

The Relationship between Public PreK Access and Poverty

By Rachel Canter

In our sample, we find that access to publicly funded preK is positively associated with high-poverty school districts: the higher the poverty in a district, the higher the access to publicly funded preK, on average. More precisely, for every percentage point increase in the number of students receiving free and reduced price lunch, access to publicly funded preK increases by 1.2 percentage points, on average. This relationship is largely driven by the availability of Head Start in Mississippi: higher poverty communities are more likely to have Head Start seats because 90% of children in every Head Start center must be at or below the poverty line.

There are some important outliers, however, that we believe the public should note. (For statistics-savvy readers, the r-squared is .44.) In an attempt to help readers better understand the differences in access, we have grouped school districts in five different categories based on poverty and access to publicly funded preK. These categories are:

- 1) average or above average poverty, below average access (red on the access map);
- 2) below average poverty, below average access (also red on the access map);
- 3) average or above average poverty, average access (light or dark blue on the access map);
- 4) below average poverty, average access (light or dark blue on the access map); and
- 5) any level poverty, above average access (green on the access map).

Important Caveats

First, we used one standard deviation above and below the mean to classify school districts as “above average,” “average,” and “below average.” Therefore, “above average” is one standard deviation above the mean, “average” is within one standard deviation above and below the mean, and “below average” is one standard deviation below the mean.

Secondly, when we say “average poverty,” we mean a district’s poverty rating relative to the average poverty level of school districts in Mississippi in our sample. Our sample includes only the 138 (of 149) Mississippi K-12 school districts for which we could calculate an access rate.¹ The average poverty level of districts in our sample was 77.2 %. This is an average of districtwide poverty levels, not an average of student-level poverty statewide. One standard deviation above the mean was 93.3%, and one standard deviation below was 61.1%. Nearly all districts in Mississippi have a poverty level that is higher than the national average poverty level. Therefore, a district with a “lower than average” poverty level is not necessarily a district that does not have a significant number of children in poverty (districts could still have a poverty level as high as 61.1%!); it is simply a district that has fewer children in poverty relative to other Mississippi districts.

Finally, please remember that this is 2011-2012 data.

¹ We could not calculate an access percentage for all of the school districts for a variety of reasons. First, the new Head Start provider in Forrest County did not have access to historical transition data to allow us to correctly allocate Head Start transfers across the three districts there. The consolidation of Sunflower and Drew in 2012-2013 meant that the Kindergarten enrollment numbers could not be allocated properly to the previous two districts. Two other districts—South Pike and Union County—had district preK programs but did not provide us the number of children served. Finally, one Head Start provider—AFJC Head Start—did not provide data for any of its four counties in the southwest corner of Mississippi.

Category 1: Average or Above Average Poverty, Below Average Access—FOCUS COMMUNITIES

Eleven districts had average or above average poverty levels and yet had below average access to publicly funded preK. We call these school districts “focus communities” because the data indicates that the children in these districts are of greatest need for preK options that are low- or no-cost for families.

Each of these eleven districts have extremely small Head Start populations, despite their poverty level. This may be because the county Head Start provider is primarily serving children who transition to another school district in the county or, in the case of single-district counties, because the Head Start partner in the county has a very limited number of classrooms. Leflore County School District, for example, holds the dubious distinction of being the only school district that had both an above average poverty level and a below average access rate. Interestingly, Greenwood, which is also in Leflore County, had an average access rate. The difference between the two districts seems to be that Greenwood received most of the Head Start transfers and had four classrooms of preK, while Leflore County had very few Head Start transfers and no district preK.

Including Leflore County, 9 of these 11 districts had no district preK program (either district-operated or blended Head Start). The two that had district preK—Union Public and Neshoba County—had one or two classes, respectively, despite large Kindergarten populations.

These school districts ranked in order first by access rate from smallest to largest and then by poverty from highest to lowest are

1. Scott County School District	5. Simpson County School District	9. Neshoba County School District
2. Houston School District	6. Covington County School District	10. Harrison County School District
3. Hancock County School District	7. Leflore County School District	11. Union Public School District
4. Jones County School District	8. Lawrence County School District	

Category 2: Average or Above Average Poverty, Average Access

With seventy-five school districts, this category is by far the largest because it includes the districts that had with average poverty and average access, in addition to districts that had above average poverty and average access. Of these seventy-five districts, twenty-four (32%) had district preK programs (either district-operated or blended Head Start).

These school districts ranked in order first by access rate from smallest to largest and then by poverty from highest to lowest are

12. Louisville School District	36. Grenada School District	60. Nettleton School District
13. Leland School District	37. Tishomingo County School District	61. Noxubee County School District
14. Carroll County School District	38. South Tippah School District	62. Coahoma County School District
15. Biloxi Public School District	39. Itawamba County School District	63. Greenwood Public School District
16. Columbia School District	40. Water Valley School District	64. McComb Public School District
17. Pontotoc City School District	41. Winona Separate School District	65. Coffeeville School District
18. Poplarville Separate School District	42. West Jasper School District	66. East Tallahatchie School District
19. Tate County School District	43. Durant Public School District	67. Baldwyn School District
20. Newton Municipal School District	44. Vicksburg-Warren School District	68. Philadelphia Public School District
21. Smith County School District	45. North Panola School District	69. Columbus Municipal School District
22. Stone County School District	46. Greene County School District	70. Lumberton Public School District
23. Brookhaven School District	47. Western Line School District	71. Richton School District
24. Kosciusko School District	48. Amory School District	72. South Panola School District
25. Pascagoula Separate School District	49. Wayne County School District	73. Marion County School District
26. Pearl Public School District	50. Leake County School District	74. Calhoun County School District
27. Prentiss County School District	51. Yazoo County School District	75. Quitman School District
28. Perry County School District	52. Jefferson Davis County School District	76. Marshall County School District
29. Picayune School District	53. Jackson Public School District	77. Okolona Separate School District
30. Pontotoc County School District	54. Walthall County School District	78. Pass Christian Public School District
31. New Albany School District	55. Bay St. Louis-Waveland School District	79. Laurel School District
32. Starkville School District	56. Canton Public School District	80. Clarksdale School District
33. George County School District	57. Hinds County School District	81. Hollandale School District
34. Senatobia Municipal School District	58. Gulfport School District	82. West Point School District
35. Copiah County School District	59. North Tippah School District	83. Meridian School District

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| 84. Hazlehurst City School District | 86. Indianola School District | 88. Choctaw County School District |
| 85. Franklin County School District | 87. West Tallahatchie School District | |

Category 3: Below Average Poverty, Below Average Access

Fifteen school districts had below average poverty and below average access. These districts had very low Head Start participation, especially relative to the size of some of these districts. Of these fifteen districts, only two—Madison and Rankin County School Districts—had district preK programs. Madison County had one blended Head Start class at each of the district’s highest poverty elementary schools—Camden Elementary and Luther Branson Elementary—where the free and reduced lunch percentage is above 95% at each school. Similarly, Rankin County’s one class was at McLaurin Elementary, where the poverty percentage is above 70% compared to the districtwide level of 41%.

These school districts ranked in order first by access rate from smallest to largest and then by poverty from highest to lowest are

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| 89. Enterprise School District | 94. Jackson County School District | 99. DeSoto County School District |
| 90. Ocean Springs School District | 95. Long Beach School District | 100. Monroe County School District |
| 91. Lamar County School District | 96. Lauderdale County School District | 101. Lincoln County School District |
| 92. North Pike School District | 97. Alcorn County School District | 102. Lafayette County School District |
| 93. Rankin County School District | 98. Madison County School District | 103. Lowndes County School District |

Category 4: Below Average Poverty, Average Access

The eight school districts in this category had below average poverty levels but average access. All of them had some access to Head Start, but only Booneville had more than half of its Kindergarteners served by Head Start. Of the eight school districts, three—Oxford, Corinth, and Tupelo—had district preK programs (either district-operated or blended Head Start). Both Corinth and Tupelo stand out in this group as school districts that would have had drastically different access rates but for their district preK programs. Tupelo’s access rate would have changed from 66% to 26%, which would have put the district just shy of having below average access. Corinth’s access would have changed from 46% to 9% in the absence of their district program, which would have pushed the district into Category 3 with other below average poverty and below average access districts.

These school districts ranked in order first by access rate from smallest to largest and then by poverty from highest to lowest are

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| 104. Webster County School District | 107. Newton County School District | 110. Tupelo School District |
| 105. Lee County School District | 108. Oxford School District | 111. Booneville School District |
| 106. Clinton School District | 109. Corinth School District | |

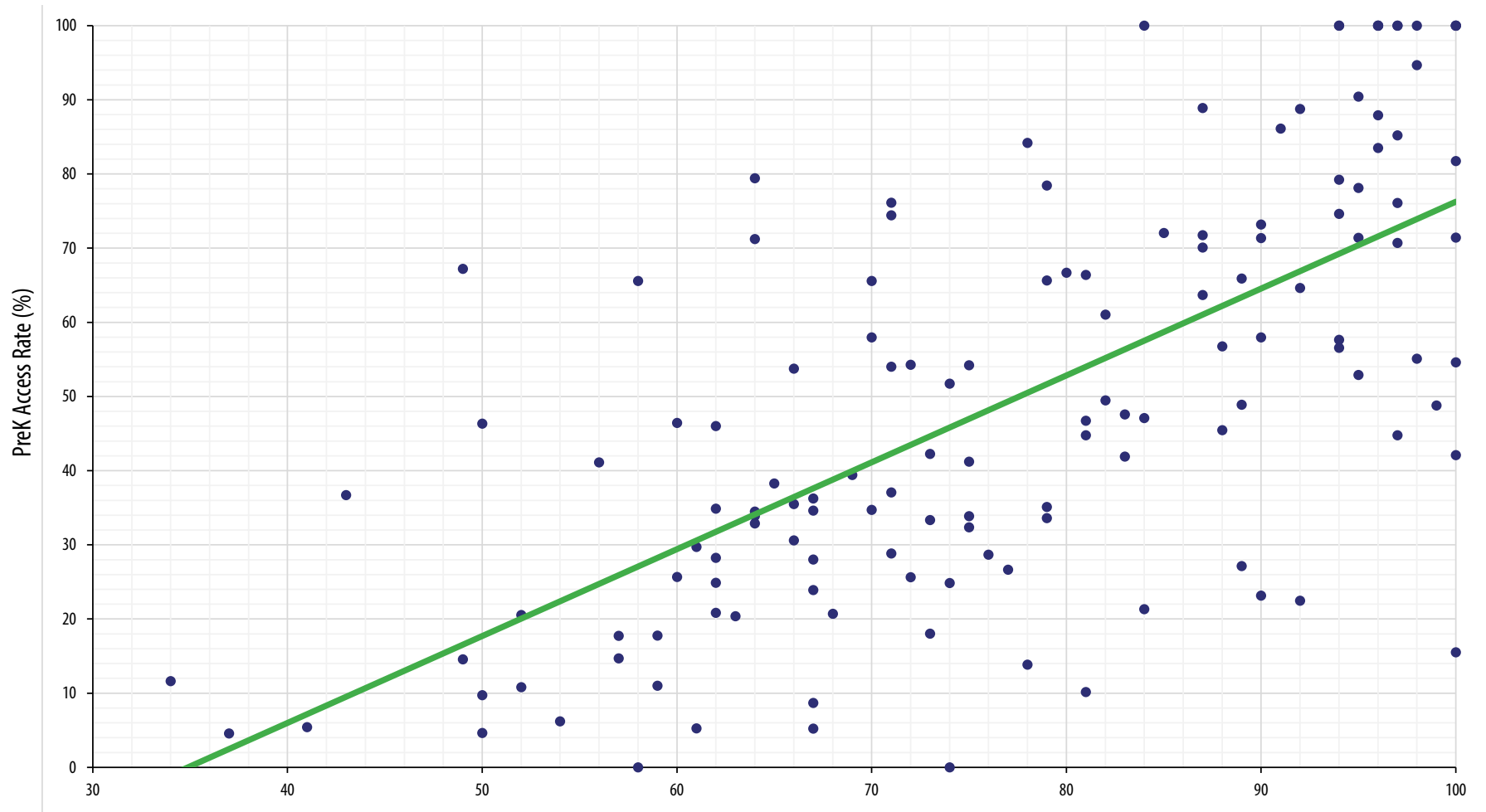
Category 5: Any Poverty Level, Above Average Access

Children and families living in the school districts in this category had strong access to publicly funded preK. (Readers should note that there were no school districts that had a below average poverty level and above average access.) Nearly all of these districts had strong Head Start participation. Furthermore, of the twenty-seven school districts in this category, seventeen (63%) had district preK programs, whether district-operated or blended Head Start programs. The other ten programs had enough Head Start seats to cover between 78% and 100% of Kindergarteners, with an average of 91% of Kindergarteners covered.

These school districts ranked in order first by access rate from smallest to largest and then by poverty from highest to lowest are

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| 112. Montgomery County School District | 122. Humphreys County School District | 132. South Delta School District |
| 113. Chickasaw County School District | 123. Greenville Public School District | 133. East Jasper School District |
| 114. Forest School District | 124. Moss Point School District | 134. Yazoo City Municipal School District |
| 115. Holly Springs School District | 125. Kemper County School District | 135. Holmes County School District |
| 116. Pearl River County School District | 126. Claiborne County School District | 136. Oktibbeha School District |
| 117. Quitman County School District | 127. Benoit School District | 137. West Bolivar School District |
| 118. Tunica County School District | 128. Mound Bayou School District | 138. Attala County School District |
| 119. Cleveland School District | 129. North Bolivar School District | |
| 120. Aberdeen School District | 130. Clay County School District | |
| 121. Benton County School District | 131. Shaw School District | |

PreK Access Rate Vs. % of Free and Reduced Lunch



Equation: $y = 1.1769x - 41.39$
R-squared: .4424

● Public School District — Best Fit Line