Excellence and Equity:
Closing the Achievement Gap in Des Moines Public Schools

Charles Bruner
and Syed Noor Tirmizi (statistical analysis)
Child and Family Policy Center, April 2004

Table of Contents

Excellence and Equity:
Closing the Achievement Gap in Des Moines Public Schools

Executive Summary

In the Des Moines Public Schools, as in the country, there are significant disparities in educational achievement – between low-income and other students and across student race. In terms of the economic and racial diversity of its student population, the Des Moines Public Schools population looks more like the nation as a whole than the rest of Iowa.

This study examined student achievement in the Des Moines Public Schools, as measured by composite test scores in third, eighth, and eleventh grades, on five critical factors:

- Income status, as measured by student participation in the free-and-reduced-price lunch (FRPL) program;
- Race, as designated by students as White, African American, Hispanic, Asian, Native American, or other;
- School type, as measured by the percentage of students in the school on free-and-reduced-price lunch;
- English as a Second Language (ESL) status; and
- Place, as measured by the student's residence.

The study examined these both independently for their relationship to test scores and in combination with the other factors. In addition, the study examined special education involvement, also including gender as an additional important factor.

Findings

The study showed significant differences in student test scores on all five of the factors examined, although none could or should be used in any way to predict or assess any individual student's achievement. The following are some of the key findings:

- Income status, as measured by FRPL participation, had a consistent and strong relationship to test scores across all three grades. Among all the factors, it showed up as having the strongest predictive power.

- The other four factors also had relationships to test scores that were significant in size, even after income status (FRPL participation) had been taken into account.

- Race comparisons showed that, when comparing African American and White test scores, there were large differences at all three grade levels. These differences remained large even when comparing FRPL students and non-FRPL students, separately.

- Race comparisons showed that, when comparing Hispanic and White test scores, there were large differences at all three grade levels. This also was true for ESL students and non-ESL students. These differences remained even when comparing FRPL students and non-FRPL students, although some of this continuing difference also could be explained by ESL status.

- Race comparisons showed that, when comparing Asian American and White test scores, while Asian Americans had slightly lower overall test scores than Whites, Asians generally had higher test scores than Whites within FRPL groups or FRPL/ESL groups.

- Examining test scores by school type and student residence also showed differences across the three grade levels. Both what school a student attended and whether a student lived within a poor neighborhood had a relationship to the student's test scores.

- When the five factors were examined together for their combined effects, FRPL status generally provided the greatest statistical explanatory power (often equivalent to 10– 15 points on achievement scores), but the following were also found to hold:
    - For African Americans, race played almost as large a role for all three grade levels (often 10 points in addition to that provided by FRPL)
    - For Hispanics, either ESL status or race played a large role (also often 10 points)
    - This did not hold, however, for Asian American students compared with White students, although ESL played a significant role in Asian American test scores, independent from FRPL.
    - School type and student residence also contributed to a statistical explanation of test score differences, although their contribution was substantially less than FRPL, ESL, or race (sometimes in the 3–5 point range).

- Special education status also had a strong correlation with student test scores at all three grade levels. Special education designation was much more likely for African Americans than Whites, and for males than females. In fact, by eighth and eleventh grade, over forty percent of African American males were designated as being a part of special education.

Explanation and Discussion

Various explanations have been provided for the difference in educational achievement and attainment across racial groups in America. While the achievement gap actually declined from the sixties through much of the eighties, over the last decade it has begun to widen.

Among the explanations for racial differences are those related both to school culture and to community culture. These include the following:

- A "cultural difference" explanation that the educational system is based upon White culture and devalues the contribution of other cultures, losing opportunities for teachable moments with students,
- A "social mobility" explanation that institutional racism block's the advancement of African Americans students, in particular, and takes away one incentive for educational achievement
- A "low expectations" explanation that teachers establish lower expectations for minority students that becomes a self-fulfilling prophecy
- An "oppositional identity" explanation, based upon the lack of "social mobility," that creates a peer culture among youth that associates doing well in school with "acting white"
- A "parental and community expectations" explanation that holds that minority parents and communities do not place high educational expectations on their children nor contribute to their children's educational success.

Empirically, both school characteristics and family and community characteristics have been shown to be strong correlates for disparities in educational achievement across race, and in most cases income, as well. At the school level, these characteristics include: rigor of curriculum, teacher preparation, teacher experience and attendance, class size (race but not income), technology-assisted instruction, and school safety. At the family and community level, these characteristics include: parent participation, student mobility, reading to young children, television watching, and parent availability. These findings provide some support to each of the explanations, but no explanation is deterministic. There are many schools and communities that have improved achievement and closed the gap, and these all have done so by raising achievement across all students, not just low income or minority students.

Fortunately, although there may be debate over the relative merit of each of these explanations, they point to the same needed strategies to raise achievement and close the current achievement gap.

These are based upon higher expectations and educational rigor within the school and greater community involvement in achieving student educational success. They require school and community partnerships at the school site level. The community schools movement can offer many examples of successful efforts around the country to achieve this success, but the work ultimately must start and be done at the school neighborhood and community level.

Excellence and Equity:
Closing the Achievement Gap in Des Moines Public Schools

Charles Bruner and Syed Noor Tirmizi (statistical analysis)
Child and Family Policy Center
April, 2004

Section One. Introduction and Basic Test Score Information

2004 marks the fiftieth anniversary of the landmark *Brown v. Board of Education* decision ruling that "separate is not equal" and requiring equal spending on education across school districts and the desegregation of this nation's schools.

While much has been achieved educationally over the last fifty years, however, significant gaps still remain in school achievement across race, ethnicity, and economic status. The federal No Child Left Behind Act has set high standards for schools to raise achievement and close the gap at all educational levels, which means that reporting is now required of all public schools on academic achievement by race, ethnicity, and economic status.

This report analyzes 2002 student test scores in the Des Moines Community School District to provide information on the size of the difference in these test scores among Des Moines students across the following:

- race/ethnicity[1];
- economic status (as measured by participation in the free and reduced price lunch (FRPL) program);
- English as a second language (ESL) status;
- student home neighborhood;
- school poverty status (as measured by percentage of free and reduced price lunch students); and
- special education (SPED) status.

It analyzes composite test scores on the Iowa Test of Basic Skills or the Iowa Test of Educational Development from the third, eighth, and eleventh grades, with percentiles reflecting how students compare with national norms, the 50th percentile being average among all students in the nation. While this is not a complete measure of student

---

[1] In Iowa, students are categorized as being White, African American, Asian or Pacific Islander, Native American, Hispanic, or Other. Unlike the census and some other reporting systems, students are not classified as multi-racial nor is there a separate breakout between race and Hispanic origin. Although some students of Hispanic origin would designate their race as African American, for instance, they fall into only one of these categories in this analysis. This analysis is therefore limited to these categories, and comparisons with analyses of census data will not be based on the same population designations.

achievement (and does have certain biases[2]), it is an important one and one that offers comparative information across students.

The conclusions from this analysis are that all of the above factors, in some measure, contribute to explaining differences in student test scores. Economic status, as measured by participation in the free and reduced price lunch program, has the primary statistical impact. Yet even when all other factors are taken into account, including economic status, race still plays a significant role in explaining[3] the variation in student test scores. The analysis is designed to contribute to the efforts of the Des Moines Community School District – working with parents, students, and community members – to raise achievement for all students and close the achievement gap across different groups of students.

On a national level, the third and eleventh grade Des Moines Community School District's test scores score well above the mean for test scores nationally (59% on core total for third grade and 63% on core total for eleventh grade), but they fall below the mean for Iowa students. Eighth grade test scores, however, are below the national mean (46% core total). In fact, however, the Des Moines Community School District has student characteristics more like the nation as a whole than the rest of Iowa. Chart One provides comparisons across Des Moines Community School District, Iowa, and national students on both race and free and reduced price lunch participation.
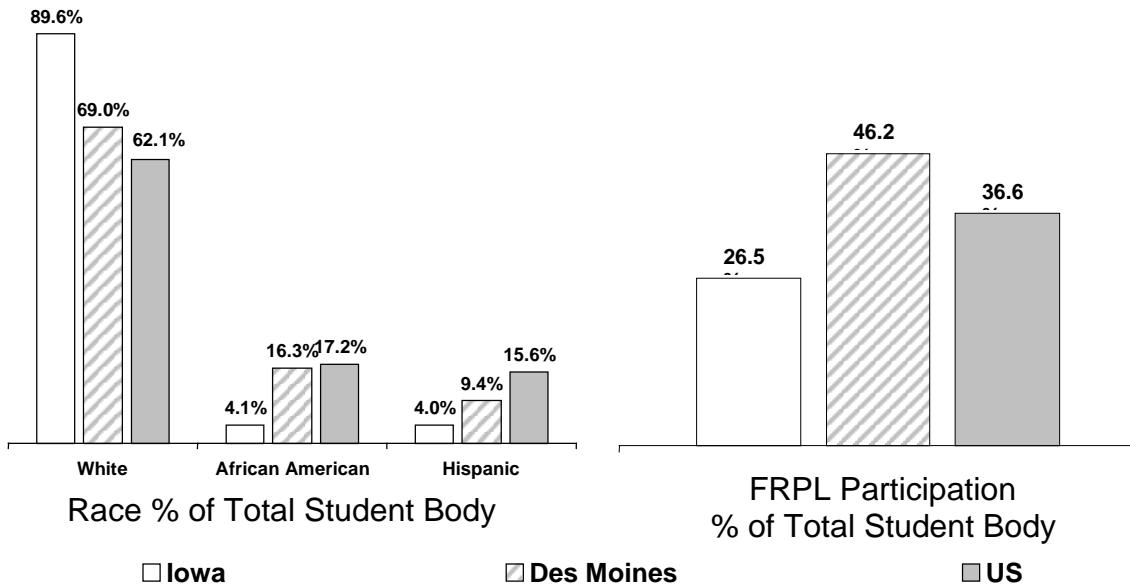
As Chart One shows, the Des Moines Community School District's has a substantially more diverse student population than the state as a whole, as well as higher use of free and reduced price lunch than both the state and the nation. Des Moines students are more comparable to students nationally on these characteristics than they are to the population of students in Iowa as a whole.

---

[2] While substantial efforts have been made to make these tests culturally neutral, the content is still reflective of some American norm reflecting common experiences among the general population, which may have some class as well as cultural biases. The content remains content that is important to achievement within that larger American norm, however, and it is the content that is the framework for teaching in most American schools. The tests do not recognize the comprehension of students in their first language if that language is other than English. Fluency, or movement to fluency, in two languages is valuable to learning and achievement, but is not recognized in standardized test scores.

[3] Statistical "explanation" does not infer causality, but rather the degree to which a specific factor can be used to "predict" the test score. The final section of this paper discusses various causal explanations for the gap in achievement across race and ethnicity, as well as strategies to raise achievement for all students and close that statistical gap.

Chart One
Des Moines Public Schools Student
Characteristics Compared with State and
National Characteristics
2001-02 School Year

Race % of Total Student Body

	Iowa	Des Moines	US
White	89.6%	69.0%	62.1%
African American	4.1%	16.3%	17.2%
Hispanic	4.0%	9.4%	15.6%

FRPL Participation % of Total Student Body

Iowa	Des Moines	US
26.5	46.2	36.6

Legend: □ Iowa   ▨ Des Moines   ▨ US

Section Two: Test Scores and Free and Reduced Price Lunch Status, Race/Ethnicity, English as a Second Language, Student Home Neighborhood, and Student Poverty Status

There are many factors that may contribute to explaining, in a statistical sense, student achievement on test scores. It is important to recognize at the outset, however, that these explanations apply only on an aggregate or grouping basis, and not for individual students. Individual students, no matter what their background, can achieve at very high levels or achieve very poorly. In a statistical sense, as Section Three will show, the "explanatory power" of all the factors taken together explains only a small portion of the variation in test scores across individual students. The types of analyses of test scores provided here should never be used to label individual students or to project the potential performance for any specific student.

This section of the report examines the relationship between test scores and four different factors that can contribute to student achievement. These four factors are examined separately in this section. Later, in Section Three, they are examined for their

interacting effects. While each measures something different, they also are correlated with one another.[4]

Free and Reduced Price Lunch Participation. Socioeconomic status long has been known to be a significant determinant of school achievement and success. In fact, from a statistical basis, the mother's educational attainment level has been shown to be the single best predictor of a child's school success.[5]

Research on brain development and early child development also has shown that impacts upon a child's learning begin early, and the richness of language environment within a house has a major impact on what language and pre-literacy skills children have acquired at the time of school entry.[6]

Research is clear that socioeconomic status plays a major role in child development and whether or not children start kindergarten "ready to learn" or needing to catch up.[7]

While schools generally do not have records of a mother's educational attainment or of overall family income, they do enroll students in the federal free and reduced price lunch (FRPL) program. Students are eligible for FRPL if their family income is at or below 185% of poverty. FRPL represents an important, although only partial, indicator[8] of a child's socioeconomic status.

As Chart Two shows, there are major differences, at each grade level, between students who participate, and do not participate, in FRPL. For each of the three grade levels, the differences in test scores are pronounced, at least fifteen points. Students on the FRPL program score below the national average, while students not on FRPL score substantially above the national average.
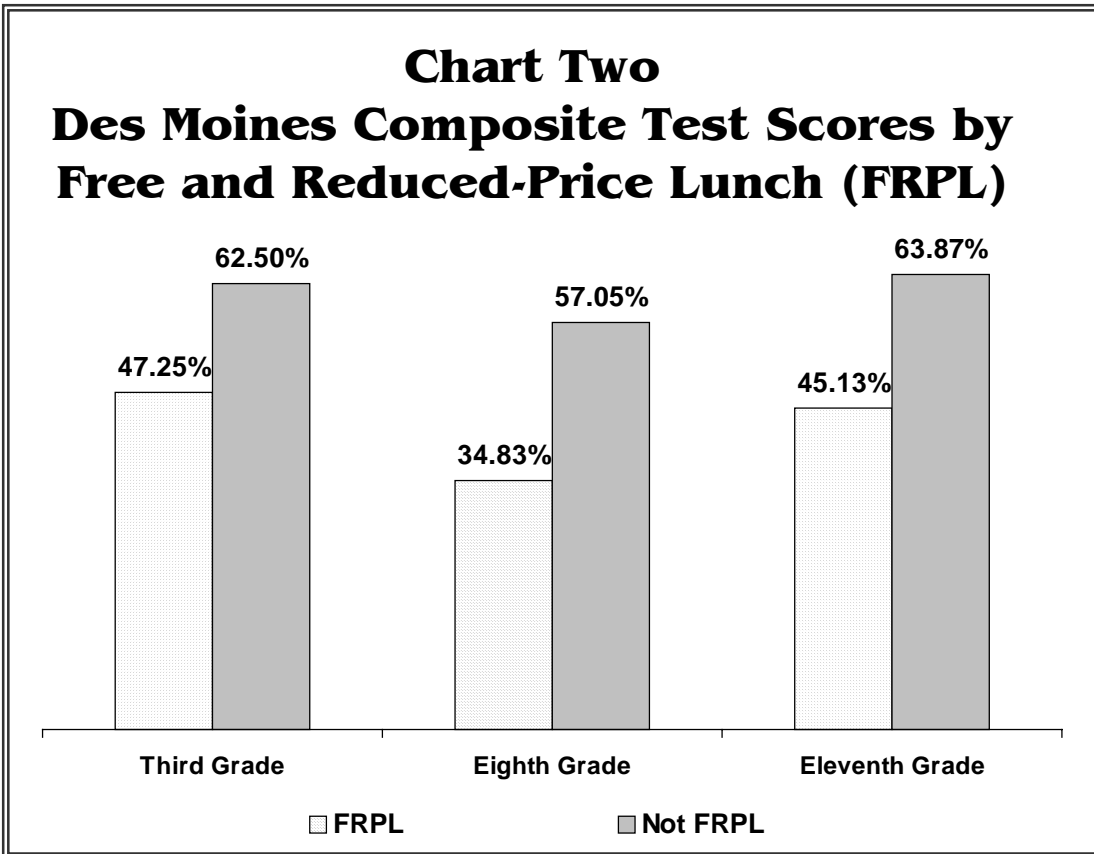
---

[4] Hispanic students, for instance, are more likely to be on FRPL than White students, and more likely to be in ESL. The differences in test scores between Hispanic and White students may largely be explainable by FRPL and ESL. This issue will be discussed in detail in Section Three.

[5] Haveman, R. & Wolfe, B. (1994). *Succeeding generations: On the effects of investments in children.* New York, NY: Russell Sage Foundation.

[6] Shonkoff, J. & Phillips, D.A. (2000). *From neurons to neighborhoods: The science of early childhood development.* Washington, DC: National Academy of Sciences Presses.

[7] Lee, V. & Burkham, D. (2002). *Inequality at the starting gate: Social background differences in achievement as children begin school.* Washington, DC: Economic Policy Institute.

[8] Ideally, there would be several measures used to determine a child's socioeconomic status, which would include family income and earnings, educational background, and professional work status. FRPL status only provides for one differentiation on income and thus is a crude measure. It cannot determine whether there are differences between children from very low income families who are living on the edge and those with low but stable incomes who generally get by. It cannot determine whether there are differences between children from moderate income working class families and very affluent or professional families, although those differences are known to exist. From a statistical sense, it is a crude measure of socioeconomic status and will only explain a part of the actual impact that socio-economic status has on student test scores. Despite this, however, it is a very useful indicator and is sufficient to demonstrate that socioeconomic status plays a very large role in determining student achievement and to help focus attention upon in develop strategies to close the gap.

Chart Two
Des Moines Composite Test Scores by
Free and Reduced-Price Lunch (FRPL)

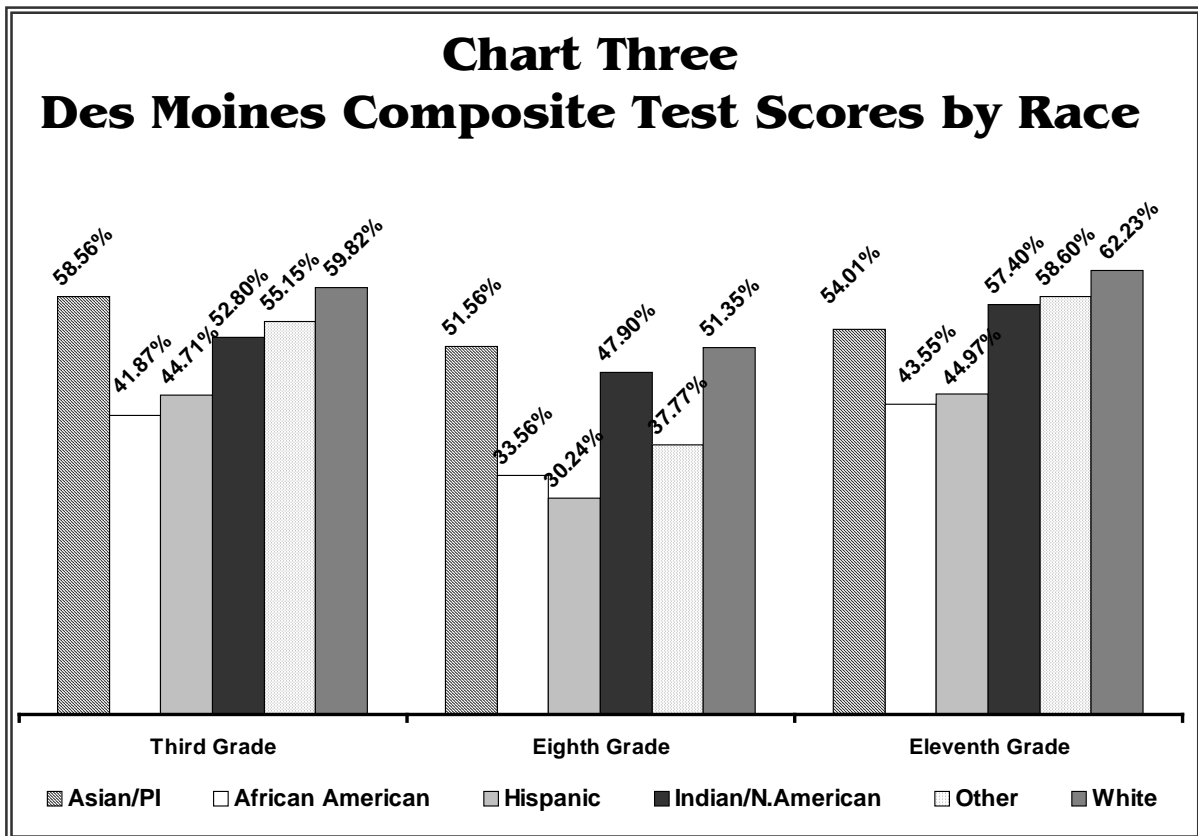|	Third Grade	Eighth Grade	Eleventh Grade
FRPL	47.25%	34.83%	45.13%
Not FRPL	62.50%	57.05%	63.87%

Clearly, there is a strong relationship between test scores and FRPL status, although this is somewhat less in the early years, with FRPL students actually performing fairly near the national norm. While schools may not be able to substantially alter the economic status of the families of their students, they can work with parents and the school community to provide additional supports for student learning.

Race/Ethnicity. A second way to look at student achievement is by race/ethnicity. One of the goals of No Child Left Behind is to raise achievement and close the existing gap between White and African American and Hispanic students. While the achievement gap between students of different races was closing during the 1970s and 1980s, it has subsequently widened again.[9] The Des Moines Community School District has become substantially more diverse over the last two decades, particularly with an increase in Hispanic students. Therefore, it is important to examine differences in student test scores by race as well as income.

---

[9] Between 1971 and 1994, the gap between African American and White test scores on the National Assessment of Educational Progress closed substantially, particularly on reading, but they have widened since that time and are now greater than they were in the late 1980's. These gaps remain when researchers control for socioeconomic status. Hoff, D.J. (September 2000). "Gap widens between black and white students on NAEP," *Education Week.* Haycock, Katy (2001), "Closing the achievement gap," *Educational Leadership* 58(6).

Chart Three contrasts mean student test scores at the three grade levels for White, African American, Hispanic, Asian, Indian/Native American, and Other race students. At all the third and eighth grade levels, White and Asian students score at the top, while at the eleventh grade level White and Other race students score at the top. At all three grade levels, African American and Hispanic students score lowest as a group. As with FRPL status, the difference between the top and bottom are very substantial, more than twenty points for eighth grade composite scores and almost eighteen points for third and eleventh grade composite scores. Again, these statistics are similar to national statistics, although Indian/Native American students score comparatively better in Des Moines schools than nationally.[10] There exist marked differences in student test score achievement by race/ethnicity in the Des Moines Community School District.

Chart Three
Des Moines Composite Test Scores by Race

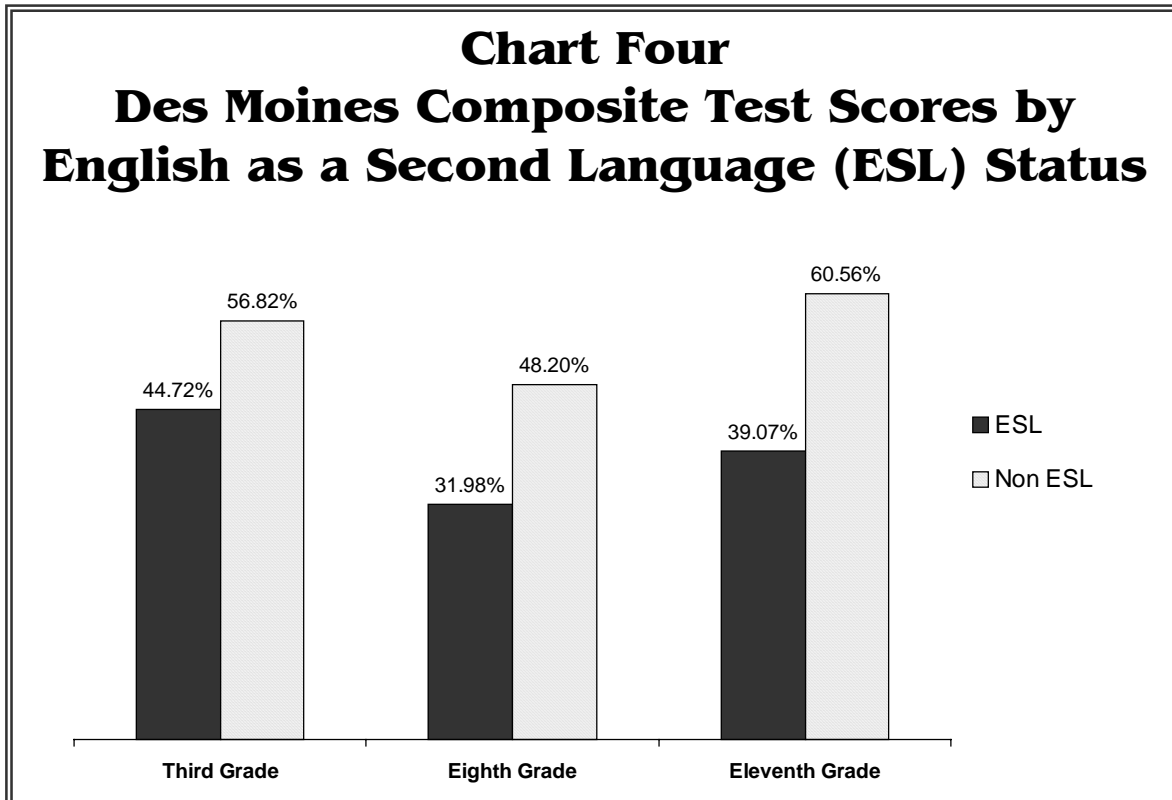|	Third Grade	Eighth Grade	Eleventh Grade
Asian/PI	58.56%	51.56%	54.01%
African American	41.87%	33.56%	43.55%
Hispanic	44.71%	30.24%	44.97%
Indian/N.American	52.80%	47.90%	57.40%
Other	55.15%	37.77%	58.60%
White	59.82%	51.35%	62.23%

English as a Second Language. There has been a dramatic growth in the number of students in the Des Moines Community School District who are immigrants or refugees and whose primarily language is something other than English. While the predominant increase in English language learners is from Spanish-speaking families, there are a multitude of languages other than English spoken by students. Standardized tests, however, are administered in English, which places those for whom English is a second language at a disadvantage. While learning two languages is certainly an asset, particularly in the increasing globalization of commerce, student achievement tests do

---

[10] Many Indian/Native Americans reside on reservations, where test scores have been lower, which may account for some of this difference.

not recognize those assets. ESL students also have special needs in school, as they must catch up in English in order to be able to fully comprehend materials in all subjects, particularly in the higher grades.

Chart Four shows comparisons between ESL and non-ESL students on student achievement scores. As the Chart shows, these differences are more pronounced in eighth and eleventh grade, when compared with third grade. This suggests the need to be particularly concerted in supporting ESL students in the higher grades.

Chart Four
Des Moines Composite Test Scores by
English as a Second Language (ESL) Status

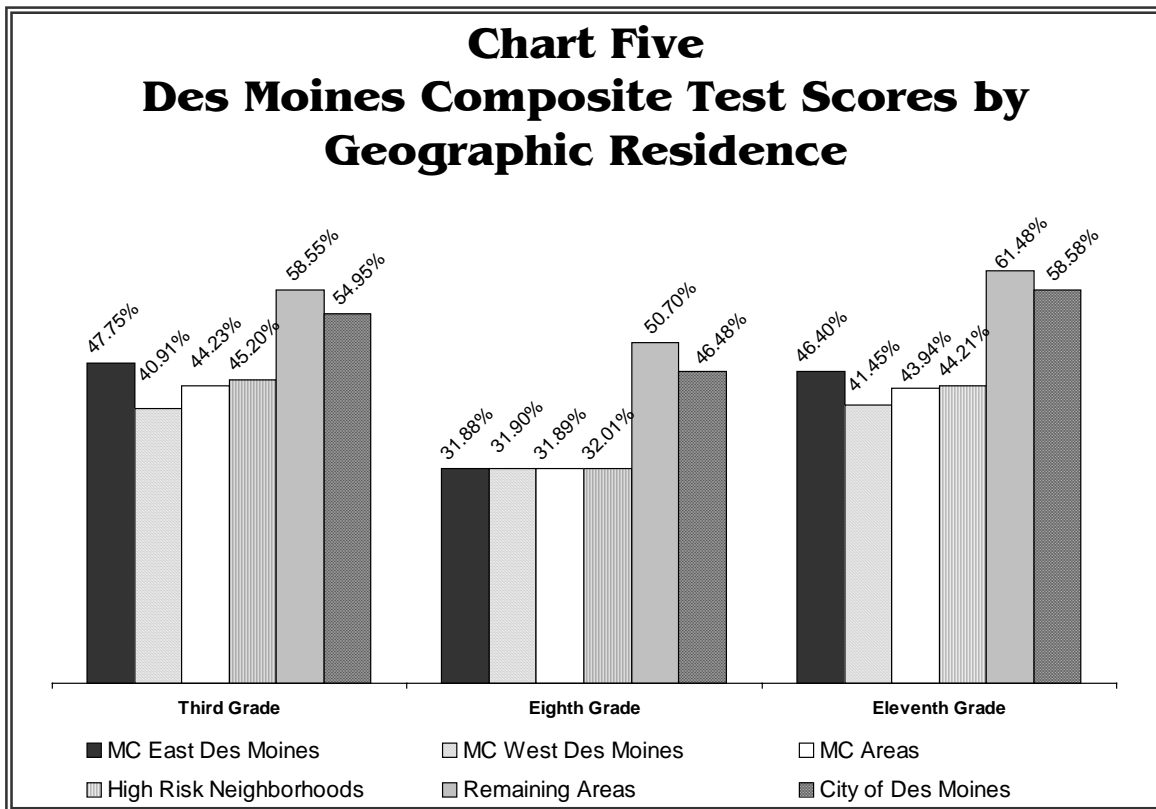|	ESL	Non ESL
Third Grade	44.72%	56.82%
Eighth Grade	31.98%	48.20%
Eleventh Grade	39.07%	60.56%

Geographic location. Living within a poor neighborhood also can be associated with poorer educational attainment. While the research on the independent impacts upon people of living in poor neighborhoods is mixed, there is some evidence that children achieve less, regardless of their own socioeconomic status, when there are few adults with professional backgrounds in the neighborhood.[11] The absence of potential mentors in children's immediate surroundings to support their educational achievement can make it more difficult for them to achieve.

Iowa Kids Count has identified census tracts in Iowa that represent the most challenging neighborhoods in the state, because of their poverty and social and educational characteristics. While Des Moines represents 6.8% of the state's population, it has

---

[11] Brooks-Gunn, J., Duncan, G. & Aber, L. ,eds. (1997). *Neighborhood poverty: Context and consequences for children, Volume 1.* New York, NY: Russell Sage Foundation.

27.6% of these highest risk census tracts. The two Making Connections neighborhoods represent the largest share of these highest risk census tracts.[12]
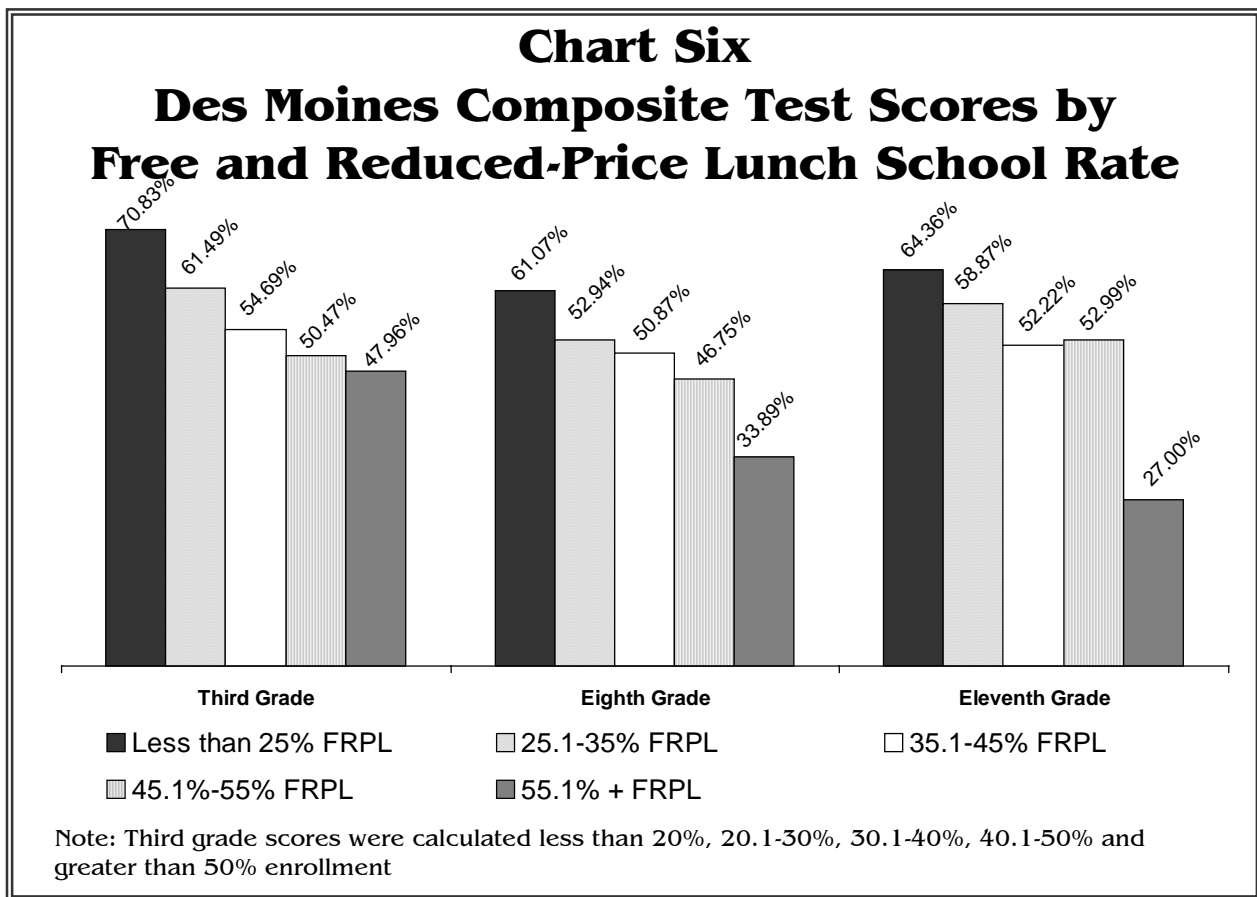
Chart Five provides test score information for students residing in both Making Connections neighborhoods and within the highest risk, inner-city census tracts as a whole, contrasting them with students residing in other parts of the city. Again, test scores are substantially lower for students who live in these census tracts. As with the other comparisons, these present striking differences, but they also can be partly explained by the fact that students from these neighborhoods also are more likely to be FRPL students, ESL students, and students of color. The geographic picture is important, however, because many solutions to addressing the achievement gap involve building greater school and community partnerships, and this points to specific neighborhoods where those partnerships are most needed.

Chart Five
Des Moines Composite Test Scores by Geographic Residence

Third Grade: 47.75%, 40.91%, 44.23%, 45.20%, 58.55%, 54.95%

Eighth Grade: 31.88%, 31.90%, 31.89%, 32.01%, 50.70%, 46.48%

Eleventh Grade: 46.40%, 41.45%, 43.94%, 44.21%, 61.48%, 58.58%

■ MC East Des Moines   □ MC West Des Moines   □ MC Areas
▩ High Risk Neighborhoods   ▦ Remaining Areas   ▦ City of Des Moines

---

[12] This covers 41,000 residents in Des Moines, 32,000 of them in the Making Connections neighborhoods and the rest in adjacent inner-city census tracts. High risk census tracts were identified based upon outlying rates on at least six of ten social, economic, or educational indicators available from the census: adults over 25 without high school diplomas, 16-19 year-olds not in school and not working, adults over 25 without post-graduate degrees, single parent households, families with children living in poverty, heads of households with interest or dividend or rent income (a measure of wealth), heads of households with earnings, heads of households receiving public assistance, 3-5 year-olds attending pre-school, and owner-occupied households. Child and Family Policy Center (2003). *Where Kids Count: Place Matters.* Annual Kids Count Data Book. Author, Des Moines, IA.

School Poverty Status. Yet another way to examine differences in student achievement is by the school students attend. Nationally, it has been documented that poor, inner-city schools tend to have the least qualified and experienced teachers and often have fewer resources and facilities to promote learning.[13] Not only are these schools faced with educating students with the greatest economic and educational challenges, they also have the fewest tools to do so.

Chart Six provides a breakdown of student test scores by school types, with schools grouped according to their percentage of students on free-and-reduced price lunch. The groupings were constructed to insure that each grouping contained a significant number of students, and the percentages for FRPL used to group schools therefore are somewhat different for elementary, middle, and high schools. In each instance, however, there is lower achievement among students as the percentage of students in the schools on FRPL increases. The differences between the lowest poverty and highest poverty schools are quite pronounced.

Chart Six
Des Moines Composite Test Scores by
Free and Reduced-Price Lunch School Rate

Third Grade   **Eighth Grade**   **Eleventh Grade**

■ Less than 25% FRPL   ▫ 25.1-35% FRPL   ☐ 35.1-45% FRPL

▨ 45.1%-55% FRPL   ▦ 55.1% + FRPL

Note: Third grade scores were calculated less than 20%, 20.1-30%, 30.1-40%, 40.1-50% and greater than 50% enrollment

---

[13] One good source for general information on this subject is the Education Trust, led by Director Katy Haycock. The Trust assembles a wide variety of materials regarding the achievement gap, as well as providing a wealth of illustrations of schools and school districts that have been able to raise achievement for all students and close the achievement gap. www.edtrust.org. Also, see: Johnston, R.C. and Viadero, D. (2000), "Unmet promise: Raising minority achievement," *Education Week* 19(27).

Summary. This section has shown that there are very pronounced differences on third, eighth, and eleventh grade composite test scores among students on each of five different distinctions:

- Free and reduced price lunch status
- English as a Second language status
- Race
- Geographic residence
- School poverty status

Any of these disparities should be cause for attention and corrective action. Each is worthy of specific attention. At the same time, however, these disparities are inter-correlated. Some of the differences by race may simply be the result of the fact that students of color are more likely to come from poorer families who quality for free and reduced price lunch, to speak a language other than English as their dominant language, to reside in a high risk neighborhood, or to attend a poor school. They cannot be treated as independent from one another. The next section describes some of their interrelations and the degree to which they each contribute to explaining differences in student achievement as measured by these composite test scores.

Section Three: Analysis of Test Score Differences by Multiple Factors.

At a national level, it has been shown that poverty and minority status both contribute to "explaining" differences in student test scores. It has often been reported that poor White students score higher on many standardized test scores than non-poor African American students, and the gap in scoring is higher between non-poor White and African American students than it is between poor White and African American students. National studies also have shown differences between Hispanic and White students that are pronounced, even when socioeconomic status is accounted for, although ESL status plays a more prominent role in explaining these differences than does race (ESL plays a limited role in explaining differences in scores among African American students).

Chart Seven provides comparisons on composite test scores by race/ethnicity and FRPL status and by race/ethnicity and ESL status. Only African American, Hispanic, Asian, and White student scores are shown in this chart.[14]

African American/White comparisons. For African American students, the national characterization of test scores does hold for third grade. FRPL White students score slightly above non-FRPL African American students; and the gap between non-FRPL White and African American students is wider than it is for FRPL White and African
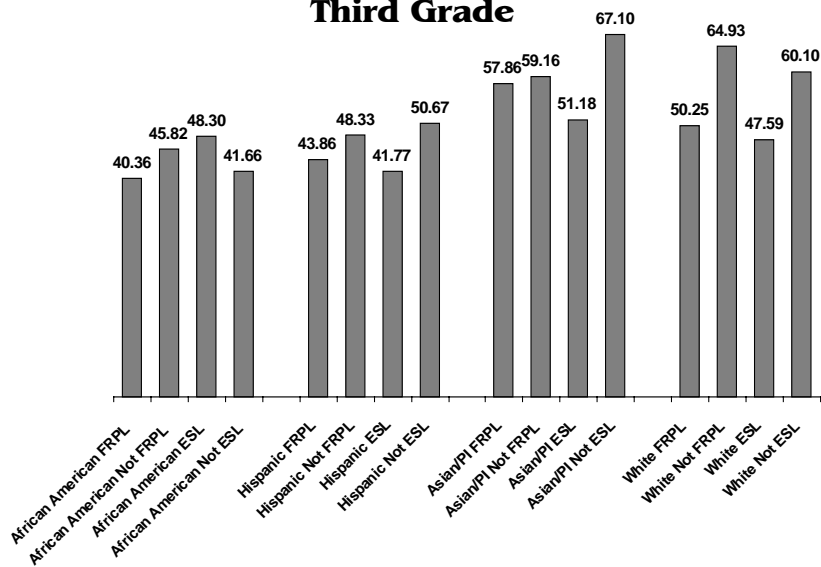
---

[14] There are too few Native American or Other race students at each grade level to draw inferences from the data, when it is broken down to this level. Some of the categories have only a few individual students in them. The Table in the Appendix does include this data, however, with the number of students in each group.
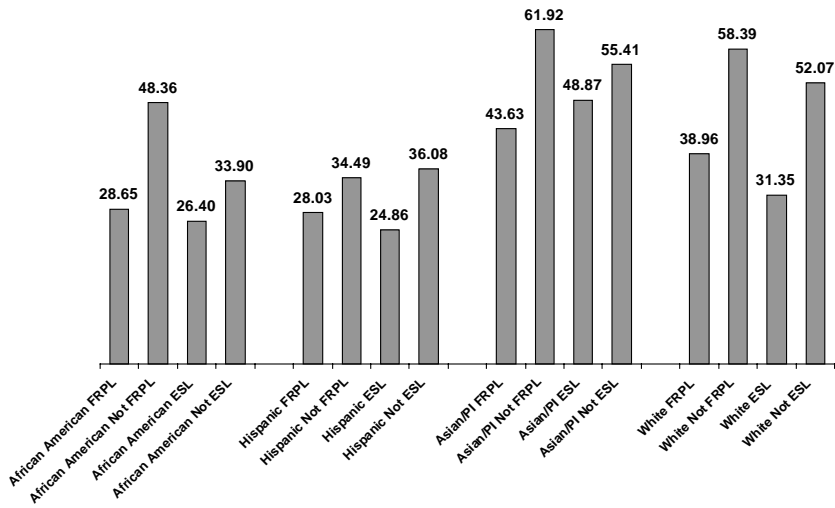
Chart Seven
Des Moines Composite Test Score Achievement
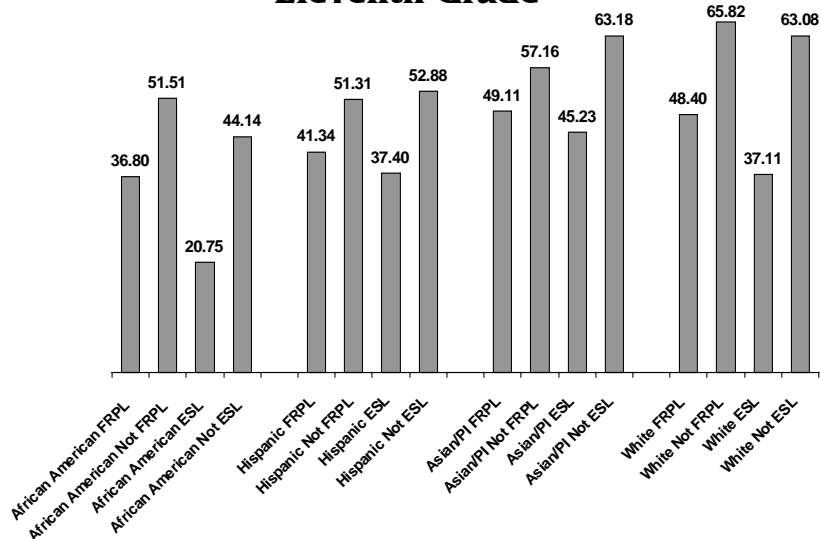# by Race, FRPL, and ESL Status

Third Grade

Category	Value
African American FRPL	40.36
African American Not FRPL	45.82
African American ESL	48.30
African American Not ESL	41.66
Hispanic FRPL	43.86
Hispanic Not FRPL	48.33
Hispanic ESL	41.77
Hispanic Not ESL	50.67
Asian/PI FRPL	57.86
Asian/PI Not FRPL	59.16
Asian/PI ESL	51.18
Asian/PI Not ESL	67.10
White FRPL	50.25
White Not FRPL	64.93
White ESL	47.59
White Not ESL	60.10

Eighth Grade

Category	Value
African American FRPL	28.65
African American Not FRPL	48.36
African American ESL	26.40
African American Not ESL	33.90
Hispanic FRPL	28.03
Hispanic Not FRPL	34.49
Hispanic ESL	24.86
Hispanic Not ESL	36.08
Asian/PI FRPL	43.63
Asian/PI Not FRPL	61.92
Asian/PI ESL	48.87
Asian/PI Not ESL	55.41
White FRPL	38.96
White Not FRPL	58.39
White ESL	31.35
White Not ESL	52.07

Eleventh Grade

Category	Value
African American FRPL	36.80
African American Not FRPL	51.51
African American ESL	20.75
African American Not ESL	44.14
Hispanic FRPL	41.34
Hispanic Not FRPL	51.31
Hispanic ESL	37.40
Hispanic Not ESL	52.88
Asian/PI FRPL	49.11
Asian/PI Not FRPL	57.16
Asian/PI ESL	45.23
Asian/PI Not ESL	63.18
White FRPL	48.40
White Not FRPL	65.82
White ESL	37.11
White Not ESL	63.08

American students. This does not hold for eighth or eleventh grade, however. In eighth grade, while there remains a substantial difference between African American and White test scores within the two FRPL categories (approximately 10 points for each), non-FRPL African American test scores also are higher than FRPL White scores by the same amount. At eleventh grade, non-FRPL African American test scores remain somewhat higher than FRPL White test scores, although, like third grade scores, the gap between White and African American test scores is higher for non-FRLP than for FRLP test scores.

Clearly, breaking down the data in this way shows that there are some gaps that cannot be explained by FRPL status alone, and this is particularly true at the third and eleventh grade levels for differences between non-FRPL African Americans and Whites.

Hispanic/White comparisons. For Hispanic students, the differences between non-FRPL Hispanic and White students are much larger at all three grade levels than they are for FRPL lunch students. In two of the three grades (third and eighth), non-FRLP Hispanic test scores are lower than those for FRLP Whites, and in eleventh grade they are only slightly higher.

Chart Seven also shows that ESL status produced greater differentiation than does FRPL status at each of the three grade levels. While there was a five point difference in FRPL and non-FRPL Hispanic test scores, there was a nine point difference in ESL and non-ESL Hispanic test scores. That difference between ESL and non-ESL rose in the eighth grade to 11 points, and in the eleventh grade to 15 points. This makes some sense, as ESL students at the older grades contend with more complex material where comprehension is based to a much greater extend on conceptual understanding of reading material that is in English.

Hispanic student test scores clearly are influenced both by FRPL and ESL status, although the gaps between Hispanics and Whites remain as large, and very similar to African Americans and Whites, even when examining differences within FRPL and ESL groupings.

Asian/White comparisons. While the test scores for Asian students as a whole are below those for White students at all three grade levels, when broken down by FRPL and ESL status, Asian student scores are higher than White student scores in most categories. FRPL Asian students score above their White counterparts at all three grade levels, by around seven points in third and eighth grade (but less than a point in eleventh grade). Not-FRPL Asian students score higher in eighth, but lower in third and eleventh grade.

Asian ESL students score substantially above White, Hispanic, and African American ESL students at all three grade levels, Asian test scores also are highest among all groups for non-ESL students, although the differences between Asian and White non-ESL students are less than one point at eleventh grade.

Asians have been called a "model minority" in terms of their assimilation into American life. Their student test scores certainly reflect that they are at least on a par with the dominant White culture, particularly when FRLP and ESL status are considered.

Chart Seven provides some important comparisons that demonstrate both the independent and interactive explanatory power of Race/Ethnicity, FRPL status, and ESL status in statistically explaining test score differences. The following uses a statistical technique, stepwise regression analysis, to determine the relative impacts of Race/Ethnicity, FRPL status, ESL status, school poverty factors, and neighborhood location in predicting test scores. These stepwise regressions were run for each of the three grade levels for each of three groupings, White and African American, White and Hispanic, and White and Asian. Stepwise regression is a statistical tool that seeks to determine which of these factors produces a statistically significant effect in predicting the test scores, and which do not, after other factors are considered. The "stepwise" part of the regression analysis uses the t-statistic to determine those variables which are statistically significant in explaining the variation in the dependent variable. At each step, it retains the first statistically significant variable and adds another from the set of statistically significant variables, until all such variables are added in. It then orders all the statistically significant variables based on their predictive power (or percent of variation that each explains).

The result is an equation that describes what would be the statistical best way to predict a student's score, knowing the student's characteristics (in this instance, race/ethnicity, FRPL status, ESL status, school poverty status, and neighborhood residence). The equation also shows how strong a predictor the equation is, by how much actual "variation" in test scores it is able to explain. It should be noted that none of the nine equations that were developed could explain more than 18.4% of the variation, which means that, on average, most of a student's score (over eighty percent) is the result of factors other than those tested in the equation. In non-statistical language, this means that one should never use the results from these analyses to apply them to individual students. There is much more variation within any particular grouping by these factors than there is across those groupings.

Table One shows these nine equations.

General Discussion of Stepwise Regression Equations. For each of the nine stepwise regressions, FRPL status was the factor that produced the greatest overall predictive power and was the first factor retained. Poverty, and socioeconomic status, clearly represent factors that contribute to school achievement. Their predominance here shows how important this issue is to addressing issues of the achievement gap.

For each of the nine stepwise regressions, school poverty status also was represented as having independent predictive power, although generally at a much lower level. Schools with higher proportions of FRPL students predicted lower test scores, even after the FRPL status of children were taken into account. This finding suggests that

13

school-specific strategies, with an emphasis upon schools with high proportions of
FRLP students, need to be undertaken to close some of the achievement gap.

For each of the nine stepwise regressions, race/ethnicity or ESL status represented a
statistically significant predictor of student test score, and often had the largest beta
(numerical predictive power, shown in parenthesis) of all factors.

While not all of the five factors showed up with a statistically significant predictive power
in all the equations, all showed upon in predicting eighth grade test score differences
and in at least one other equation. None should be discounted as having little impact
upon student test scores or being an issue to address in closing the achievement gap.

Stepwise Regression Analysis of White and African American Test Score Differences.
For all three grades, both FRPL status and race had large effects in predicting what
could be predicted (which was less than 20% of all variation) regarding student test
scores. On a very broad, statistical basis, a FRPL student would be expected to have a
lower test score by 9.6 points in third grade, 16.2 points in eighth grade, and 12.2 points
in eleventh grade. Going to a higher poverty school would impact scores by 3.6 to 4.6
points. After accounting for FRPL and other factors, being African American would
predict 11.8 fewer points in third grade, 6.5 points in eighth grade, and 11.0 points in

eleventh grade.[15] Although the number of African American ESL students is small, ESL also showed up as a powerful predictor in the eighth and eleventh grades, probably reflecting the challenges that refugees face in relocating and restarting their lives.

Overall, these findings are troubling, but not out of keeping with findings. The final section will discuss theories and strategies for addressing the achievement gap, with a particular emphasis to issues of race.

Stepwise Regression Analysis of White and Hispanic Test Score Differences. As with African American and White differences, FRPL status had a large effect in predicting differences in each of the three grades: 10.1 points in third grade, 15.2 points in eighth grade, and 12.2 points in eleventh grade. ESL status, rather than ethnicity, however, generally played a larger role in explaining other differences; 9.3 points in third grade, 4.3 points in eighth grade, and 18.4 points in eleventh grade. Hispanic ethnicity only showed up with any predictive power in eighth grade, and at 5.2 points was below three of the other four factors in predictive size.

Clearly, ESL status and Hispanic ethnicity are interrelated, but the analysis suggests that special attention has to be given to language and addressing the needs of English language learners, if disparities in test scores and student achievement between Hispanics and Whites are to be closed.

Stepwise Regression Analysis of White and Asian Test Score Differences. Again as with both African American and White and Hispanic and White differences, FRPL status had a large effect in predicting differences at all grade levels; 9.7 points in third grade, 16.3 points in eighth grade, and 12.2 points in eleventh grade. On a predictive basis, ESL status played an even larger role in the Asian and White comparisons than it did in the Hispanic and White comparisons; 12.0 points in third grade, 12.3 points in eighth grade, and 16.6 points in eleventh grade. When other factors were taken into account, Asian students could be expected to have higher test score results in third and eighth grades than Whites (there were no differences in eleventh grade), by 9.1 points in third grade and 15.1 points in eighth grade.

The Asian and White comparisons point to the importance of identifying and addressing barriers that FRPL students experience in their education and in addressing the needs of English language learners of all races and ethnicities. They also suggest that overall achievement can be improved in among White students, particularly in elementary and middle school, as, when other factors are considered, White students do not achieve at the level of their Asian counterparts in those grades.

---

[15] Since, in this instance the stepwise regression loaded race as the second predictive factor, right after FRPL for eleventh grade, some of the 11.0 points shown here might also be attributable to one of the lower-loaded factors.
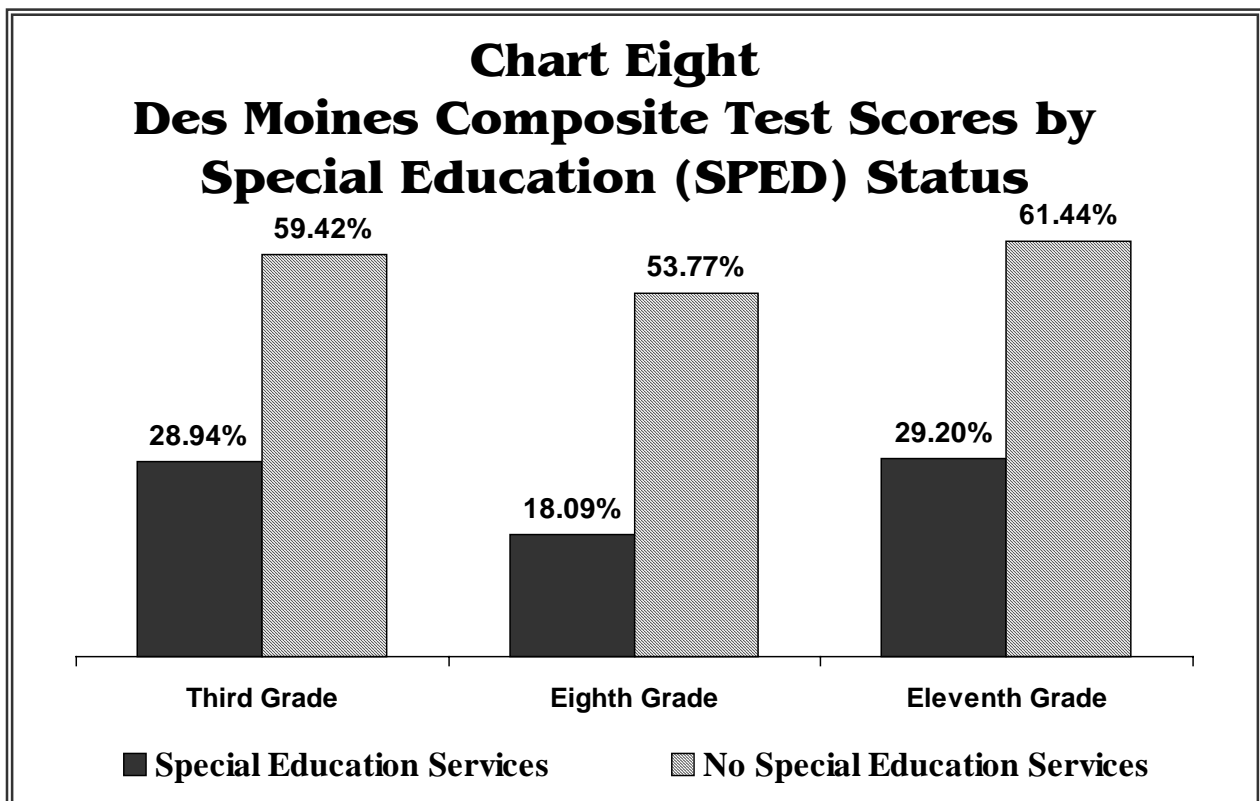
Section Four: Special Education and Composite Test Scores

In addition to the analyses conducted in prior sections, distinctions can be drawn between students who are in special education and those who are not. At the federal level, the Individuals with Disabilities Education Act (IDEA) requires that schools receiving federal funding address the special educational needs of students with disabilities, which can be physical, developmental, or behavioral. Iowa has developed a strong special education system that provides additional funding and instructional and other supports for children with disabilities.

The prior analysis included the test scores of children in special education programs, as children can be placed into special education for a variety of reasons, some of which can relate back to environmental conditions as well as organic issues. At a national level, it has been shown that African American boys, in particular, are disproportionately placed in special education programs for behavioral reasons, often for reasons of hyperactivity or attention deficit disorder, which some experts believe is much over-diagnosed and treated.

This section examines the special education population in the Des Moines Public Schools, both in terms of test scores and in terms of its proportion within different racial and gender groupings.

Chart Eight shows composite test scores for special education (SPED) students and non-SPED students at each of the three grade levels.

Chart Eight
Des Moines Composite Test Scores by Special Education (SPED) Status

Third Grade: Special Education Services 28.94%, No Special Education Services 59.42%
Eighth Grade: Special Education Services 18.09%, No Special Education Services 53.77%
Eleventh Grade: Special Education Services 29.20%, No Special Education Services 61.44%

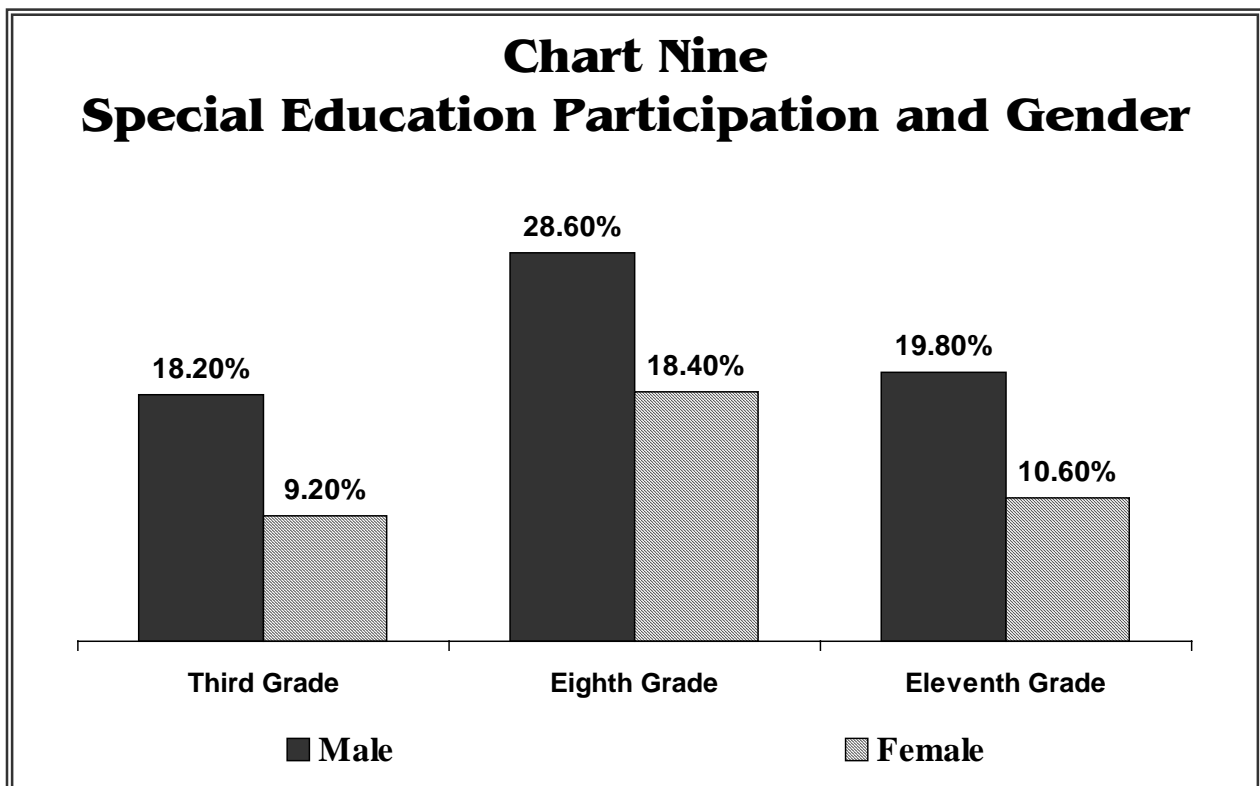■ Special Education Services   ▨ No Special Education Services

As Chart Eight shows, test scores of special education students are substantially below those of other students at all three grade levels, over 30 points at each level. Although breakouts within racial and ethnic categories are not shown in this chart, they are provided in the corresponding Table in the Appendix. These comparisons show that this 30 point differential holds for both White and Asian students, but is somewhat less (18-27 points, depending upon grade level) for Hispanic and African American students.

Clearly, students assigned to special education have substantially greater educational needs than those not assigned, as measured by test scores.

Examination of who is assigned to special education, however, reveals some very significant differences by grade, gender, and race/ethnicity. In terms of grade level, 13.8% of third graders, 23.6% of eighth graders, and 15.1% of eleventh graders were in special education. The percentage in eighth grade was almost twice that for either younger or older students, with eighth grade representing the adolescent period where adjustment issues that can give rise to educational problems may be most pronounced. Further, by high school, it is possible that those with the most serious adjustment problems may have already dropped out.

Chart Nine shows special education participation rates by gender.

As Chart Nine shows, males are much more likely than females to be assigned to special education. The rate is double for both third and eleventh grade, and is around ten percentage points higher in each of the three grades. There is increasing discussion

Chart Nine
Special Education Participation and Gender

Third Grade: Male 18.20%, Female 9.20%
Eighth Grade: Male 28.60%, Female 18.40%
Eleventh Grade: Male 19.80%, Female 10.60%

■ Male   ▨ Female

of an achievement gap in the United States between genders. While females historically have performed better than males on verbal tests and males better than females on mathematical tests, the gap is narrowing on mathematical tests and widening on verbal tests, and females are less likely to be involved in special education programs or be disciplined in school.[16] There is some discussion that the conventional learning environment in schools favors cultural learning styles more likely to be ingrained in females than males.[17] This also goes back to issues of identified special education needs on the basis of high physical activity levels in the classroom.

In addition to these differences by gender, there also are substantial differences by race/ethnicity, as shown in Chart Ten.

As Chart Ten shows, African Americans have a much higher rate of special education participation at all three grade levels than do other racial groups, at least 50% higher than the overall population of students at each grade level. Alternatively, Hispanic students have lower levels of special education involvement at all three ages. Not shown in Chart Ten but in the accompanying Tables in the Appendix is additional important information on special education involvement among ESL students and special education involvement by both race/ethnicity and gender.

Chart Ten
Special Education Participation by Race/Ethnicity

Third Grade: Asian/PI 7.22%, Hispanic 10.06%, African American 22.94%, White 12.78%
Eighth Grade: Asian/PI 12.50%, Hispanic 15.18%, African American 35.73%, White 22.68%
Eleventh Grade: Asian/PI 10.28%, Hispanic 12.39%, African American 26.84%, White 13.87%

Legend: ■ Asian/PI   ▨ Hispanic   □ African American   ▨ White

---
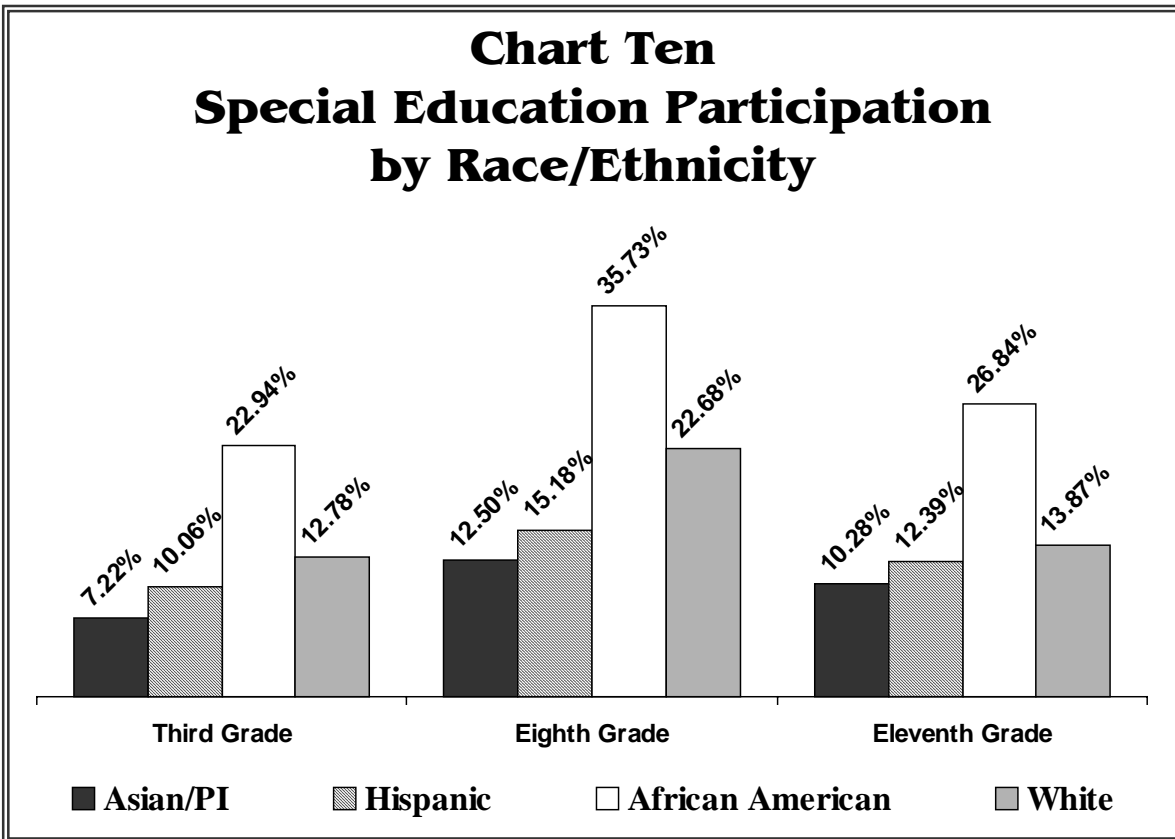
[16] Galley, Michelle, "Research: Boys to men," *Education Week.* January 23, 2002.
[17] Sommers, Christina Hoff, "The war against boys," *Atlantic Monthly.* May, 2000.

The lower rate of special education involvement of Hispanics is explained by the much lower rate of involvement of ESL students in special education programs than the population as a whole. At third grade, 9.0 percent of ESL students participated in special education programs, compared with 14.6 percent of non-ESL students. The comparisons were even more pronounced in eighth (9.9% compared with 25.3%) and eleventh (6.7% and 16.0%) grades. These comparisons suggest either that ESL instruction is taking precedence over SE designation or that the district does not do as much to identify special education issues among ESL students as it does for other students. Identifying special education needs for ESL students likely requires assessments that are provided in the native language and that are conducted by those who understand different cultural contexts.

Comparisons of special education participation by both gender and race/ethnicity generally show that rates for males are much higher than for females within each race, but that differences across race remain. African American male students are most likely to be in special education – nearly one-third of all third graders (29.6%), and more than two-fifths of all eighth graders (42.7%), and eleventh graders (42.0%). The rate at eleventh grade is especially high in comparison with all other groups, and particularly when recognizing that the higher dropout rate among African Americans also means that this population already is a smaller subset of that group's age cohort.

Findings, Discussion and Implications

The findings from this analysis are not unique to the Des Moines Public Schools, but are consistent with the findings from other analyses across the United States. Those that deserve particular attention in addressing achievement gap issues are the following.

First, the best available indicator of socioeconomic status, free and reduced price lunch participation, has a strong bearing on student achievement, as measured by composite test scores, at various education levels. The most powerful statistical predictor of student test scores at third, eighth, and eleventh grade is FRPL participation. This is true regardless of student race, home address, or what school the student attends. Closing the achievement gap will require addressing some of the disadvantages and barriers that low-income families face.

Second, while FRPL participation is the most powerful statistical predictor, poverty school status plays a second, independent role. Students score less well in high poverty schools, at all three grade levels and independent from their FRLP status, ESL status, or race or ethnicity. Closing the achievement gap also will require special attention to high poverty schools and their support systems for students and families.

Third, in comparing African Americans with Whites, race has a strong predictive power, even apart from FRPL status, school status, neighborhood, or ESL status. The gaps are highest between non-FRPL African Americans and Whites. This finding will be explored further in the discussion and implication sections. Closing the achievement gap will require understanding and addressing issues that produce this differential achievement.

Fourth, in comparing Hispanics and Whites, ESL status, and not ethnicity, has an independent predictive power, apart from FRPL and school poverty status. Closing the achievement gap will require addressing the needs of English language learners in more effective ways than have been provided to date.

Fifth, there are different rates of student involvement in special education system that are larger than one would consider reasonable based upon organic causes, alone. African American males, in particular, appear to be over-represented in special education, with particularly high rates at the middle and high school levels. Hispanics, and ESL students, appear to be under-represented. Closing the achievement gap may require rethinking the role of special education and its cultural and racial connotations, both in identifying SE students and in developing appropriate learning environments for them.

Fortunately, there is substantial evidence to show that any of these current achievement gaps can be closed, as there are high performing schools throughout the country who have raised achievement for all students and greatly closed the gaps described above, at the elementary, middle, and high school levels. They are not inevitable, but they do require concerted effort to change.

While most people recognize the role of socioeconomic status, language, and even school characteristics in affecting academic achievement, the role of race in affecting academic achievement is more complex to explain, as well as being very politically sensitive. What is clear, however, is that the difference is not genetic and it is not unchangeable.

In her provocative lead essay in *Young, Gifted, and Black,*[18] Teresa Perry describes several different explanations for educational achievement gap between African Americans[19] and Whites. While first noting that, historically, African Americans have gone to great risk and sacrifice to educate themselves and their children, seeing education as a means for advancement, Perry describes the post-desegregation period in different terms. She describes three different explanations for the achievement gap, noting that none fully explains it nor could be considered deterministic.

The first of these is the "cultural difference" explanation, that the educational system is based upon white culture and devalues the contributions of other cultures. African

---

[18] Perry, *op.cit.*

[19] There also needs to be some distinction drawn between Africans who have recently immigrated to this country and African Americans who have lived in the United States for some time, often for many generations. The Des Moines African American figures actually include both African Americans and recent immigrants from Africa, particularly Sudanese in Des Moines. Refugees and immigrants from African have different histories and cultures from African Americans who have lived all their lives in America. Immigrants and refugees often lived in countries where racial discrimination and institutional racism were not part of everyday life experiences, nor their past embodying slavery. Responding to a dominant white culture may not be part of their cultural experience and identity. They may have significant language and other barriers to address, and the following discussion in many respects holds for them (and for other racial and ethnic populations as well), but Perry's essay speaks specifically to the African American community and its culture, so the term "African American" is used here.

Americans attending dominant culture schools do not see their home culture represented in teachings, including their own cultural register, or style of communication. Perry also describes successful schools that provide much more duality in their instruction, incorporating African American culture and register into their teaching.

The second of these is the "social mobility" explanation, often applied in particular to the achievement gap experienced by African American males in poor, inner-city neighborhoods. This relates to "institutional racism" as well as discrimination. General recognition within the community that racism blocks the ability to succeed in life, whether or not one succeeds educationally, produces a lack of "effort optimism" in pursuing educational success. There is an absence of role models showing pathways to success. This can even produce an "oppositional identity" among youth that devalues educational success as "acting white." Perry again describes successful schools that have produced success even in very disinvested neighborhoods, where educational achievement is prided in its own right.

The third of these is the "low expectations" or "racial inferiority" explanation, that teachers establish low expectations for African American students that become a self-fulfilling prophecy. Again, there are examples of African American communities which have placed such a value on education that there is an independent force that drive achievement up, even in the absence of exceptional efforts within the educational community. It is this explanation, however, that the Education Trust stresses in its analysis, one that places responsibility squarely on the school system. [20]

In addition to the explanations discussed by Theresa Perry, some others have suggested that expectations within the African American community for their students educational achievement are lower than in White or Asian communities, and that African American parents, in general, are less likely to hold their own children to high educational expectations or to actively become involved in their children's educational success, leading that to schools.[21]

Research has shown that African American students, as a whole, do view the education system differently than whites, although their desires and efforts to achieve and their recognition of the importance of school are high. In fact, surveying students has helped schools eliminate some myths about student perceptions and begin to fashion solutions, as has been the case in Shaker Heights and Fort Wayne, Indiana.[22]

On an empirical level, Paul Barton, in *Parsing the Achievement Gap*, has identified 14 separate, well-researched correlates of the achievement gap between White and non-

---

[20] See footnote 14.
[21] For a similar argument regarding the role of culture in "explaining this difference," see: Thernstrom, A. & Thernstrom, S. (2003). *No excuses: Closing the racial gap in learning.* New York, NY: Simon and Schuster.
[22] Ferguson, Ron (2001). "A diagnostic analysis of black and white GPA disparities in Shaker Heights, Ohio," *Brookings papers on educational policy.* Washington, DC: Brookings Institution.

White students, most of which also hold as correlates of the achievement gap between low income and non-low income students. These include:

- Six related to school environment and characteristics (rigor of curriculum, teacher preparation, teacher experience and attendance, class size for minority but not low income populations, technology-assisted instruction, and school study)
- Five related to parent and community involvement and characteristics (parent participation, student mobility, reading to young children, television watching, and parent availability), and
- Three related to student health and well-being (birthweight, lead poisoning, and hunger and nutrition).[23]

These empirical indicators and their correlations with achievement provide some support for elements of each of the explanations offered above, although quantifiable data is necessarily limited for some of the cultural explanations.

In short, each of these explanations has some element of truth, as well as limitation, in identifying underlying factors that contribute to the specific achievement gap related to race. It is not necessary to choose among these explanations, however, as they imply a set of common solutions. These solutions also apply to achievement gaps that are the result of socio-economic status and underfunded schools, as well.

First, as James Comer wrote in *School Power*, a seminal work written almost a quarter century ago on raising achievement in inner-city schools, one of the keys to success is "reducing the distance between the culture of the schools and the culture of the community."[24] This requires school and community partnerships, which also requires those within the school and within the community who can serve as social connectors, in many respects acting like the frontline youth development practitioners described in *Urban Sanctuaries.*[25] There are sufficient examples of strong school and community partnerships across the country, in very diverse communities of all races and ethnicities, to recognize that these can be developed anywhere, provided there is a spark or catalyst. In most instances, these sparks or catalysts are people with passion, who can bridge the two worlds of school and community, who have received sufficient support from both to move forward. Often, this work starts in after-school programming and youth activities, or on weekends and in the summer, when youth are most available.[26]

---

[23] Barton, Paul. (2003). *Parsing the achievement gap.* Princeton, NJ: Educational Testing Service.

[24] Comer, James (1980). *School power.* New York, NY: Free Press.

[25] McLaughlin, M., Irby, M., & Langman, J. (1995). *Urban sanctuaries: Neighborhood organizations in the lives and futures of inner-city youth.* San Francisco, CA: Jossey-Bass Inc.

[26] Public/Private Ventures identified five core concepts that research supported as integral to the success of youth programs: (1) personal support and guidance from caring adults, (2) work and school as a tool for promoting personal development and learning, (3) constructive activities that fill critical gap periods and facilitate major transitions, (4) active youth involvement in program and community activities, and (5) continuity of attention to these four areas from early adolescence to adulthood. Public Private Ventures (1993). *Community Change for Youth Development: Establishing Long-Term Supports in Communities for the Growth and Development of Youth People.* Author, Philadelphia, PA.

Second, it requires high expectations and instructional rigor within the schools, particularly those serving poor and minority communities. This may require transformational leadership on the part of school leaders, particularly principals, in building that enthusiasm within a teaching force that has established much lower expectations for itself and its students over time.

Third, it requires an understanding of and appreciation from the school community for the rich, if different, culture that the students and their families embody. This involves more than "cultural competence" training, and instead revolves around how the different culture, and in many instances language, may be employed and integrated into the educational process itself.

Fourth, and particularly with older students, it involves understanding student perceptions and involving students in developing solutions.

Finally, it involves acting early, even before students enter the classroom. While some students who start school behind catch up and excel, on an aggregate level those who start behind do not, and many fall further behind.[27] This involves developing an early learning system that embodies the same three characteristics described above and includes family support, early intervention, early care and education and enriched pre-school programming, and transitional activities that prepare children for kindergarten and schools for those children. The more the achievement gap can be eliminated before children enter school, the better able schools will be to insure that gaps do not develop in school.

The data presented in this report clearly show that the Des Moines Public Schools have significant achievement gaps in the performance of their low-income and minority students. It also shows that there is no single explanatory factor from a statistical sense, but that FRPL status, ESL status, race/ethnicity, school poverty status, and student home neighborhood all have some independent statistical effect in predicting achievement.

Research has shown, however, that these can be changed. This requires building community and school partnerships, establishing high instructional standards, and recognizing and valuing student culture and language. It requires educational leadership and training and support. It requires starting early, and linking early learning efforts with early elementary instruction. It requires finding people of passion who relate to youth and can serve as bridges between school and community.

---

[27] Lee, V. & Burkham, D. *Inequality at the starting gate.*, *op.cit.* provide statistics on disparities on pre-literacy on children starting school, based on the ECS-K data. Child Trends has conducted further work on these disparities and groupings of children who are at special risk of being behind and falling further behind. Halle, T., Haire, E., Terry-Human, E., & Calkins, J. (2003). *School readiness: Naturally occurring patterns in kindergarten and predictions to later achievement.* Child Trends Presentation at the State Early Childhood Policy Technical Assistance Network National Conference on Kindergarten Assessment. www.finebynine.org. Regarding "learning loss" during the summer months, which affects low-income children much more greatly than higher-income children, see: Berlin, Gordon & Sum, A. *Toward a more perfect union.*

There is no magic curricula that will achieve this task, or a specific planning or governance structure that represents a fail-safe approach to making this happen. Rather, it requires active involvement, from the school, from parents, and from the community, each with a clear belief in all students' ability to succeed. No school has been successful in closing the achievement gap without also raising the achievement of all students. This is not an either/or proposition, but one which requires, and benefits, everyone.

Appendix – Data Tables

Table 1: Student Characteristics 2001-02 School Year

Race/Ethnicity	Des Moines	State	National
White	69.0%	89.6%	62.1%
African American	16.3%	4.1%	17.2%
Hispanic	9.4%	4.0%	15.6%
Asian American	4.5%	1.7%	4.0%
American Indian	0.5%	0.5%	1.2%
FRPL Participation	46.2%	26.5%	36.6%

Source: Des Moines Public School District- January 2003

Table 2: Test Score Achievement By Free & Reduced Price Lunch

	FRPL			
Mean ITBS Core Score	N	Yes	N	No
Grade 3	1013	47.25	1171	62.50
Grade 8	1008	34.83	1111	57.05
Grade 11	410	45.13	1042	63.87

Source: Des Moines Public School District- January 2003

Table 3: Test Score Achievement By Race/Ethnicity

	N	Other	N	Indian/N American	N	Asian	N	Hispanic	N	Black	N	White
Mean ITBS Core Score												
Grade 3	47	55.15	20	52.80	95	58.56	230	44.71	314	41.87	1478	59.82
Grade 8	13	37.77	20	47.90	90	51.56	194	30.24	337	33.56	1465	51.35
Grade 11	10	58.60	5	57.40	92	54.01	88	44.97	159	43.55	1098	62.23

Source: Des Moines Public School District- January 2003

Table 4: Test Score Achievement By ESL Status

	ESL			
Mean ITBS Core Score	N	Yes	N	No
Grade 3	252	44.72	1932	56.82
Grade 8	225	31.98	1894	48.20
Grade 11	134	39.07	1318	60.56

Source: Des Moines Public School District- January 2003

Table 5: Test Score Achievement By Geographic Area

	N	East Des Moines	N	West Des Moines	N	MC Areas	N	HR Neighborhood	N	Remaining Areas	N	City
		MC Neighborhood										
ITBS Score												
Grade 3	210	47.75	223	40.91	433	44.23	511	45.20	1673	58.55	2072	54.95
Grade 8	189	31.88	220	31.90	409	31.89	487	32.01	1641	50.70	2119	46.48
Grade 11	105	46.40	104	41.45	209	43.94	244	44.21	1208	61.48	1452	58.58

Source: Des Moines Public School District- January 2003

Table 6: Test Score Achievement By School Poverty Status

School Poverty Status	N	Grade 3
< = 20 % Enrollment	277	70.83
(20.1 - 30)% Enrollment	401	61.49
(30.1 - 40)% Enrollment	411	54.69
(40.1 - 50)% Enrollment	708	50.47
50.1 % & Above	387	47.96
		Grade 8
(0 – 25) % Enrollment	191	61.07
(25.1 – 35)% Enrollment	254	52.94
(35.1 – 45)% Enrollment	278	50.87
(45.1 – 55)% Enrollment	925	46.75
55.1% & Above	468	33.89
		Grade 11
(0 – 25) % Enrollment	670	64.36
(25.1 – 35)% Enrollment	263	58.87
(35.1 – 45)% Enrollment	300	52.22
(45.1 – 55)% Enrollment	186	52.99
55.1% & Above	32	27.00

Source: Des Moines Public School District- January 2003

Table 8: Test Score Achievement By Special Education Status

	N	SPED Yes	SPED No
Grade 3	2409	28.94	59.42
Grade 8	2374	18.09	53.77
Grade 11	1859	29.20	61.44

Source: Des Moines Public School District- January 2003

Table 8a: Test Score Achievement By Race and Special Education Participation (SPED)

	Asian SPED Yes	Asian SPED No	Hispanic SPED Yes	Hispanic SPED No	Black SPED Yes	Black SPED No	White SPED Yes	White SPED No
Grade 3	27.29	61.05	23.91	46.91	27.57	45.60	30.27	63.91
Grade 8	14.56	55.67	14.46	32.90	15.03	42.07	19.75	58.95
Grade 11	23.00	56.17	26.20	46.10	20.17	47.51	31.47	65.08

Source: Des Moines Public School District- January 2003

Table 9: Special Education Participation & Gender

	Female N	Female SPED Yes	Female SPED No	Male N	Male SPED Yes	Male SPED No
Grade 3	1164	9.2	90.8	1245	18.2	81.8
Grade 8	1160	18.4	81.6	1214	28.6	71.4
Grade 11	950	10.6	89.4	909	19.8	80.2

Source: Des Moines Public School District- January 2003

Table 10: Special Education Participation: Percentage By Race, FRPL, & ESL

| | GRADE 3 | | | GRADE 8 | | | GRADE 11 | |
| | SPED | | | SPED | | | SPED | |
N	Yes	No	N	Yes	No	N	Yes	No
Race								
Other	50	14.00	86.00	17	17.65	82.35	16	6.25	93.75
Indian/Native American	21	28.57	71.43	21	19.05	80.95	7	14.28	85.71
Asian	97	7.22	92.78	96	12.50	87.50	107	10.28	89.72
Hispanic	298	10.06	89.93	224	15.18	84.82	121	12.39	87.60
Black	340	22.94	77.05	389	35.73	64.27	231	26.84	73.16
White	1603	12.78	87.21	1627	22.68	77.32	1377	13.87	86.13
FRPL								
Yes	1090	17.06	82.94	1126	31.62	68.38	572	25.35	74.65
No	1319	11.14	88.86	1248	16.43	83.57	1287	10.57	89.43
ESL								
Yes	321	9.03	90.96	262	9.92	90.08	180	6.67	93.33
No	2088	14.56	85.44	2112	25.33	74.67	1679	16.02	83.98
All Students	2409	13.8	86.2	2374	23.6	76.4	1859	15.1	84.9

Source: Des Moines Public School District- January 2003

Table 11: Special Education Participation: Percentage By Race & Gender

		GRADE 3			GRADE 8			GRADE 11	
		FEMALE			FEMALE			FEMALE	
		SPED			SPED			SPED	
	N	Yes	No	N	Yes	No	N	Yes	No
Race									
Other	22	0.0	100.0	8	25.0	75.0	9	11.1	88.9
Indian/Native American	5	40.0	60.0	10	10.0	90.0	3	0.0	100.0
Asian	43	9.3	90.7	39	15.4	84.6	51	5.9	94.1
Hispanic	151	5.3	94.7	107	9.3	90.7	73	8.2	91.8
Black	151	14.6	85.4	197	28.9	71.1	131	15.3	84.7
White	792	9.0	91.0	799	17.3	82.7	683	10.4	89.6
All Females	1164	9.2	90.8	1160	18.4	81.6	950	10.6	89.4

Source: Des Moines Public School District- January 2003

Table 12: Special Education Participation: Percentage By Race & Gender

		GRADE 3			GRADE 8			GRADE 11	
		MALE			MALE			MALE	
		SPED			SPED			SPED	
	N	Yes	No	N	Yes	No	N	Yes	No
Race									
Other	28	25.0	75.0	9	11.1	88.9	7	0.0	100.0
Indian/Native American	16	25.0	75.0	11	27.3	72.7	4	25.0	75.0
Asian	54	5.6	94.4	57	10.5	89.5	56	14.3	85.7
Hispanic	147	15.0	85.0	117	20.5	79.5	48	18.8	81.3
Black	189	29.6	70.4	192	42.7	57.3	100	42.0	58.0
White	811	16.5	83.5	828	27.9	72.1	694	17.3	82.7
All Males	1245	18.2	81.8	1214	28.6	71.4	909	19.8	80.2

Source: Des Moines Public School District- January 2003

218 Sixth Avenue, Suite 1021
Des Moines, IA 50309-4006
(515) 280-9027
www.cfpciowa.org

Human Services Planning Alliance
1111 Ninth Street, Suite 100
Des Moines, IA 50314
(515) 246-6605

Excellence and Equity:
Closing the Achievement Gap in Des Moines Public Schools

Charles Bruner
and Syed Noor Tirmizi (statistical analysis)
Child and Family Policy Center, February 16, 2004 DRAFT

Table of Contents