Trends in Maryland Public Schools: Segregation

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As Maryland school districts become more diverse, it is important to examine whether schools are becoming more or less integrated by race and income. This brief examines increases in the racial and socioeconomic segregation of schools in Maryland. We used several measures to gauge the level of the racial and socioeconomic segregation of students in schools in Maryland. These measures show several trends, all pointing towards increased segregation by race and greater concentration of low-income students in schools.

Moderate Levels of Racial Segregation

To determine how well schools are integrated given the overall district enrollment, we examined the extent to which the racial composition of schools is evenly distributed when compared to the district racial composition. We use a dissimilarity index to measure the relative separation or integration of

Table 1. Differential Distribution of Two Racial Groups Across Districts, 2010

| | Dissimilarity Index | | |
District	Black and White	Latino and White	Asian and White
Allegany	0.305	0.197	0.440
Anne Arundel	0.426	0.297	0.242
Baltimore City	0.647	0.625	0.587
Baltimore	0.511	0.257	0.343
Calvert	0.175	0.145	0.178
Caroline	0.245	0.317	0.202
Carroll	0.224	0.171	0.192
Cecil	0.425	0.290	0.335
Charles	0.280	0.153	0.237
Dorchester	0.320	0.193	0.298
Frederick	0.455	0.315	0.340
Garrett	0.416	0.334	0.383
Harford	0.538	0.210	0.200
Howard	0.380	0.268	0.283
Kent	0.161	0.228	0.498
Montgomery	0.328	0.345	0.253
Prince George's	0.467	0.533	0.351
Queen Anne's	0.152	0.218	0.251
Somerset	0.233	0.260	0.236
St. Mary's	0.379	0.223	0.306
Talbot	0.158	0.236	0.263
Washington	0.380	0.244	0.269
Wicomico	0.290	0.194	0.220
Worcester	0.377	0.171	0.099

Source: U.S. Department of Education, National Center for Education Statistics, *Common Core of Data.*

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students across schools within a district. A dissimilarity index measures how evenly students are distributed across schools compared to the district's student composition. For example, an index value near 0.000 would indicate that students of two races are evenly distributed given their proportion of enrollment. A dissimilarity index above 0.600 indicates high segregation (above 0.800 is extreme) while a value below 0.300 indicates low segregation.

Table 1 summarizes the dissimilarity between White student enrollments and Black, Latino, and Asian student enrollments by district. Baltimore City, Baltimore, Harford, and Prince George's school districts have the most segregated schools (above 0.500) on one or more of the three comparisons. The level of segregation in thirteen districts is moderate, between 0.300 and 0.500. The least segregated districts include Calvert, Carroll, Charles, Queen Anne's, Somerset, Talbot, and Wicomico. This measure also shows that Black students are the most segregated from White students in 15 districts, Latino students from White students in 6 districts, and Asian students are the most segregated from White students in 8 districts (for each comparison, the dissimilarity index is above .300).

Trends in the Racial Isolation of Students

While dissimilarity provides a district level measure of segregation and is useful for comparing districts at a given point in time, we also measured school-level concentration of students to compare segregation trends over time. To measure the racial concentration of schools, we calculated the percentage of schools within each district that are racially isolated White (90-100% White), predominately minority (50-90% minority), and racially isolated minority (90-100% minority). These data suggest that racially isolated minority schools have increased (figure 1).

Figure 1. Percentage of students by school-level racial concentration, Maryland public schools, 1990-2010.
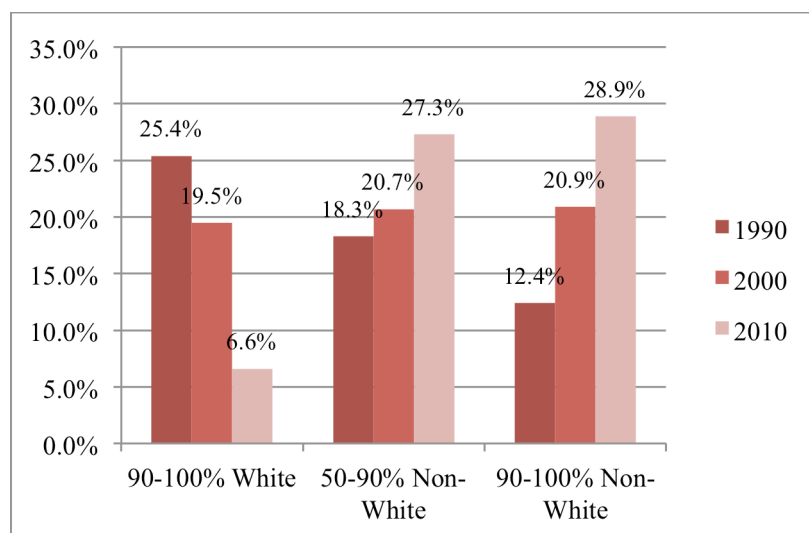
Source: U.S. Department of Education, National Center for Education Statistics, *Common Core of Data.*

Across the state, the percentage of racially isolated White schools declined substantially, from 25.4% of schools in 1990 to 6.6% in 2010. At the same time, the percentage of racially isolated minority schools (90% - 100% minority enrollment) more than doubled between 1990 and 2010, increasing from 12.4% of

schools to 28.9%. In total, 35.5% of public schools in the state were racially isolated White or non-White in 2010, about the same as in 1990 when 37.8% were racially isolated. However, the make-up of these racially isolated schools changed from predominately White to predominately non-White. There was also an increase in the percentage of schools that enrolled 50-90% minority students. About a quarter (27.3%) of Maryland's schools fell into this category in 2010 compared to less than a fifth in 1990.

Trends in Economic Segregation in Maryland

Statewide, economic segregation decreased between 1990 and 2010. However, low-income students are more likely to attend schools that predominantly enroll low-income students (57.3% low-income students) while middle- and upper-income students are more likely to attend schools that predominantly enroll economically advantaged students (71.4% non-poor students). Further, as the percentage of low-income students increased in Maryland, the concentration of low-income students in schools increased.

Table 2. Differential Distribution of Students by Income Across Districts, 2010

| | Dissimilarity Index |
District	FRPM and Non-FRPM
Allegany	0.230
Anne Arundel	0.386
Baltimore City	0.394
Baltimore	0.382
Calvert	0.265
Caroline	0.172
Carroll	0.297
Cecil	0.259
Charles	0.258
Dorchester	0.287
Frederick	0.366
Garrett	0.212
Harford	0.452
Howard	0.413
Kent	0.162
Montgomery	0.433
Prince George's	0.343
Queen Anne's	0.328
Somerset	0.139
St. Mary's	0.291
Talbot	0.145
Washington	0.309
Wicomico	0.229
Worcester	0.241

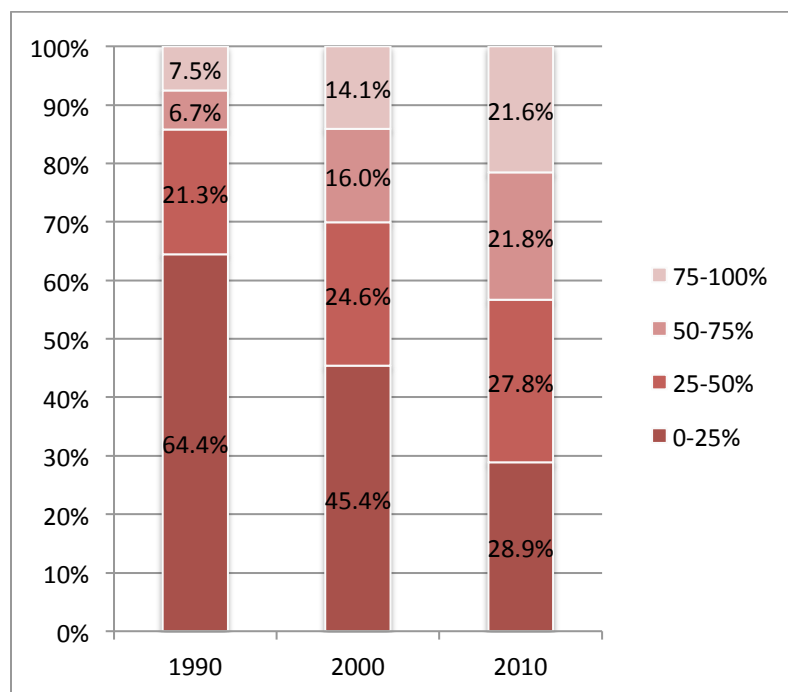Source: U.S. Department of Education, National Center for Education Statistics, *Common Core of Data.*

As table 2 above shows, low-income students are most segregated from non-poor students in Harford, Montgomery, and Howard counties. Other districts where the dissimilarity index is above .300 include Anna Arundel, Baltimore City, Baltimore, Frederick, Prince George's, Queen Anne's, and Washington. With the exception of Queen Anne's, these districts are in the central portion of the state. Somerset and Talbot have the lowest levels of segregation by income. The level of income segregation or integration is not simply related to the percentage of low-income students in a district, as some districts with low percentages of low-income students have higher levels of income segregation; in other districts with higher percentages, low-income students are more evenly distributed.

Trends in the Economic Concentration of Students

The figure below shows the percentage of Maryland schools by the level of poverty concentration.[1] In 2010, almost half (43.4%) of all schools in Maryland had poverty levels of 50% or greater, compared to 14.2% in 1990. The percentage of Maryland public schools with more than 75% of students from low-income families increased three-fold, from 7.5% of all public schools in 1990 to 21.6% in 2010. At the same time there are fewer schools with low concentrations of poverty. The percentage of schools with fewer than 25% of low-income students decreased from 64.4% in 1990 to 28.9% in 2010.

Figure 2. Percentage of Maryland public schools by poverty concentration, 1990-2010.

Source: U.S. Department of Education, National Center for Education Statistics, *Common Core of Data.*

For the state, the percentage of schools with low concentrations of poverty decreased 46.7% between 1990 and 2010, from 786 schools to 419 schools. In 1990, there were schools in every district with low

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[1] School-level concentration of students is a measure of income-based segregation over time.

concentrations of poverty; in 2010, eight districts no longer had any schools with low concentrations of poverty. These districts were in eastern (Caroline, Dorchester, Kent, Somerset, Talbot, and Worcester) or western Maryland (Allegany and Garrett). Statewide, the percentage of schools with concentrated poverty increased 240.2%, from 92 schools in 1990 to 313 schools in 2010. In 1990, there were 7 districts with one or more schools with concentrated poverty; in 2010 there were 22 districts. Districts with the largest percentage of schools with concentrated poverty were in Baltimore City (87.8% of schools), Dorchester (30.8% of schools), Allegany (25.9% of schools), and Prince George's (25.7%). Queen Anne's and Talbot had no schools with concentrated poverty in 2010.

Conclusion

Our findings suggest that as public school enrollment has become more diverse, schools are becoming more segregated by race and the concentration of low-income in schools has increased. While the magnitude of these changes varies across districts, these demographic changes are manageable if Maryland and school districts are proactive in addressing them. But left unaddressed, they are likely to create situations where educational opportunities are unequally distributed and educational goals are unmet.

To read the full report, go to http://www.mdequity.org/research/inequities

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