the achievement differences are in reading and mathematics among students of different racial/ethnic groups and with different levels of family socioeconomic status (SES) at the point of entry into formal schooling. Figure 12 shows the reading and mathematics scores of beginning kindergartners in the fall of 1998, by racial/ethnic groups. The data show substantial differences in children's reading and mathematics test scores as they begin kindergarten. Average mathematics scores are 21 percent lower for Black children than for White children. Hispanic children's scores are 19 percent lower than the scores of White children. Similar differences also exist in reading.

Figure 12

Reading and Mathematics Achievement at the Beginning of Kindergarten, by Racial/Ethnic Group



Source: Valerie E. Lee and David T. Burkam, *Inequality at the Starting Gate: Social Background Differences in Achievement as Children Begin School*, Washington, D.C.: Economic Policy Institute, 2002.

Early Language Acquisition

While there have been many studies about what happens in the early years of life and how early experiences affect cognition and language acquisition, none has been as thorough as the work by Betty Hart and Todd Risley, who studied children's language development from birth through age 3. These researchers recorded and monitored many aspects of parent-child interactions and noted the children's progress. They found that in vocabulary, language, and interaction styles, children mimic their parents.

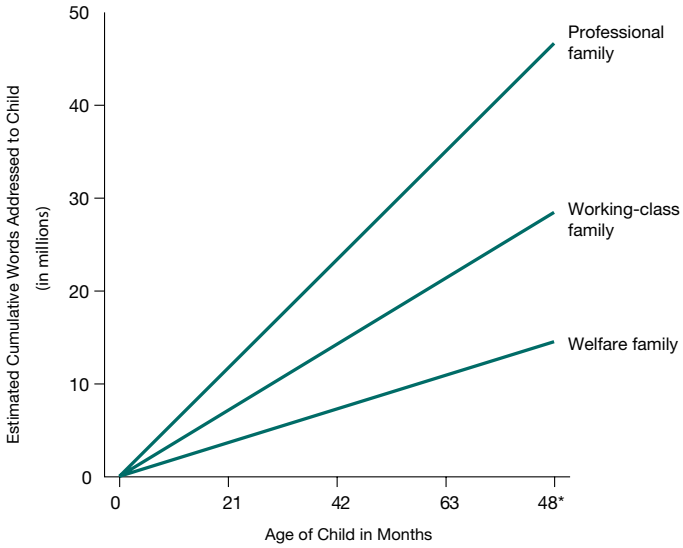
Hart and Risley observed that in working-class families, "about half of all feedback was affirmative among family members when the children were 13 to 18 months old; similarly, about half the feedback given by the child at 35 to 36 months was affirmative." That is, when the parents spoke in an affirmative manner to a child, the child imitated this tone in talking to siblings and parents. An affirmative tone was slightly more prevalent among professional parents, and their children shared this.

Conversely, in families on welfare, verbal interactions with the children were much more likely to be negative and, in turn, the same was true of the interactions of the child with the rest of the family. In the families on welfare, the researchers generally found a "poverty of experience being transmitted across generations." One example of the researchers' findings related to language exchanges is illustrated in Figure 13, which shows the estimated number of words addressed to the children over 36 months, with the trends extrapolated through 48 months. The differences were huge among the professional, working-class, and welfare families. This research indicates that, by the end of four years, the average child in a professional family hears about 20 million

more words than children in working-class families hear, and about 35 million more than the children in welfare families hear.[23]

Figure 13

Estimated Cumulative Differences in Language Experience by 4 Years of Age



* Projected from 36 to 48 months.
Source: Hart and Risley, 1995.

Reading to Young Children

Child Trends, a nonprofit, nonpartisan research organization dedicated to improving the lives of children, sums up seven research papers, reports, and books, and cites 19 researchers to build an overwhelming case for the value of reading to children:

> Children develop literacy-related skills long before they are able to read. By reading aloud to their young children, parents can help them acquire the prerequisite skills they will need to learn to read in school. Being read to has been identified as a source of children's early literacy development, including knowledge of the alphabet, print, and characteristics of written language.
>
> By the age of two, children who are read to regularly display greater language comprehension, larger vocabularies and higher cognitive skills than their peers. Shared parent-child book reading during children's preschool years leads to higher reading achievement in elementary school, as well as greater enthusiasm for reading and learning. In addition, being read to aids in the socioemotional development of young children and gives them the skills to become independent readers and to transition from infancy to toddlerhood.[24]

Reading to children is about the simplest thing that can be done to help them achieve, and it is a critical step in raising achievement and closing achievement gaps. For this reason, if for no other, teaching non-reading parents to read needs to be a high priority for communities, states, and the nation — as a key element of an education policy for children. Making sure all families have access to books and other suitable reading materials for their children must also become a key part of this policy. Library bookmobiles in poor areas, for example, could become as ubiquitous as the once-famous Good Humor man.

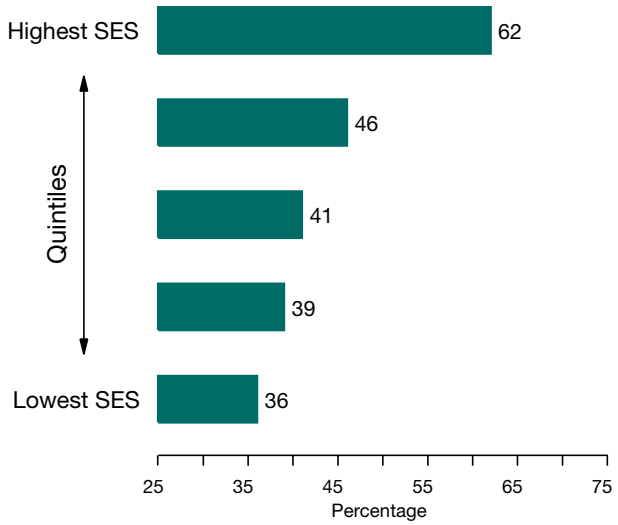
There is, of course, a considerable amount of reading going on in the American family, although it is clear that the amount and quality varies considerably. For example, ECLS-K found a strong relationship between a kindergartners' SES and the extent to which their parents read to them. As Figure 14 shows, at the highest SES quartile, 62 percent of parents reported reading to their children every day, compared to only 36 percent of parents at the lowest SES quartile. These are very large differences.[25, 26]

Trend data displayed in Table 2 also show that, in 2005, 60 percent of parents of 3- to 5-year-old children who had not yet entered kindergarten read to their children every day. In 1993, only 53 percent did so. How much parent-to-child reading goes on in families varies a lot, depending on racial/ethnic group, SES, and family

[23] Betty Hart and Todd R. Risley, *Meaningful Differences in the Everyday Experience of Young American Children*, Paul R. Brookes Publishing Co., 1995.
[24] http://www.childtrendsdatabank.org/indicators/5ReadingtoYoungChildren.cfm
[25] In statistical terms, this is a difference of about one-half of a standard deviation.
[26] SES is measured from a scale that reflects the education, income, and occupations of kindergartners' parents or guardians.

Figure 14

Percentage of Kindergartners Whose Parents Read to Them Every Day, by Socioeconomic Status



Source: Richard J. Coley, *An Uneven Start: Indicators of Inequality in School Readiness*, Policy Information Report, Policy Information Center, Educational Testing Service, March 2002.

structure variables. For example, in 2005, children in poor families were less likely to have a parent read to them regularly than children in more affluent families. And while 68 percent of White and 66 percent of Asian-American 3- to 5-year-olds were read to every day, the percentage drops to 50 percent for Black children and 45 percent for Hispanic children.

Family characteristics also have an important influence on learning and school success. As might be expected, children in a two-parent family were more likely to be read to than children in a single-parent family (63 percent vs. 53 percent). There was also a strong relationship between mothers' educational level and the frequency of reading to the child. Seventy-two percent of children whose mothers were college

Table 2

Percentage of Children Ages 3 to 5 Who Were Read to Every Day in the Past Week by a Family Member, Selected Years, 1993-2005[27]

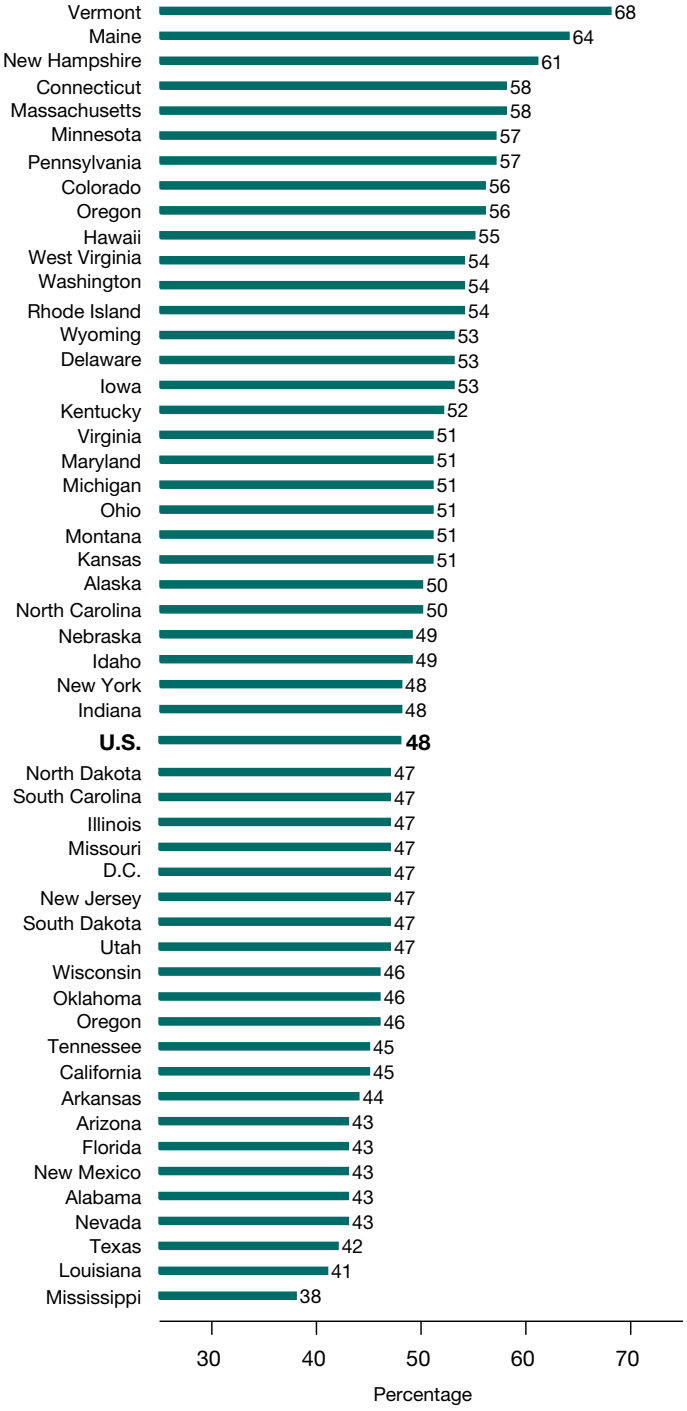
	1993	1995	1996	1999	2001	2005
Total	***53%***	***58%***	***57%***	***54%***	***58%***	***60%***
Gender						
Male	51	57	56	52	55	59
Female	54	59	57	55	61	62
Race and Hispanic Origin						
White, Non-Hispanic	59	65	64	61	64	68
Black, Non-Hispanic	39	43	44	41	47	50
Hispanic[28]	37	38	39	33	42	45
Asian American	46	37	62	54	51	66
Poverty Status[29]						
Below 100% poverty	44	47	47	39	48	50
100-199% poverty	49	56	52	51	52	60
200% poverty and above	61	65	66	62	64	65
Family Type						
Two parents[30]	55	61	61	58	61	62
Two parents, married	-	-	-	-	61	63
Two parents, unmarried	-	-	-	-	57	50
One parent	46	49	46	42	47	53
No parents	46	52	48	51	53	64
Mother's Highest Level of Educational Attainment[31]						
Less than high school graduate	37	40	37	39	41	41
High school graduate/GED	48	48	49	45	49	55
Vocational/technical or some college	57	64	62	53	60	60
College graduate	71	76	77	71	73	72
Mother's Employment Status[32]						
Worked 35 hours or more per week	52	55	54	49	55	57
Worked less than 35 hours per week	56	63	59	56	63	61
Looking for work	44	46	53	47	54	63
Not in labor force	55	60	59	60	58	65

Source: Reproduced from the Federal Interagency Forum on Child and Family Statistics, *America's Children: Key Indicators of National Well-Being*, 2006, Federal Interagency Forum on Child and Family Statistics, Washington, D.C., U.S. Government Printing Office, Table ED1. Based on National Household Education Survey analysis.

[27] Estimates are based on children who have yet to enter kindergarten.
[28] Persons of Hispanic origin may be of any race.
[29] Poverty estimates for 1993 are not comparable to later years because respondents were not asked exact household income.
[30] Refers to adults' relationship to child and does not indicate marital status.
[31] Children without mothers in the home are not included in estimates dealing with mother's education or mother's employment status.
[32] Unemployed mothers are not shown separately but are included in the total.

Figure 15

Percentage of Children Who Were Read to Every Day in the Past Week, 2003



Source: Data on reading to children are from Child and Adolescent Health Measurement Initiative, *National Survey of Children's Health*, Data Resource Center on Child and Adolescent Health, 2005.

graduates were read to daily, compared to 55 percent of children whose mothers were high school graduates or who had obtained a GED, and 41 percent of children whose mothers had not completed high school.

There is also considerable variation among the states, as can be seen in Figure 15, which shows the percentage of parents who read to their children, under age 5, every day. The low was Mississippi at 38 percent, and the high was Vermont at 68 percent; the national average was 48 percent.

Parents are children's most important teachers during their first five years of life. But parents are far from being children's only teachers: A large proportion of children are in the hands of child care providers for a large amount of time. These providers constitute the larger family in which children are raised. It stands to reason, then, that improving the availability of high-quality child care will improve student learning and reduce inequality.

Research supports this assertion and is clearly summed up in the Annie E. Casey Foundation *2006 Kids Count* essay:

> A large body of research underscores how quality child care enables young children to build the cognitive and social skills that will help them learn, build positive social relationships and experience academic success once they enter school.[33]

This ETS Policy Information Report has drawn heavily from the *2006 Kids Count* essay, and the essay is an excellent synthesis of what is known and being done to improve child care.

The Head Start program provides the most consistent model of quality child care available in the United States today. But for a variety of reasons, Head Start and similar high-quality child care programs aren't available to many families. Until quality child care programs are accessible to all families, parents will continue to rely on family members, friends, and neighbors to care for their children. Of 15.5 million U.S. children in child care today, some 6.5 million (almost 42 percent) are in home-based settings. And 2.5 million of these children come from families whose incomes are below 200 percent of the poverty line. Although Black families are the most likely to use home-based care arrangements, White families use them as well. Hispanic families are more likely to use parental care, but when they go outside the home for child care, they turn to family members, friends, or neighbors for child care rather than center-based care.[34]

Parents use family, friend, and neighbor care for reasons having to do with cost and inability to find transportation to child care centers. Many parents work shifts that don't correspond to the hours child care centers are available. Others choose this type of care as a matter of preference based on issues of trust, personal comfort, culture, and preferences for a homelike environment. Says the Casey Foundation:

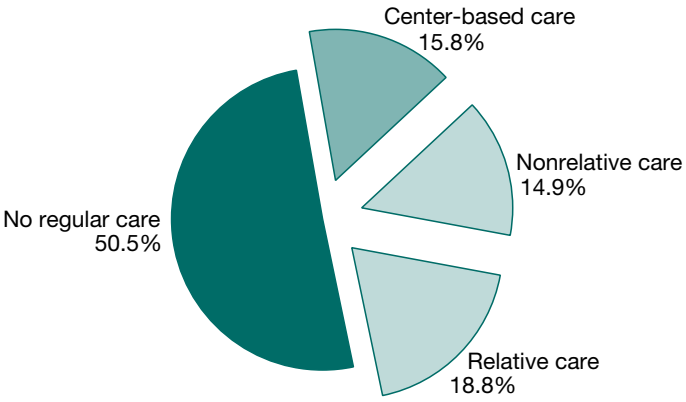
> This form of child care has been used for generations and will, undoubtedly, be an important resource for years to come. For the foreseeable future, it will represent the most common type of child care for low-income children under age six whose parents are working, especially those in entry-level jobs with non-traditional schedules.[35]

A Look at Day Care for the Nation's 2-Year-Olds

A longitudinal survey of children has recently released information on the child care arrangements for the nation's 2-year-olds. The Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), sponsored by the U.S. Department of Education's National Center for

Figure 16

Regular Nonparental Care at About 2 Years of Age, by Primary Type of Care, 2003-04

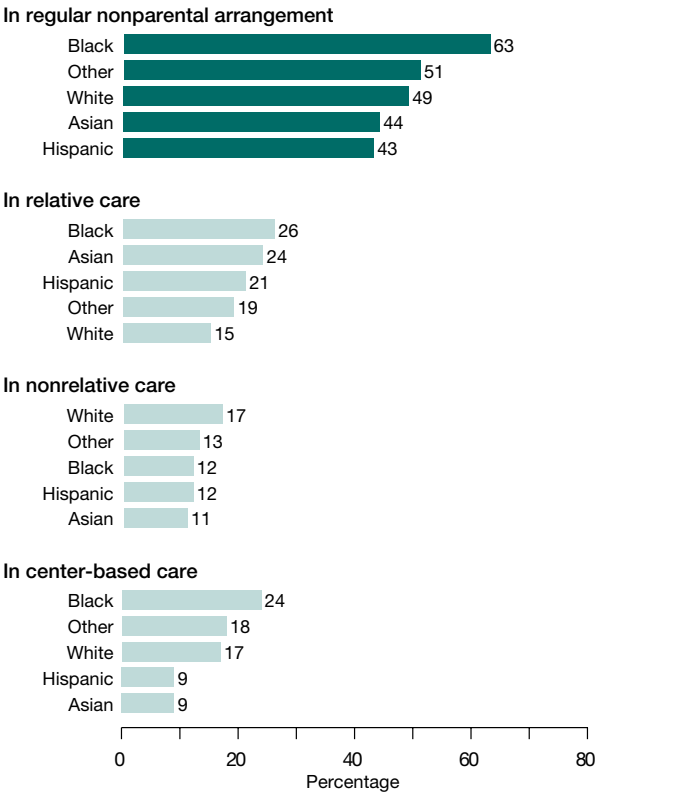


Source: Gail M. Mulligan and Kristin Denton Flanagan, *Age 2: Findings from the 2-Year-Old Follow-Up of the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B)*, U.S. Department of Education, National Center for Education Statistics, August 2006.

[33] Annie E. Casey Foundation, 2006 *Kids Count* Essay, 2006, (http://www.aecf.org/upload/PublicationFiles/2006_databook_essay.pdf).
[34] Annie E. Casey Foundation, 2006.
[35] Annie E. Casey Foundation, 2006.

Figure 17

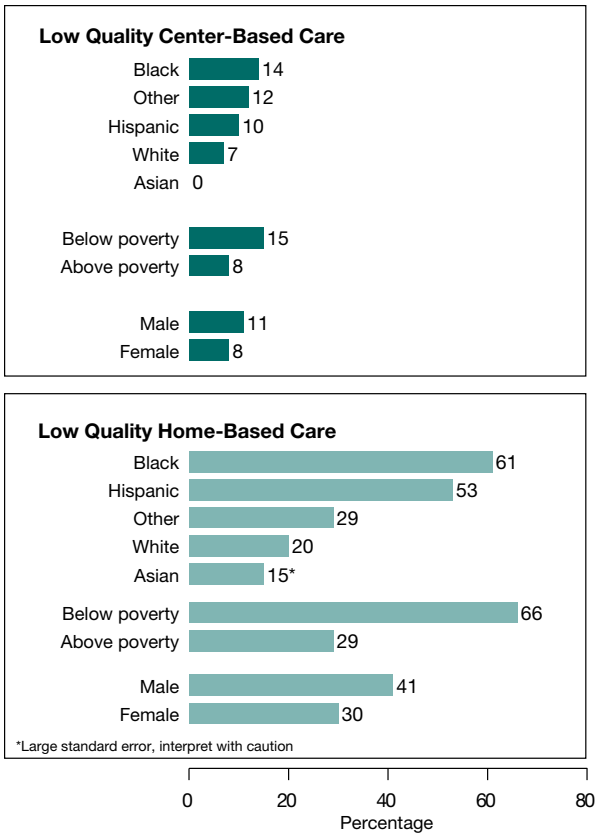
Percentage of Children (at About Age 2) in Regular Nonparental Care, by Type of Care and Racial/Ethnic Group, 2003-04



"Other" includes Native Hawaiian, Other Pacific Islander, American Indian or Alaskan Native, and multiracial children.
Source: Gail M. Mulligan and Kristin Denton Flanagan, *Age 2: Findings from the 2-Year-Old Follow-Up of the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B)*, U.S. Department of Education, NCES, August 2006.

Figure 18

Percentage of Children (at About Age 2) in Low-Quality Day Care, by Type of Care and Child Characteristics, 2003-04



"Other" includes Native Hawaiian, Other Pacific Islander, American Indian or Alaskan Native, and multiracial children.
Source: Gail M. Mulligan and Kristin Denton Flanagan, Age 2: Findings from the 2-Year-Old Follow-Up of the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), U.S. Department of Education, NCES, August 2006.

Education Statistics (NCES), provides information on children's development, health, and in- and out-of-school experiences in the years leading up to school.[36]

Type of Day Care. These data, drawn from ECLS-B, describe the nonparental care arrangements of the nation's 2-year-olds, and provide an assessment of the quality of that care.

Figure 16 shows that about half of all two-year-olds were in some kind of regular nonparental child care. About 19 percent received care from a relative, about 16 percent received care in a center (nursery school, early learning center, preschool), and about 15 percent had home-based nonrelative care (nanny, neighbor, regular sitter).

As Figure 17 shows, there are differences among racial/ethnic groups. Black children were the most likely to be in nonparental care at age 2. Sixty-three percent of Black children were in nonparental care, compared to a little over 40 percent of Asian and Hispanic children, and about half of White children and children classified as "other."

[36] ECLS-B is the first nationally representative study within the United States to directly assess children's early mental and physical development, their attachment with their primary care giver (usually their mother), the quality of their early care and education settings, and the contributions of fathers, both resident and nonresident, to their lives. For more information, visit http://nces.ed.gov/ecls/Birth.asp.

Quality of Day Care. ECLS-B also collected information on the quality of child care. For a subsample of the children, trained field interviewers observed the child's care setting and recorded information on its quality. Overall, for children in center-based care, 24 percent were in high-quality care, 66 percent were in medium-quality care (adequate), and 9 percent were in low-quality care. For children in home-based care, the quality was not rated as highly. Seven percent were in high-quality home-based care, 57 percent were in medium-quality settings, and 36 percent were in home-based arrangements of low quality.

Differences were also reported among children of different backgrounds, particularly for the use of home-based care. As Figure 18 shows, more than half of Black and Hispanic 2-year-olds were in home-based care rated as low quality, compared to only 20 percent of White children and 15 percent of Asian children. Children in families below the poverty threshold (66 percent) were much more likely than non-poor children (29 percent) to be in low-quality child care.

Raising academic performance and reducing achievement gaps require a national effort to improve the quality of this extensive child care system. The data that we now have on child care for 2-year-olds show that minority and poor children are much more likely to be in low-quality child care arrangements, reinforcing rather than reducing achievement gaps.

While there are relatively few efforts now underway to improve the quality of child care, there are a variety of good models to explore and build on. Here are a few examples, all drawn from the *Kids Count* essay:

- The Boston Children's Museum, in partnership with Head Start, kindergartens, and child care teachers in the city, sponsors a citywide effort called *Leveling the Sandbox*. All caregivers (including the children they care for and their families) are invited to a half-day seminar, three "child-focused" field trips to the museum, and three family nights at the museum.
- The Arizona *Kith and Kin Project* provides caregiver support and training groups that meet weekly for 14 weeks.
- Hawaii's *Good Beginnings Alliance* helped create neighborhood-based play-and-learning centers staffed with volunteers and early childhood education specialists.
- The *Family Support Center*, run by the Ashe County Partnerships in North Carolina, teaches caregivers the skills needed for raising literacy levels, and provides a cooperative play center that is open to home-based caregivers.
- *Infant/Toddler Family Day Care, Inc.*, in Fairfax, Va., gives skills-training to 100 child care providers and offers home visits by child care specialists.

Any effort to upgrade the quality of child care providers will have to take into account the fact that this is a diverse population. For children under the age of 5, of a total of 4.7 million care givers, 2.3 million are paid and 2.4 million are unpaid. Table 3 shows the distribution of these caregivers and provides a source for those interested in obtaining more detailed information on the child-care enterprise.

Table 3

Characteristics of the Child Care Workforce for Children From Birth to Age 5 (2002)

	Paid Child Care Providers	Unpaid Child Care Providers
Total	2,301,000	2,395,000
Center-based staff	550,000	42,000
Family child care providers	650,000	—
Relatives	804,000	2,232,000
Nonrelatives	298,000	121,000

Source: Alice Burton, et al., *Estimating the Size and Components of the U.S. Child Care Workforce and Caregiving Population*, Center for the Child Care Workforce and Human Services Policy Center, University of Washington, May 2002.

How well are America's "smallest schools" equipped as learning environments? Many factors and conditions can contribute to making the home a productive place for children to learn including:

- A quiet place to read and study
- A desk or table where children can work
- Books, magazines, newspapers, and reference books to explore; access to a public library and encouragement to visit it
- A computer and access to the Internet

The availability of such resources depends on several factors. First and foremost is whether the family income is sufficient to provide them. If there is to be equality in home resources, national economic and social policies must provide a means to narrow income inequality.

A second factor is simply differences in the interests of parents and other family members — whether the newspaper arrives daily, the *National Geographic* arrives monthly, and so on. Parents with less interest, however, might be persuaded to obtain these kinds of materials if they understand how important the presence of such reading materials is in encouraging children's interest in reading and developing their academic ability.

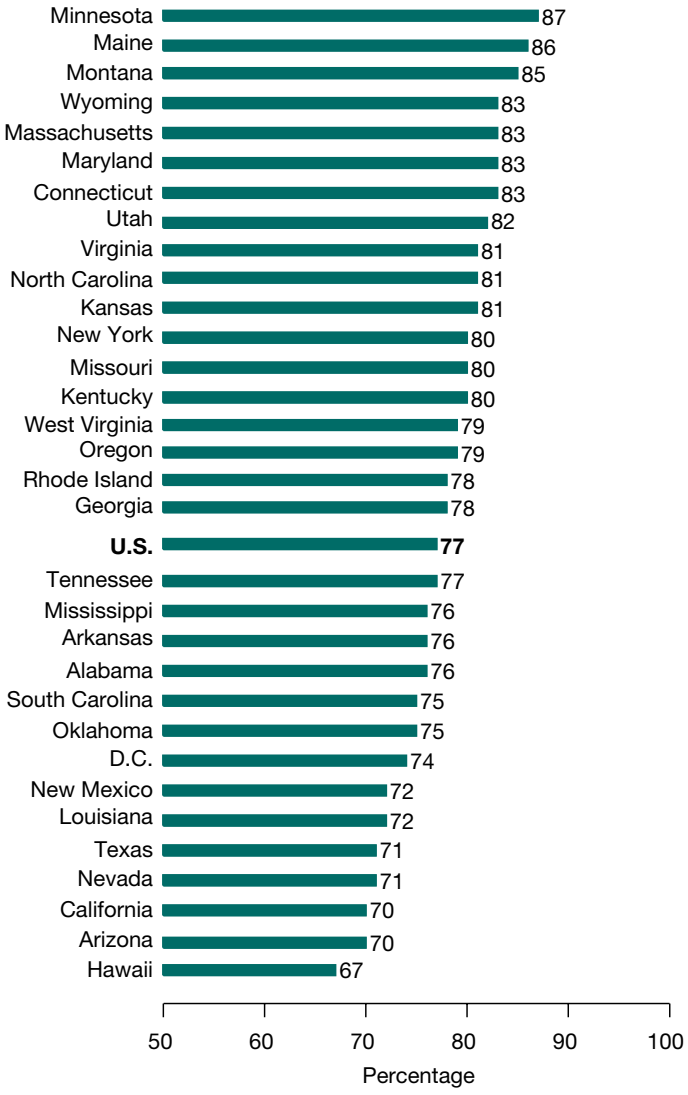
A third factor is the parents' understanding that the home is an important place for learning and educational development. This realization may be shaped by the parents' own childhood experiences. Some parents may view the school as the entity primarily responsible for education. These parents may just need encouragement to provide the learning resources their children need at home.

Literacy Materials in the Home

The 2000 NAEP mathematics assessment asked eighth-grade students whether they had books, magazines, encyclopedias, and newspapers in their homes. Figure 19 shows the percentage of students in the states that participated in that assessment who said that they had at least three of those types of literacy materials in their homes. Overall, 77 percent of U.S. eighth-graders indicated that they had at least three types of literacy materials in their home. Differences among the states are shown.

Figure 19

Percentage of Eighth-Graders With Three or More Types of Literacy Materials in the Home, by State, 2000



Source: Data from the NAEP 2000 Mathematics Assessment, analyzed by the ETS Policy Information Center.
Note: Data are presented for the states that participated in the 2000 assessment.

In international comparisons using data from the Trends in International Mathematics and Science Study (TIMSS), 31 percent of U.S. eighth-grade science students had from zero to 25 books in the home, compared with an average of all participating countries of 44 percent. Twenty-four percent of U.S. eighth-graders had more than 200 books in the home, compared to

the international average of 15 percent.[37] This suggests a high degree of inequality in the United States in the availability of these important resources in the home.

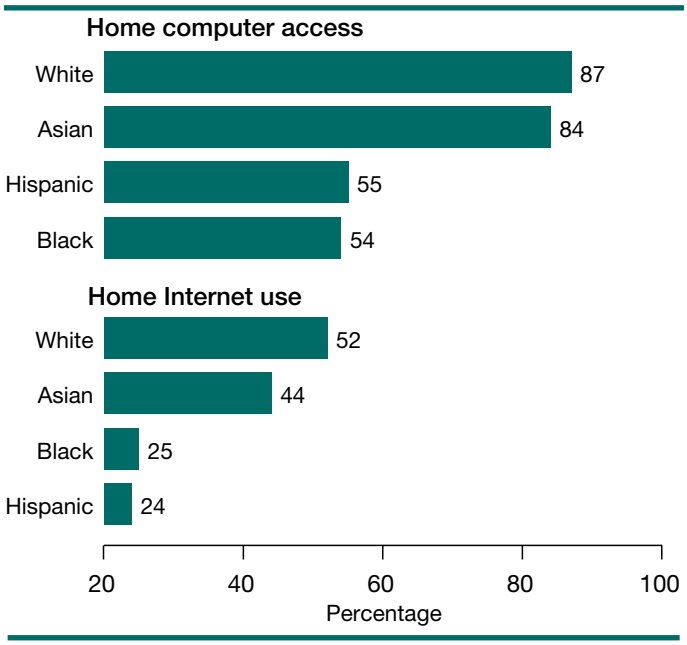
Technology

The big story about technology is its rapid expansion in availability and use. While just 15 percent of 3- to 17-year-olds had access to a home computer in 1984, a steady increase brought that percentage to 76 in 2003.[38] Home Internet use among this group grew from 22 percent in 1997 to 42 percent in 2003. It is likely much higher today.

However, while many U.S. families take home computers for granted, many of our nation's students still don't have this technology in their homes. Research shows that computer availability and use is very uneven among racial/ethnic subgroups. Figure 20 shows that White and Asian-American homes are most likely to have a home computer, with 87 percent and 84 percent, respectively, compared to just over half of Black and Hispanic homes in 2003. As shown in the figure, the trends are similar for home Internet use.

Figure 20

Percentage of Children Ages 3 to 17 Who Have Access to Computers at Home and Who Use the Internet at Home, by Racial/Ethnic Group, 2003



Source: Child Trends calculations based on U.S. Census data.

TIMSS also provides data that offer an international perspective on these trends. Among the 45 participants, 60 percent of eighth-grade students, on average, reported having a computer at home. However, there were great differences. For 16 of the participants (Australia, Belgium [Flemish], Chinese Taipei, England, Hong Kong SAR, Israel, Republic of Korea, the Netherlands, New Zealand, Norway, Scotland, Singapore, Sweden, the United States, and the Canadian provinces of Ontario and Quebec) virtually all eighth-grade students (90 percent or more) reported having a computer at home. In contrast, less than 20 percent of eighth-grade students in Armenia, Botswana, Egypt, Indonesia, Moldova, and Morocco reported having a home computer.[39]

What can be said about how much the presence of a home computer — and using it — raises student achievement? For many families, computers remain fairly expensive, so any good research on this question has to distinguish computer availability for school purposes from the known relationship between income and school achievement. Distinctions must also be made between constructive uses and those of little or no help to academic pursuit — such as use for games, chat rooms, and conversing with friends via e-mail and instant messaging. Like spending too much time watching television, any one of these activities, when excessive, can be a "thief of time."

With so many variables to consider, it isn't surprising that Child Trends' synthesis of the literature does not find a clear story on the role of the computer in student achievement:

> Research on the effects of home computers and Internet use on children's achievement is limited and often does not control for other factors. Some research indicates that those with access to home computers perform somewhat better in mathematics and reading,

[37] Michael O. Martin et al., *TIMSS 2003 International Science Report*, TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College, 2004.
[38] Childtrendsdatabank.com, derived from a variety of U.S. Census Bureau reports.
[39] Martin et al., 2004.

> though the benefit is larger for Whites and those in higher socioeconomic groups … However, there is widespread concern that children may be exposed to pornographic, violent, and other age-inappropriate materials. … Lastly, time in front of the computer may also take the place of time spent exercising or being active …[40]

Technology holds much promise for improving children's educational achievement, but a heavy responsibility falls on parents in monitoring how their children use it. Perhaps the public school system can give parents guidance on the constructive use of computers in the home.

A Place to Study

In international comparisons, 86 percent of U.S. eighth-grade science students reported having a study desk or table in 2003, just above the international average of 83 percent, but well below Hungary (98 percent), Israel (97 percent), Japan (96 percent), Republic of Korea (97 percent), Netherlands (99 percent), Norway (98 percent), Slovenia (97 percent), and Sweden (98 percent).[41]

Dealing With Distractions

Distractions inside the home have skyrocketed since the days of *The Lone Ranger* and *The Shadow*. It is not hard to imagine a teenager with the television turned on and myspace.com on the computer screen, checking for text messages on the cell phone — perhaps even with a book open in the lap. And there are computer and video games, and the iPod. That's a lot of competition for reading and homework.

Much of the research about student distraction has focused on watching too much television. Some serious efforts have been made to pin down the effects of large amounts of television watching on school achievement. However, scientific studies were greatly hampered by the fact that control groups were hard to find: Television was already ubiquitous when the first studies were done some 40 or more years ago. Complicating this line of inquiry is the fact that some television programming offers solid educational content, so researchers must take into account the quality of the television programs children are watching.

The effect of television was of much concern when the College Board commissioned a blue ribbon panel in 1975 to investigate why SAT® scores were declining. The panel commissioned a report synthesizing the available research, which was limited. The panel's final report stated that: "What direct research there is on correlations between television watching and academic test scores is, in fact, entirely inconclusive." Nevertheless, the panel was undaunted in drawing some conclusions and noted that "by age 16, most children have spent between 10,000 and 15,000 hours watching television." The panel came to this bottom line: "So is television a cause of the SAT score decline? Yes, we think it is."[42]

The American Psychological Association's Task Force on Television and Society showed equal concern for how television might be affecting our nation's youth. In 1992 this task force issued a report entitled *Big World, Small Screen: The Role of Television in American Society* that linked excessive television viewing (particularly violent television) with negative behaviors, such as insensitive and aggressive activity.[43]

Census data also provide information on the extent to which families establish rules limiting children's television watching, the types of programs they're allowed to watch, the time of day they can watch television, and the number of hours they can watch it. Rules limiting the types of programs and time of day were more common than rules limiting the number of hours watched. The data show that children age 3 to 5 in families with no television rules were read to less often than those with rules. Also, children living with married parents had more restrictions on television watching than children with never-married parents.[44]

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[40] www.childtrendsdatabank.org/indicators/69HomeComputerUse.cfm
[41] Martin et al., 2004.
[42] Willard Wirtz et al., *On Further Examination: Report of the Advisory Panel on the Scholastic Aptitude Test Score Decline*, College Board, 1977, p. 35.
[43] This study is described in Jane Lawler Dye and Tallese D. Johnson, *A Child's Day: 2003(Selected Indicators of Child Well-Being)*, Current Population Reports, P70-109, U.S. Census Bureau, Washington, DC, January 2007.
[44] Dye and Johnson, 2007. Married includes married, spouse present and married, spouse absent (excluding separated).

In 2006, Child Trends provided a summary of what can now be concluded:

> When students are watching television excessively, they are less likely to be spending time doing homework or reading, participating in after-school activities, exercising frequently, or being engaged in other intellectually stimulating activity. Students who watch six or more hours of television each day scored lower, on average, than did other students on the National Assessment of Educational Progress (NAEP) mathematics assessment. Likewise, in all countries participating in the Third International Mathematics and Science Study in 1995, eighth graders who watched more than five hours of television per day had the lowest average mathematics scores.[45]

Child Trends reports that, in 2004, 31 percent of eighth-graders watched four or more hours of television on an average weekday, with considerable differences between White students (24 percent) and Black students (59 percent). The variation by parents' education ranges from a low of 19 percent for students whose parents attended graduate school, up to 42 percent for students whose parents have less than a high school education (see Figure 21). The trend in the percentage of students watching four or more hours is down somewhat since 1991: 36 percent, compared with 31 percent in 2004 for both White and Black students.[46]

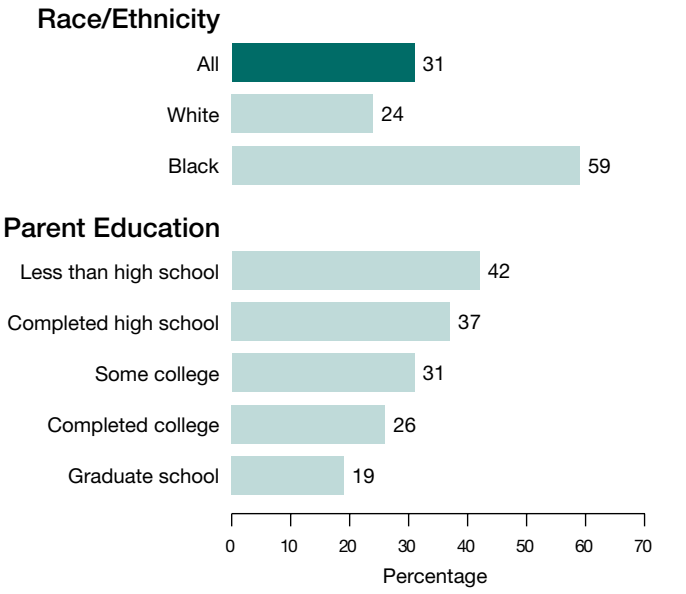
In our 1992 report, *America's Smallest School: The Family*, we showed how the variation in the amount of television watching by state closely tracked the variation in the average achievement scores by state. Figure 22 shows the percentage of eighth-graders who watched five or more hours of television per school day in 2000, the most recent year for which state data are available. The differences among the states that participated in NAEP that year are large. On one hand, few students watched five hours of television or more in Montana, Minnesota, North Dakota, Maine, and Utah, while almost a third or more did so in Louisiana, Mississippi, South Carolina, and Washington, D.C.

While the authors of this Policy Information Report believe there is a strong basis for advising parents that they need to watch over their children's television viewing, it is also fair to say that no scientific certainty has been established as to how much time in front of what types of television programming results in how much impact on school achievement.

TIMSS provides a much broader view of a variety of potentially distracting student activities: watching television and video, playing computer games, playing or talking with friends, doing jobs in the home, participating in sports activities, reading for enjoyment, surfing the Internet, and working at a paid job.

Figure 21

Percentage of Eighth-Graders Watching Four or More Hours of Television on an Average Weekday, 2004



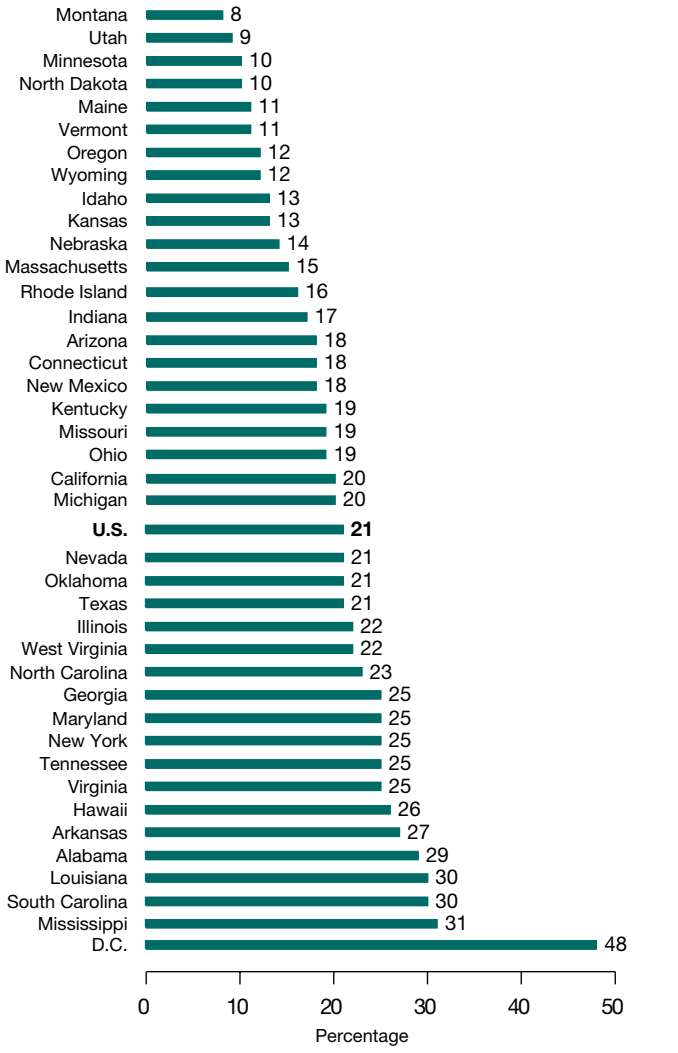
Source: Data are from Childtrendsdatabank.org, derived from Jerald G. Bachman, Lloyd D. Johnston, and Patrick M. O'Malley, *Monitoring the Future: A Continuing Study of American Youth (8th-, 10th-, and 12th-Grade Surveys), 1976-2004*, University of Michigan, Survey Research Center.

[45] http://www.childtrendsdatabank.org/indicators/55WatchingTV.cfm

[46] Data are from Childtrendsdatabank.org, derived from Jerald G. Bachman, Lloyd D. Johnston, and Patrick M. O'Malley, *Monitoring the Future: A Continuing Study of American Youth (8th-, 10th-, and 12th-Grade Surveys), 1976-2004*, University of Michigan, Survey Research Center.

Figure 22

Percentage of Eighth-Graders Watching Four or More Hours of Television per School Day, 2000



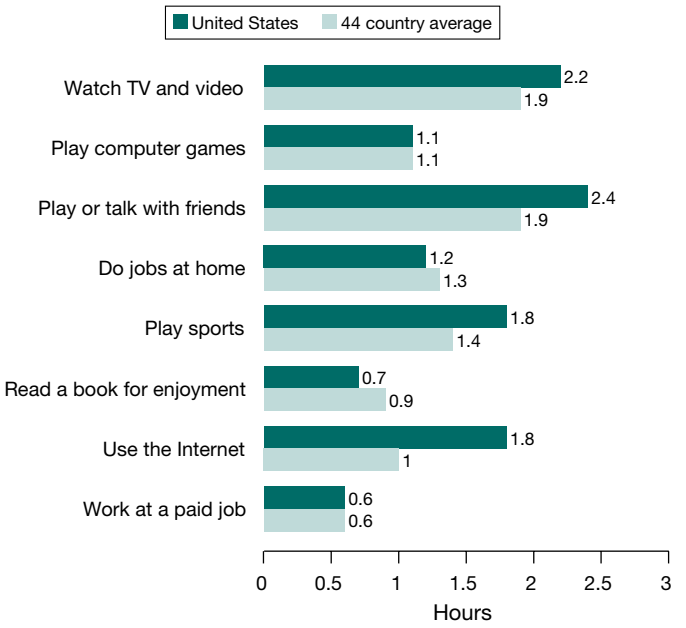
Source: Data from the NAEP 2000 Reading Assessment, analyzed by the ETS Policy Information Center.

Figure 23 compares the United States with the average for 44 other countries, in terms of the average hours per week eighth-grade students spent on each activity on a normal school day. The United States was:

- A bit lower than the average in time spent reading a book for enjoyment, and doing jobs at home.
- About average in time spent playing computer games and working at a paid job.

Figure 23

International Comparison of Average Hours Spent on Various Activities on a Normal School Day by Eighth-Graders, 2003



Source: TIMSS, 2003

- Above average in time spent watching television and videos, playing or talking with friends, and participating in sports activities. U.S. eighth-grade students also spent almost one hour more using the Internet in a normal school day than their international peers.

Certainly, many of these activities are constructive and can benefit student development. Others can be considered both play and educational, such as using the Internet. These data reveal the wide array of activities that compete for students' time in a school day — and the heavy responsibility parents have for influencing their children to achieve a balance.

* * * * *

The home, as a small school, needs resources, as does any large school. However, many families are hampered by incomes so low that simply paying the rent and putting food on the table takes precedence over anything else, including academics. That's a problem. But parents can compensate for these

resource deficiencies by encouraging their children to read and study, monitoring the time their children spend in front of the television, and making sure they have a place somewhere to study without distraction. A lot of school work has been done around the dining room table under the watchful eye of a parent.

Families with adequate financial resources face better prospects than those with significant financial problems. However, families of all incomes need to be encouraged to do what they can to create a home environment that facilitates learning. The importance of having at least a minimum of educational resources in the home should become part of a broad national educational policy and program to raise student achievement at the bottom of the achievement distribution and reduce achievement gaps.

Research clearly shows that when parents and schools work together to support student learning, children do better in school. There are many steps parents can take to be more involved in their children's schools and support their children's academic efforts. These include making sure children get to school on time, attending parent-teacher conferences, and checking whether homework is completed.

Getting Children to School

Of all the important things parents can do to help their children succeed in school, making sure they get there heads the list. Teachers can't teach, and students can't learn, when students aren't in school.

Child Trends summarizes the research this way:

> School attendance is a critical factor for school performance among youth. Studies show that higher attendance is related to higher achievement for students of all backgrounds. Students who attend school regularly score higher than their peers who are frequently absent . . . chronic truancy (regular unexcused absence), in particular, is a predictor of undesirable outcomes in adolescence, including academic failure, dropping out of school, substance abuse, and gang and criminal activity.[47]

One in five fourth- and eighth-grade students misses three or more days of school a month — that's more than five weeks of a school year. Asian/Pacific Islander students have the fewest absences, while Black and Hispanic students have the highest rates of absenteeism (see Table 4). Absenteeism rates have been roughly stable overall since 1994. The rank order of absences parallels the rank order of achievement in the NAEP assessment, as Table 5 shows.

Table 4

Percentage of Fourth- and Eighth-Grade Students Who Reported Missing Three or More Days of School in the Previous Month, 2005

	Grade 4	Grade 8
Total	19%	20%
White Non-Hispanic	18	19
Black Non-Hispanic	21	24
Hispanic	21	23
Asian/Pacific Islander	13	12
American Indian	25	29

Source: Childtrendsdatabank.org, from Student Absenteeism, *The Condition of Education 2006*, U.S. Department of Education, National Center for Education Statistics (http://nces.ed.gov/programs/coe/2006/section3/indicator24.asp#info).

Table 5

Comparison of Days Absent From School in the Previous Month and NAEP Mathematics Scores, Grade 8, 2005

Days Absent	Average Math Score
None	284
1-2	280
3-4	270
5-10	265
Over 10	250

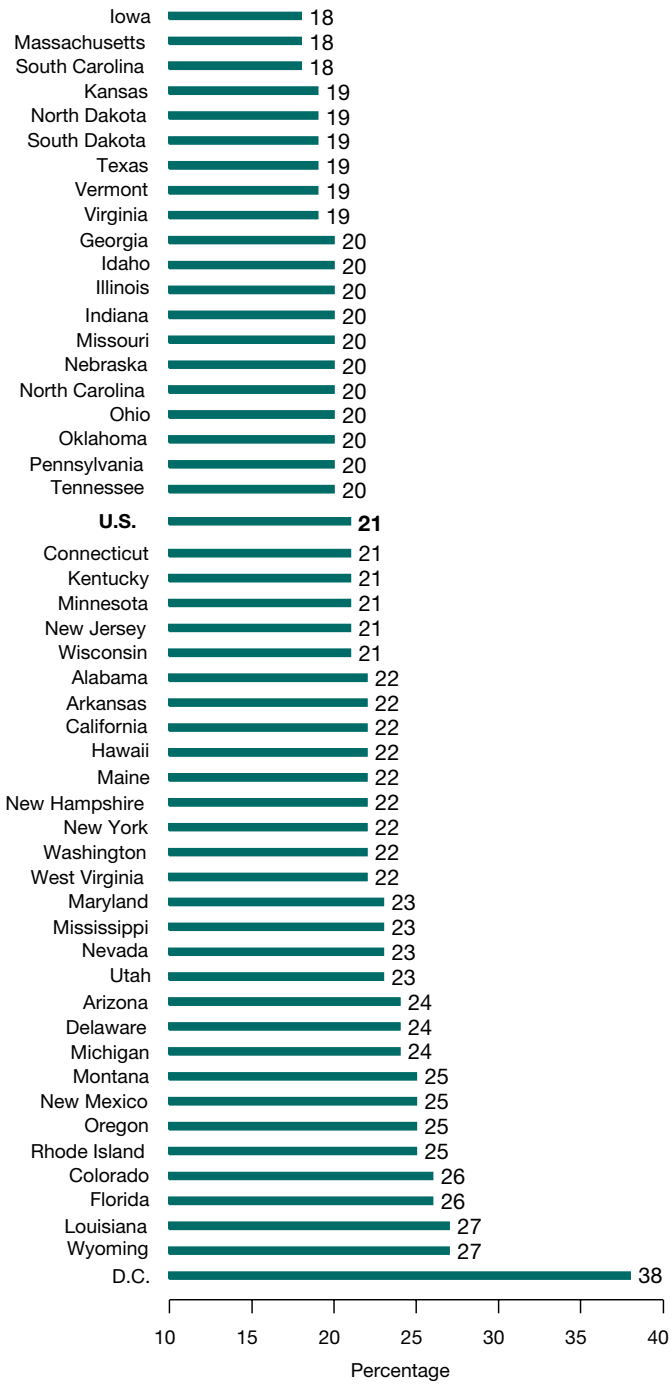
Source: Data from the 2005 NAEP Mathematics Assessment, analyzed by the ETS Policy Information Center.

Data are also available on the differences among the states on the frequency of student absences. Figure 24 shows the states ranked from low to high on the percentage of students absent three or more times a month.

[47] http://www.childtrendsdatabank.org/indicators/106StudentAbsenteeism.cfm

Figure 24

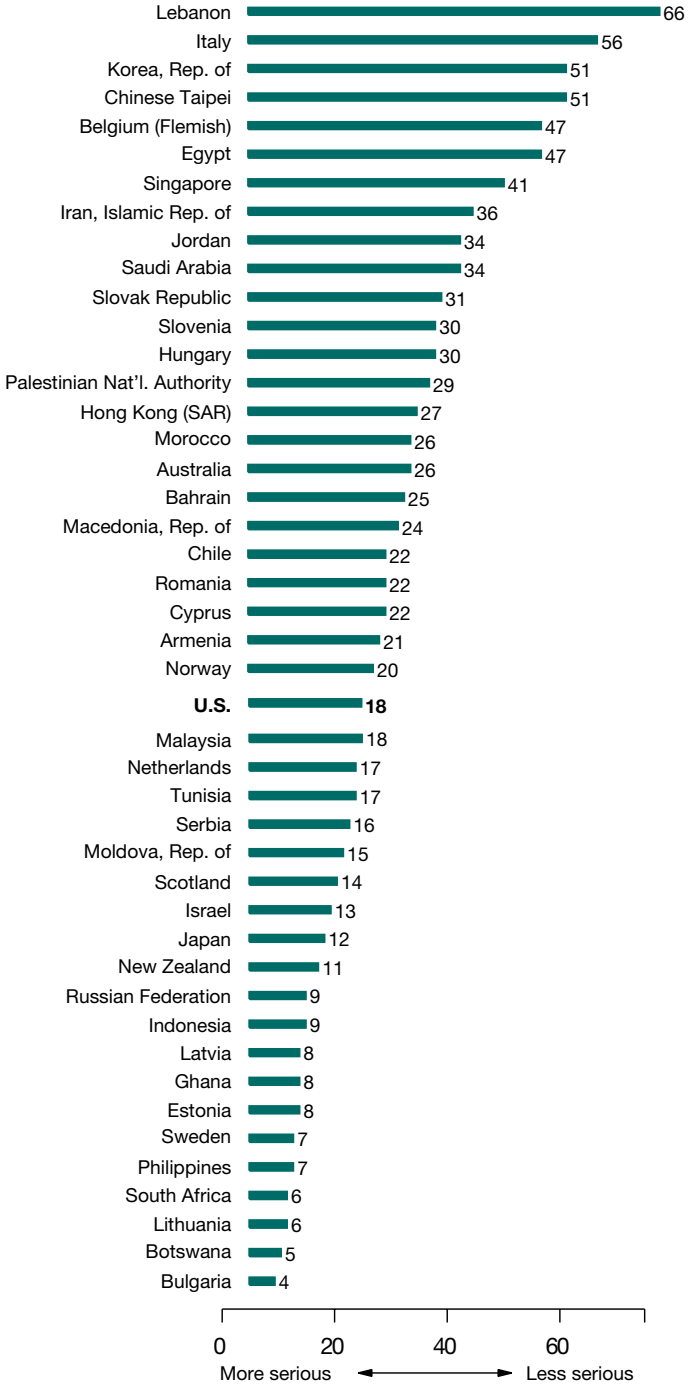
Percentage of Eighth-Graders Who Are Absent Three Days or More per Month, by State, 2005



Source: Data from the NAEP 2005 Mathematics Assessment, analyzed by the ETS Policy Information Center.
Alaska data are not reported since reporting standards were not met.

Figure 25

Seriousness of School Attendance Problems, Grade 8, TIMSS 2003



Source: Ina V.S. Mullis et al., *TIMSS 2003 International Mathematics Report*, TIMMS & PIRLS International Study Center, Lynch School of Education, Boston College, 2003.

In international comparisons made in 2003 as part of the eighth-grade TIMSS mathematics assessment, attendance rates varied widely among 45 participating countries. TIMSS constructed an index of good school and class attendance based on principals' responses to three questions about the seriousness of attendance problems in the school, absenteeism, and skipping class. High levels indicate good attendance — all three behaviors either never occur or are reported not to be a problem. Figure 25 provides an international perspective on student attendance at eighth grade. Lebanon was highest at 66 percent. The United States was 26th, with a score of 18 percent, and Bulgaria, at 4 percent, had the lowest score.

Sometimes students have to miss school. And because NAEP does not separately identify unexcused absences, it's difficult to gain a clear understanding of how large a part truancy plays in our nation's absenteeism rates. Clearly, parents have the primary responsibility of getting their children to school. But when poor school attendance becomes a problem they can't control, parents and school personnel need to work together to identify solutions.

Government agencies can also do more to address systemic truancy problems. States, for example, set and enforce mandatory attendance ages. The U.S. Office of Justice has provided an in-depth look at the problem, and a description of a major effort in truancy reduction, in *Truancy Reduction: Keeping Students in School* (The Office of Justice Programs, U.S. Office of Justice, September 2001). This large project began in 1998. The latest report was in April 2006, showing a reduction in the unexcused absence rate from 14.6 to 7.4.[48]

In April 2007, *The Washington Post* reported that "the problem of truancy has drawn widespread attention this year, prompting some area lawmakers to call for tough measures to keep track of the most habitual offenders and leading schools to crack down on those who consistently skip class." In February 2007, Prince George's County police began a crackdown and reported that as of April they had "caught" 425 truants.[49]

The Buffalo (New York) Board of Education is trying to address its truancy problem by basing 10 percent of students' grades on their attendance (but not penalizing students for excused absences). The results of this policy, which was initiated in October 2006, will be reviewed in a year.[50]

High absenteeism is a major drag on efforts to improve student performance and reduce achievement gaps. It has also been shown to be an important factor in predicting high school completion. As schools introduce more content and rigor into their school day, more material will be missed by those absent from school, and the impact will be greatest for low-achieving students.

Parental Involvement in School

While schools are charged with the primary responsibility for education, the success of that enterprise depends on a cooperative effort among students, parents, and schools. Child Trends summarizes the research on the effect parental involvement has on student learning:

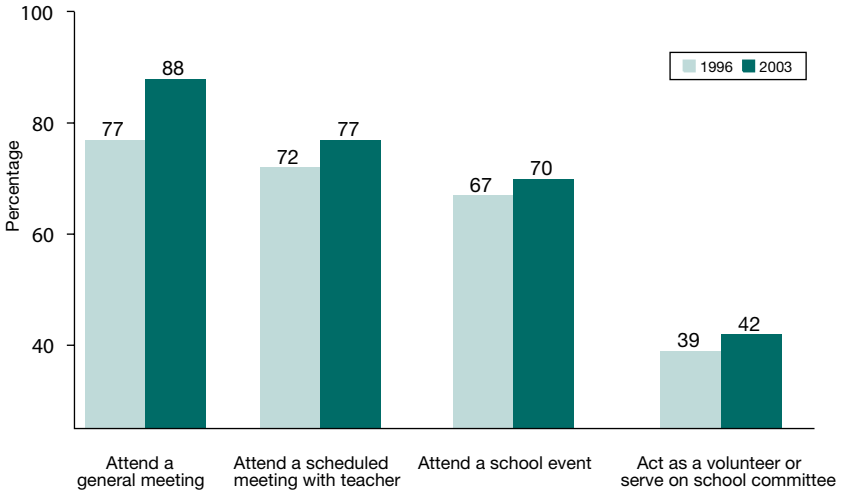
> Students with parents who are involved in their school tend to have fewer behavioral problems and better academic performance, and are more likely to complete secondary school. Parental involvement allows parents to monitor school and classroom activities, and to coordinate their efforts with teachers … Research has found that students perform better in school if their fathers as well as their mothers are involved, regardless of whether the father lives with the student or not.[51]

Using the Chicago Longitudinal Study database, Arthur Reynolds and Melissa Clements' recent research documents the contributions of family involvement. The Chicago study was conducted over a period of 17 years, with 1,539 low-income

[48] "Truancy, Dropouts and Delinquency," a presentation provided by Dr. Ken Seeley, President, National Center for School Engagement, The Colorado Foundation, 10/11/06, kens@coloradofoundation.org.
[49] Nelson Hernandez et al., "Keeping Kids in the Classroom," *The Washington Post*, April 30, 2007.
[50] Peter Simon, *Buffalo News*, October 12, 2006.
[51] http://www.childtrendsdatabank.org/pdf/39_PDF.pdf

Figure 26

Trends in Parent Involvement in Their Child's School



Source: Data from the National Center for Education Statistics, reported by Child Trends DataBank (http://www.childtrendsdatabank.org/tables/39_Table_2.htm).

children, of whom 93 percent were Black, with a matched comparison group. They found that parent involvement serves as a mechanism though which the long-term effects of interventions are achieved, ultimately leading to higher levels of student performance.[52]

National trend data on parent involvement with their children's school is positive. For example, parents who reported that they attended a general meeting rose from 77 percent in 1996 to 88 percent in 2003 (see Figure 26).

As Figure 27 shows, there was little difference among racial/ethnic groups of parents with respect to attending general meetings or appointments with a teacher. Somewhat fewer Black and Hispanic parents said they had attended a school event, and substantially fewer said they did volunteer work or served on a committee. A problematic pattern can be seen in these participation data when organized by other categories. These Child Trends data show that, for example, parent participation decreases as students progress through school. While more than 90 percent of parents of children in early elementary school said they had attended a general meeting at school, the percentage drops to 74 percent for parents of 11th- and 12th-graders. Further, parent participation is lower where student grades are lower. Parents of students with A averages are much more likely to attend school functions than the parents of students earning C's and D's. Parent education, poverty status, and English proficiency were also related to parent involvement.

A variety of efforts have been undertaken at different levels of government to increase parental involvement. For example, New York City recently assigned a school-parent coordinator in every school. And the No Child Left Behind Act mandates that schools provide parents with information about how they can be involved in school improvement efforts.

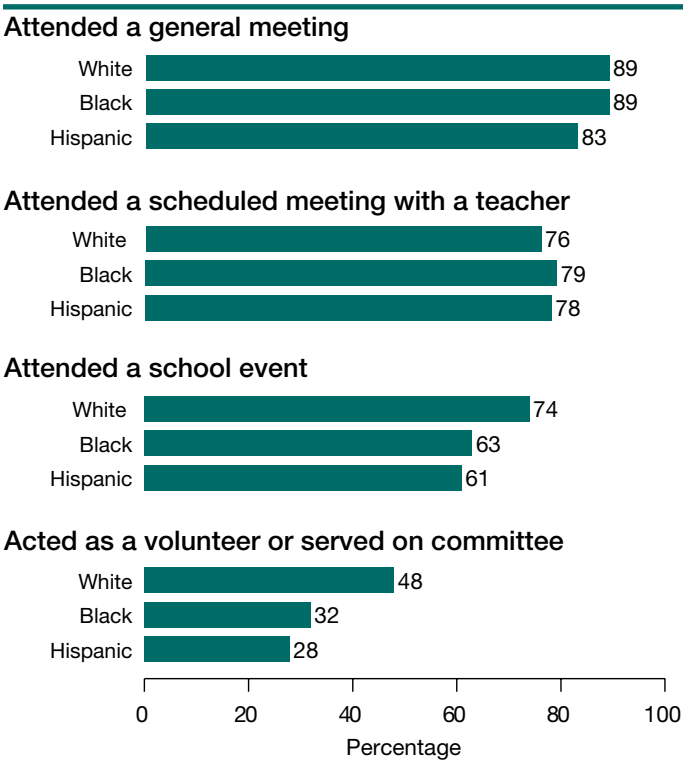
In Lake County, Fla., teachers will soon put students' test scores, homework scores, attendance records, and progress reports on a secure website so that parents can access them. The website will also provide information to help parents on a range of parenting and learning concerns, with links to articles by pediatricians and child-care experts, as well as to a weekly online publication called *The Informed Parent*. Communication between parents and teachers is encouraged. The site will also include a homework hotline and provide students with access to an online tutor.[53]

Kentucky's Prichard Committee for Academic Excellence, which led Kentucky's school reform movement, has also undertaken a large effort to improve parent involvement. In 1997, the committee created the Center for Parent Leadership, which trained 1,200 Kentucky parent leaders to work at the local level. The center now markets its services across the country.[54]

[52] Arthur J. Reynolds and Melissa Clements, "Parental Involvement and Children's School Success," in Evanthia Patrikakou et al., *School-Family Partnerships for Children's Success*, New York, Teachers College Press, 2005.
[53] Eliva Ben-Avari, *Orlando Sentinel*, December 30, 2006.
[54] See www.centerforparentleadership.org

Figure 27

Percentage of Students in Grades K to 12 Whose Parents Reported Involvement in Their Child's School, by Racial/Ethnic Group, 2003



Source: Data from the National Center for Education Statistics reported in Child Trends DataBank (http://www.childtrendsdatabank.org/tables/39_Table_1.htm).

Joyce Epstein, a leading national expert in parental involvement, has developed a model for families, schools, and community organizations exerting overlapping spheres of influence on children's education.[55] Epstein lays out six types of cooperation:

- **Parenting**: Health, safety, and home environment;
- **Communicating**: Schools reaching out to parents about school programs and student progress;
- **Volunteering**: Schools get most contributions from parents by making it easy for them to participate;
- **Learning at Home**: Helping the student, with the guidance and support of teachers;
- **Decision-making**: Giving parents meaningful roles in school decisions; and
- **Collaboration with the Community**: Schools helping families gain access to support services in the community.[56]

Appleseed, a non-profit social justice agency, has issued a report calling on federal, state, and local officials to do a better job of abiding by NCLB's parent involvement requirements. The report is based on research involving 18 school districts in six states. It finds that despite many problems, parent involvement is integral to the success of students and schools. The report concludes that while current parent involvement provisions in the law are solid and ambitious, more faithful implementation and enforcement are required.[57]

Dorothy Rich, founder of the Home and School Institute, has been leading the way toward better home involvement with the schools and with student learning for many years. She is the author of *MegaSkills®: Building Children's Achievement for the Information Age*.[58]

Lastly, a revised edition of a 1986 book has recently been published that offers practical advice for establishing and improving interactions and collaborative partnerships among schools, families, and community groups. The book also contains a comprehensive chapter on useful resources, including guides and publications, organizations, web-based resources, and programs related to this important topic.[59]

[55] see Joyce Epstein, *School, Family and Community Partnerships: Preparing Educators and Improving Schools*, Westview Press, 2001.
[56] Joyce Epstein, "Six Types of School-Family-Community Involvement," *Harvard Education Letter*, September/October 1997.
[57] Appleseed, *It Takes a Parent: Transforming Education in the Wake of the No Child Left Behind Act*, September 2006.
[58] www.MegaSkillsHSI.org
[59] Anne T. Henderson et al., *Beyond the Bake Sale: The Essential Guide to Family/School Partnerships*, The New Press, 2006.

Putting It Together: Estimating the Impact of Family and Home Factors on Student Achievement

This report describes a number of family characteristics and home conditions that influence children's cognitive development and school performance. These factors tend to be interrelated and rarely existing in isolation from one another. One way to view this is as stars comprising a constellation of family conditions and experiences that are associated with student achievement. We have chosen four factors here to represent the stars in this constellation; although we might have chosen others and found similar results.

These four factors are:

- **The Parent-Student Ratio**: The percentage of children under age 18 who live with one parent
- **Absenteeism**: The percentage of eighth-graders who missed three or more days in a single month
- **Reading to young children**: The percentage of children age 5 or younger whose parents read to them every day
- **Excessive television watching**: The percentage of eighth-graders who watch five or more hours of television on a school day

The authors used these factors in a regression analysis to predict state eighth-grade reading scores on the 2005 NAEP assessment. For each state, the analysis compared the *predicted* score with the *actual* score, as shown in Figure 28. In statistical terms, these four factors account for *two-thirds* of the differences in the actual scores (r squared = .66). That is a very strong association. These four factors, in a sense, could stand for other factors discussed in this report, as many are interrelated or correlated with each other.[60]

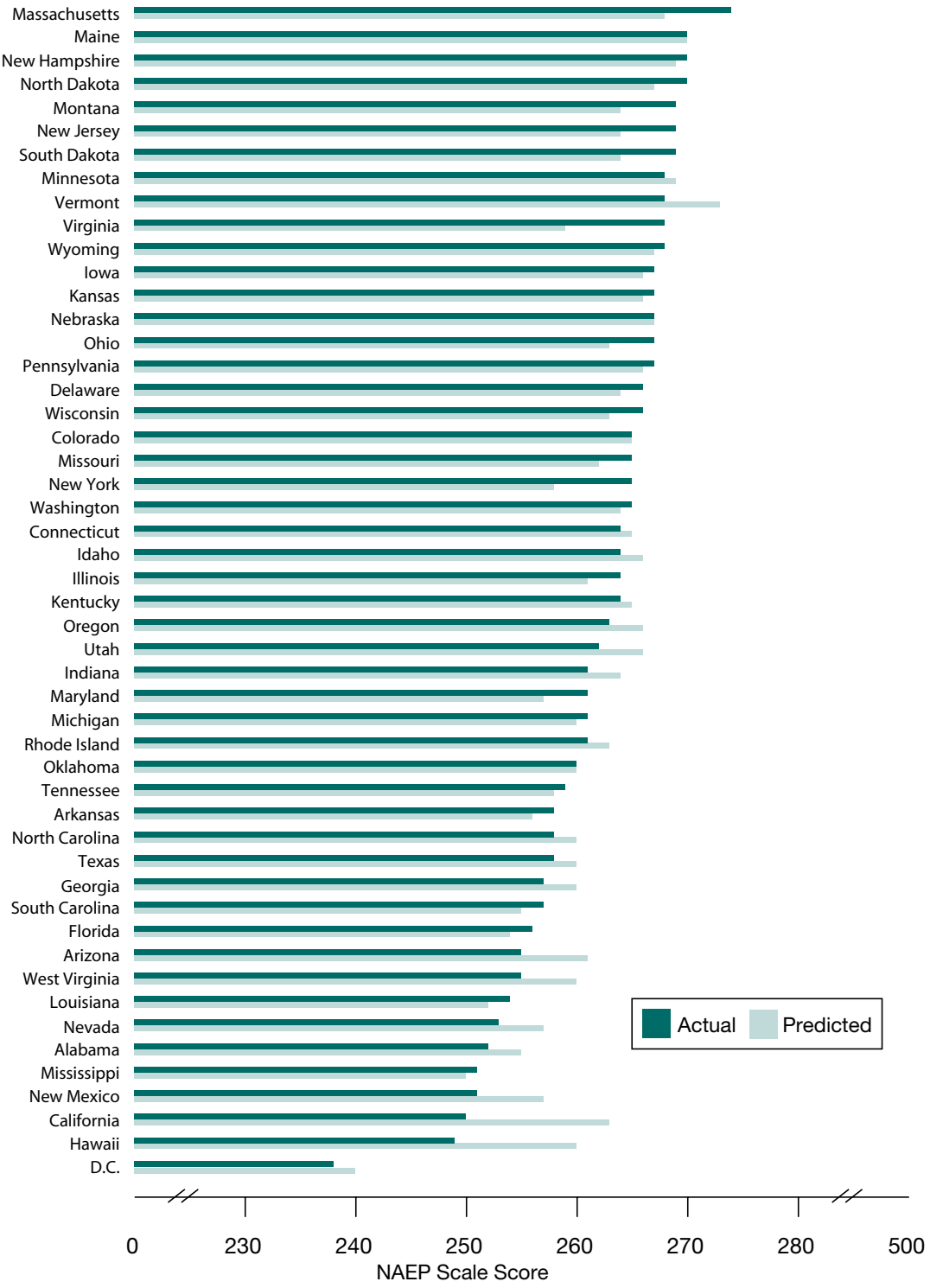
For 22 states, the predicted reading score was within 2.0 points of the actual score; in 16 states, the score was within 2.1 to 4.0 points of the actual score; in seven states, the score was within 4.1 to 6.0 points; and the score in five states was more than 6.0 points higher than the predicted score.

While this set of family factors shows a strong association with student achievement, we want to caution against concluding that it carries more weight than school efforts and quality. As there are inter-correlations among this large set of family characteristics and home conditions, there are inter-correlations between family factors and school factors. For example, poorer states may have a higher percentage of single-parent families that tend to earn less income than two-parent families and, as a result, pay fewer taxes. Schools in these states may not have the resources to attract the more qualified and experienced teachers. And since the research is clear that teacher quality and experience is correlated with student achievement, we are likely to see lower levels of student achievement, on average, in these states. A set of school factors, found to be related, would also likely make a strong showing in predicting average mathematics scores.

[60] See Appendix table for details of this analysis.

Figure 28

Actual and Predicted Eighth-Grade NAEP Reading Scores



Source: Data from the National Assessment of Educational Progress Analyzed by the ETS Policy Information Center.
Note: Alaska was not included in the analysis because of insufficient data.

Concluding Comments

Schools are the primary agencies for teaching students, and there is a national focus on improving those schools — as there should be. Long before schools begin their jobs, however, teaching and learning take place in the family. The quality of that home and family teaching makes a large difference in how much children know and how ready they are to learn when they get to school. Home and family experiences and conditions continue to influence learning, too, once children start school.

For all children, the height of the platform on which they stand when they begin school will make a difference in how much they achieve during that first year of school. Teachers have no magic wand to wave to make all the platforms of equal height. Some students arrive at school able to read and armed with large vocabularies; others arrive unable to read and with limited vocabularies.

This report examines children's family and home experiences, identifying those factors that influence learning. The report examines *differences* in these critical experiences, where possible, by race/ethnicity and SES.

Not only is the nation's attention focused on raising student achievement generally, and increasing the supply of students ready to excel in math and science, it is riveted also on reducing the large achievement gaps that exist between minority and non-minority students, and between children from low-income families and families with higher incomes. When people speak about the need for education reform, they often mean that there is a need to reduce the achievement gaps between these groups.

This report clearly establishes that the gaps in critical home experiences mirror the gaps in early school achievement — gaps that persist through the end of high school. This report and our prior reports, *Parsing the Achievement Gap* and *Windows on Achievement and Inequality*, nail down, plank by plank, the platform that children take off from when they enter school. Ignore the construction of that platform and the United States will not reach its ambitious goals of raising student achievement and increasing its ability to compete in a global economy; nor will it be successful in reducing the huge disparities in achievement among students of different racial/ethnic groups and different levels of SES. It has been well documented that there are deficiencies in our schools — and that there should be no excuses for not fixing them — and our reports have helped to document such deficiencies. This report makes clear that there often are shortcomings and deficiencies in the schooling and support that children receive at home. And there should also be no excuses for recognizing these shortcomings and working to fix them.

While research clearly establishes that these family experiences and home conditions affect student achievement, this report does not attempt to answer the question of what portion of the differences in student achievement is due to these factors and what portion is a result of what happens while students are in school. Simple statistical analyses can't account for these inter-correlations between school and family conditions. For example, as we've noted, poorer states may have a higher percentage of single-parent families who pay fewer taxes; and states with fewer resources may have lower average teacher salaries, making it difficult to attract highly qualified teachers. What is entangled so completely cannot be disentangled simply — if at all.

We've constructed a case about the importance of out-of-school experiences in educational achievement, and how these differ among the nation's population. Additionally, several recent ETS Policy Information Center publications have attempted to make a convincing case concerning the need for school improvement and standards-based education reform. We do not believe that recognizing the importance of either weakens the case for the other.

We fully recognize that more intense and concerted efforts to improve teaching can compensate (at least somewhat) for learning deficiencies present when students arrive at school. Research, however, has not established the trade-offs to tell us how much a particular investment in school effort can make up for under-investment in the out-of-school environment, or vice versa.

On the school front, the summation of research findings in our Policy Information Report *Parsing the Achievement Gap* identifies six core factors related to school achievement. These factors, in their presence or absence in students' racial/ethnic or socioeconomic group, mirrored gaps in school achievement. Since issuing that report in 2003, we've seen no progress in narrowing the gaps in these critical factors by, for example, providing more experienced teachers in the schools where students are not succeeding academically.

On the before- and out-of-school fronts, we are obviously talking about a very broad terrain with very different approaches required, depending on the conditions and experiences involved. With the two-parent family having historically been, for many cultures, the basic unit for raising and socializing children, its decline is perhaps the most important development in the role families play in children's early literacy and cognitive development. The difference that having two parents makes in children's academic success is well established in volumes of research studies, as summarized in this report. It is important to always recognize, however, that we are talking about averages, and that many children growing up in single-parent families are doing very well, just as many children in two-parent families are doing poorly.

Since about the mid-1960s, the trend toward single-parent families has largely been upward in the United States and in many other developed countries. This is not a trend that is likely to be reversed easily by changes in public policy. The question then becomes: What can neighborhoods, communities, private organizations, and governments do to compensate for this decline in the parent-pupil ratio, which we believe is leading to a "new inequality"? This report offers several solutions: from expanding good child care arrangements to arranging for mentors to read to young children.

Clearly, low-income families are at a disadvantage when it comes to providing resources to support their children's academic success. For example, although having a quiet place to study is important for learning and school success, many families are forced to live in overcrowded, often chaotic conditions that make such an amenity impossible. Changing schools frequently is also associated with academic difficulties, but many parents are forced to move to find work. Even providing a basic necessity like good nutrition requires substantial resources. The uneven distribution of income and wealth in the United States is intertwined with the huge disparities in the literacy and academic achievement of our nation's students.

Another set of factors related to school achievement is within the control of parents at any income level: Getting students out of bed and off to school, establishing rules for television watching, and reading to and talking with young children are examples. Making sure parents understand how important these seemingly modest efforts can be for their children's success can improve trends associated with poor academic performance. Equally important is assisting parents who are willing, but unable, to take these steps. That means providing instruction in parenting skills to those who need them, teaching non-reading parents how to read, and helping families obtain suitable reading materials for their homes.

As we've noted, research clearly indicates that parent involvement in children's learning and school, and good communication between parents and school personnel, improves students' success in school. It's important to let parents know that being involved makes a difference, and to encourage schools to take the lead in opening lines of communication.

Lastly, child care arrangements play a critical role in student learning. Child care, particularly good child care, is expensive. And in America, families with the least resources are the ones whose children are most likely to be in lower-quality care. The quality of child care is most important during the first three years of life, when child-parent verbal interaction makes a critical difference in language development. So far, we have only limited experience with compensatory efforts in these critical first three years of life. Early Head Start is still a young effort, and there has been little time for thoroughly documented results. On the other hand, Head Start and other programs that reach pre-schoolers have been evaluated and shown to be successful.

We recommend consulting a recent Brookings Institution paper by Jans Ludwig and Isabele Sawhill on early intervention in the early years of a child. The

authors point out what research has established: "… Early intervention is particularly important because of the brain's unusual 'plasticity' during a child's early years."

They propose an intervention they call "Success by Ten":

> Success by Ten is a proposed program designed to help every child achieve success in school by age ten. It calls for a major expansion and intensification of Head Start and Early Head Start, so that every disadvantaged child has the opportunity to enroll in a high-quality program of education and care during the first five years of his or her life. Because the benefits of this intensive intervention may be squandered if disadvantaged children go from this program to a low-quality elementary school, the second part of the proposal requires that schools devote their Title 1 spending to instructional programs that have proven effective in further improving the skills of children, especially their ability to read.

This proposal is firmly based in research and on the successful Abecedarian program of early childhood education. They have carefully estimated both its costs and benefits.[61]

The responsibility for promoting constructive efforts to address these issues needs to be accepted and shared by a wide range of leaders and decision makers, including:

- Presidents, governors, and chief state school officers using their offices as bully pulpits to change behaviors, including parental behavior, as well as to create legislation and programs
- Elected officials at all levels, working with local institutions and community leaders to find ways to compensate for family's resource shortages, as well as shortcomings in the training of child care providers
- School systems extending into the community, in collaboration with other community agencies, to supplement family efforts in a variety of ways, such as providing health care for children with conditions that interfere with learning

It's essential that parents, educators, and policy leaders fully understand that raising student achievement involves much more than improving what goes on in classrooms. Leaders and policy makers must establish community, state, and national programs to both improve schools and enhance the home and family conditions that give all students a better chance to reach high platforms from which to start school.

It is unfortunate that there are often competing views on what our focus should be. Some point to the need to address the conditions outside of schools that have an impact on students' capacity to learn, while others point a finger directly at the schools and tolerate no excuses. Yet both views concur that to do nothing sets us up for a future that nobody wants — for individuals, for society, or for the nation's economy. Both sides need to proceed together, as did Lewis Carroll's unlikely pair, the butcher and the beaver:

But the valley grew narrow and narrower still,
And the evening got darker and colder,
Till (merely from nervousness, not from goodwill)
They marched along shoulder to shoulder. [62]

[61] Jens Ludwig and Isabel Sawhill, *Success by Ten: Intervention Early, Often, and Effectively in Education of Young Children, the Brookings Institution*, February 2007.
[62] Lewis Carroll, *The Hunting of the Snark: An Agony in Eight Fits*.

Appendix Table

Predicting NAEP State Achievement — 2005 Reading Grade 8							
State	Percent of Children Living With One Parent	Percent of Children Read to Every Day	Percent of Students Watching 5 or More Hours of TV on School Day	Percent of Students Absent 3 or More Days in Month	Actual Score	Predicted Score	Difference Between Actual and Predicted
Alabama	36%	43%	28%	20%	252	255.2	3.2
Arizona	31%	43%	18%	20%	255	261.0	6.0
Arkansas	38%	44%	28%	19%	258	255.9	-2.1
California	29%	45%	18%	18%	250	262.5	12.5
Colorado	26%	56%	16%	23%	265	264.8	-0.2
Connecticut	27%	58%	20%	19%	264	265.1	1.1
Delaware	35%	53%	16%	22%	266	263.7	-2.3
District of Columbia	68%	47%	49%	27%	238	239.9	1.9
Florida	36%	43%	25%	26%	256	254.3	-1.7
Georgia	35%	46%	26%	15%	257	259.6	2.6
Hawaii	28%	55%	25%	22%	249	259.9	10.9
Idaho	23%	49%	12%	21%	264	266.1	2.1
Illinois	28%	47%	21%	20%	264	260.8	-3.2
Indiana	26%	48%	17%	19%	261	263.9	2.9
Iowa	24%	53%	16%	19%	267	265.7	-1.3
Kansas	24%	51%	14%	20%	267	265.8	-1.2
Kentucky	30%	52%	20%	15%	264	265.0	1.0
Louisiana	44%	41%	29%	24%	254	251.8	-2.2
Maine	33%	64%	12%	21%	270	269.8	-0.2
Maryland	33%	51%	26%	24%	261	257.1	-3.9
Massachusetts	29%	58%	15%	18%	274	268.1	-5.9
Michigan	31%	51%	20%	24%	261	260.4	-0.6
Minnesota	24%	57%	12%	19%	268	269.3	1.3
Mississippi	42%	38%	32%	23%	251	249.9	-1.1
Missouri	31%	47%	20%	19%	265	261.6	-3.4
Montana	27%	51%	9%	29%	269	264.1	-4.9
Nebraska	23%	49%	13%	19%	267	266.6	-0.4
Nevada	31%	43%	22%	24%	253	256.8	3.8
New Hampshire	26%	61%	13%	20%	270	269.4	-0.6
New Jersey	25%	47%	16%	20%	269	263.5	-5.5
New Mexico	38%	43%	19%	26%	251	257.1	6.1
New York	34%	48%	25%	22%	265	257.7	-7.3
North Carolina	34%	50%	24%	19%	258	260.0	2.0

Predicting NAEP State Achievement — 2005 Reading Grade 8							
State	Percent of Children Living With One Parent	Percent of Children Read to Every Day	Percent of Students Watching 5 or More Hours of TV on School Day	Percent of Students Absent 3 or More Days in Month	Actual Score	Predicted Score	Difference Between Actual and Predicted
North Dakota	24%	47%	11%	19%	270	266.9	-3.1
Ohio	33%	51%	19%	19%	267	263.2	-3.8
Oklahoma	34%	46%	22%	20%	260	259.5	-0.5
Oregon	29%	56%	13%	24%	263	265.7	2.7
Pennsylvania	30%	57%	16%	21%	267	265.6	-1.4
Rhode Island	39%	54%	16%	24%	261	262.8	1.8
South Carolina	40%	47%	31%	19%	257	255.2	-1.8
South Dakota	27%	47%	16%	18%	269	264.2	-4.8
Tennessee	34%	45%	25%	20%	259	257.8	-1.2
Texas	32%	42%	21%	18%	258	259.9	1.9
Utah	17%	47%	9%	24%	262	265.9	3.9
Vermont	26%	68%	11%	18%	268	273.3	5.3
Virginia	29%	51%	26%	20%	268	259.3	-8.7
Washington	30%	54%	16%	23%	265	263.9	-1.1
West Virginia	29%	54%	23%	23%	255	260.4	5.4
Wisconsin	28%	46%	16%	21%	266	262.6	-3.4
Wyoming	27%	53%	13%	19%	268	267.4	-0.6

Note: Alaska was not included in the analysis because of insufficient data.

Regression Results

The REG Procedure
Model: MODEL1
Dependent Variable: avescore

Number of Observations Read	50
Number of Observations Used	50

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	1619.41209	404.85302	21.72	<.0001
Error	45	838.66791	18.63706		
Corrected Total	49	2458.08			

Root MSE	4.31707	R-Square	0.6588
Dependent Mean	261.72	Adj R-Sq	0.6285
Coeff Var	1.6495		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	269.34657	8.3332	32.32	<.0001
onepar	1	-0.0656	0.1657	-0.4	0.694
tv5	1	-0.53519	0.17705	-3.02	0.0041
readday	1	0.29618	0.11763	2.52	0.0154
absent3	1	-0.47125	0.23586	-2	0.0518

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