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Discrimination and the Achievement Gap: Ten Districts

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Abstract

The testing scores of black and white students were compared in an observational study involving ten North Carolina school districts for the 2016-17 academic school year. The presence or lack of inclusive racial awareness programs was also measured using a dummy variable. Measuring achievement gap as a percentage and controlling for other factors, a multiple regression analysis was performed to look for causal relationships. However, the relationship between testing scores and racial outreach programs is an endogenous one. Racial awareness outreach programs may be utilized to combat existing achievement gaps, rather than causing greater or lesser achievement gaps. Studying the effect of outreach programs over time rather than school district would yield a more definitive conclusion.

1. Introduction

Black American students disproportionately suffer low test scores compared to their white peers at all levels of education. Known as the achievement gap, this disparity has been well documented across the United States for years[2,7,10]. The causes for this achievement gap, however, are debated. Media reports and research[4] tend to credit poverty for the achievement gap, since black children are more likely to come from poor families[3]. Yet Steele[1] contends that poverty has little to do with the achievement gap; rather, the achievement gap arises from discrimination and the low confidence instilled in black students by educators, community members, and media.

Using data from ten school districts of North Carolina provided by the North Carolina Department of Public Instruction[5,6], this observational study seeks to measure the impact of outreach programs on the achievement gap with controls for median income, school district funding, percentage of economically disadvantaged students, the number of white students and black students, district size (in students), and the existence of racial awareness / outreach programs, if any. An attempt was also made to distinguish between inclusive racial outreach programs aimed toward the entire community of a district versus exclusive programs aimed solely at black students. Ultimately, no exclusive programs for black students were found using the instruments in this study.

The research question asks why some school districts are better at handling achievement gaps than others, and my hypothesis was that districts with outreach programs would have smaller achievement gaps. A regression analysis was completed with several controls and seven models.

Income and district funding did not appear to have any effect on achievement gaps after a regression analysis. Outreach programs and achievement gaps appeared to have a firm, positive relationship after creating a scatterplot and looking at the regression coefficient. For every 10% increase in achievement gap, there is a 25% greater chance that a racial outreach program exists. However, this relationship is an endogenous one. Schools may be responding to larger achievement gaps by incorporating outreach programs, rather than observing growing achievement gaps with outreach programs in place.

2. Research Question

The objects of my research are ten North Carolina school districts and their achievement gaps (or lack thereof). Voter suppression, poverty, and discrimination can have both direct and indirect impacts on a child's learning environment. Racial tensions have been incredibly high throughout the last several years in the United States, and North Carolina specifically was reprimanded by the Supreme Court in 2017 for racially charged gerrymandering[11]. The recently repealed Section 4 of the Voting Rights Act – which created special rules (and punishments) for certain jurisdictions known for racial profiling involving voters – covered 40 counties in North Carolina, including Onslow County, one of the school districts I study in this project. North Carolina's history with racial issues makes it a prime candidate for any type of racial study, and counties which lost the protection of the Voting Rights Act may suffer consequences that reach as far as a child's classroom.

Many studies have focused on the achievement gap between black and white students[1,2] and the media and subsequent studies have framed the achievement gap under the lens of socioeconomic status[4,7]. Some school districts are better at combating the achievement gap than others, but why? Is it really attributable to socioeconomic status? Or is it rather due to better methods of combating discrimination? This observational study will examine this question in detail.

3. Theoretical Argument: Discrimination and Achievement Gaps

Based on the research of Steele[1], outreach programs at a university aimed at combating racial disparities and helping black students learn have high success rates and improve test scores dramatically. *So why are some school districts much more likely to have large black-white achievement gaps than others?* Do school districts with any kind of outreach program have better test scores among their black students? If not, what else could explain such disparities?

According to Steele, disidentification with school is the primary cause of low test scores among black students. This disidentification refers to a student no longer gaining motivation, learning or confidence from good nor bad school experiences, but instead rejecting school entirely. Black students are given low expectations from media, educators, and even their families, and therefore reject education, even at the lowest grade levels. Teachers and educators perpetuate these low expectations by making assumptions about students' intelligence based on their race. The combination of discrimination and low expectations create what Steele calls double vulnerability to disidentification with school. If discrimination by the school system (excessive punishment, exclusion from class activities) and low expectations are present, it is likely that the community of black students will not identify with school and will have lower test scores and/or drop out of school later on.

Discrimination and low expectations are hard to measure, but the resources used to combat them are not. Many school districts across the country utilize racial awareness and diversity outreach programs aimed specifically at helping students of color and white students to combat discrimination. This outreach programs may include the community at large, educators, or families. Yet Steele contends that affirmative action-style programs aimed *exclusively* at black students can be alienating and can worsen achievement gaps[1]. Further, by his proposed solutions, outreach programs that don't also help educators and communities combat discrimination are only dealing with half of the issue. A thorough outreach program, then, must meet certain criteria: it must aim to involve black *and* white students; and it must involve students, educators, *and* families for completeness. Therefore, one should define such diversity outreach programs, if present, by their comprehensive involvement of students, families and educators. If their stated goal (or mission statement) is simply to involve more black students in an activity, it is not likely to be helpful, and may serve to alienate black communities. If the stated goal of an outreach program is to bring students, educators, and families of all races together for something, however, it is more likely to help students identify with one another, with their communities, and with school in general. It is also more likely to help educators and families avoid inadvertent racial devaluation. Such outreach programs will lead to a higher percentage of passing black students, and less of an achievement gap between black and white students. The independent variable here is whether diversity outreach programs that meet these criteria are present in a school district, while the dependent variable is the percentage difference of test scores between black and white students. The fewer such programs there are (or, none), the more likely that the gap between test scores is great. The first independent variable will account for whether or not a district has outreach programs, and the second independent variable will account for whether those program(s) are inclusive to the community or exclusive to parts of the community.

The causal mechanism for both independent variables is the same: Discrimination towards black students lead to disidentification with school at a young age in the classroom. This disidentification affects educators and families

because it lowers current and future expectations of black students, and harms black students themselves, lowering their self-worth and causing them to reject any worth they might have gained from school achievement. Finally, this disidentification leads to lower test scores among black students, and a larger gap between black and white test scores.

Hypothesis I: Districts with any racial awareness and outreach programs will have a lower achievement gap.
Hypothesis II: Districts with racial awareness and outreach programs exclusive to black students will have a greater achievement gap.

4. Socioeconomic Status and Race in the Achievement Gap: Literature Review

There are two dominant perspectives on the causes of the achievement gap between black and white students: socioeconomic status and discrimination. Minorities, especially black Americans, are far out-performed by whites in nearly every subject and at every grade[10]. In addition, black Americans are far more likely to be impoverished and come from broken homes[3]. Socioeconomically disadvantaged students are more likely to perform poorly in school. Farkas[2] goes further than economic disadvantage and details what he calls the three preconditions for student learning: opportunity, student effort, and skills and experiences and explains how economic status itself can impact all three of these preconditions. Using three national data sets which tested kindergarteners and toddlers for school readiness, Farkas finds that minority children arrive at kindergarten or first grade with lower levels of school readiness than do White and Asian children. He references a study by Lee and Burkam from 2002, which shows that three-fourths of the African American cognitive skills gap at kindergarten entry is accounted for by the social class background differential between African American and White families. In many early educational subjects (such as math and reading), black children are some years behind white children, and this varies by grade-level. Farkas asks whether or not some of these discrepancies could be attributable to discrimination by school systems and teachers.

Farkas discusses several conclusions. First, according to a study by Phillips, Crouse, and Ralph from 1998, at least half of the Black-White gap in twelfth grade would be eliminated if we could eliminate the Black-White performance gap at school entry, meaning in early education. Second, he provides four possible explanations for the stark achievement gaps: 1. insufficient opportunities to learn; 2. A lack of effort on the part of students; 3. Insufficient early skills and experiences; and 4. Summer fallback, or the loss of learning during the summer months. He rejects all of them on various grounds.

Farkas ends his research by suggesting that much more research must be done on discrimination within school systems to make any definitive explanations possible. Throughout his research of other studies, he lumps black students and lower-income students together. Most of the studies he references do the same thing. Taking his writing as it is, he does not seem to have provided any conclusive theory. Through his process, he has shown that race and socioeconomic status are inseparable, something that the media and writers like Morrison[4] have taken to heart. Subsequent research studies have narrowed their focus to socioeconomic status as well[7], accepting their connection in relation to achievement gaps, rather than studying race and achievement gaps exclusively. Wealthy black students are seemingly left out of these studies.

Steele[1] provides a more compelling theory, and even provides a counter to the idea that socioeconomic status is a definitive factor: he shows that gaps occur even when black students suffer no economic disadvantage. Steele also notes that issues in preparedness don't explain anything either – even among black students who met or exceeded academic performance requirements, a staggering number tended to drop out or eventually flunk within a matter of years at a large, prestigious university where Steele taught as a professor[2]. This idea that preparedness, or in Farkas' terms, skills and experiences, will not change a black student's prospects could be extended to young children in early grades as well, since Farkas claims that the gap begins in kindergarten.

Steele contends that the real issue among black communities is identification with school. He explains that unlike their white counterparts, black students derive no self-worth from success in education, and nor do they feel motivated to do better when they receive low grades[3]. He explains this lack of identification by racial devaluation – that is, because black Americans are already devalued in society via media, advertising, movies and in the news, black Americans are given a set of low expectations at a young age, and this persists for both educators and the black students themselves[3].

Sampling a number of black students, Steele and fellow professors finds that "attitudes related to disidentification were more strongly predictive of grades than even academic preparation" such as SAT scores, though this study was not expanded to a national level[4]. Steele references several studies of programs meant to aid black students and finds that their success rate is enormous. However, he asks, why do more schools not invest in such programs? He claims that it is because black students are often rerouted to special or remedial education instead, and because so many black

students end up in remedial education compared to whites, they begin to identify with it, rather than with their successes (6).

Steele concludes his paper by giving four recommendations to combat the racial achievement gap in all levels of education. The first is that teachers must be taught to value their students. Second, he contends that "frustration is less crippling than alienation," referring to the rate of black students placed in remedial education the second that they show struggle with a particular concept. This incorrect placement leads to frustration and boredom for black Third, and building off the second point, segregation must be avoided. White and black students alike should be placed into student success programs to reduce devaluation and racial vulnerability. Fourth, he says the black Americans must be better represented in media and movies to raise the confidence and identity of black Americans.

5. Data and Measurement

To measure outreach programs, achievement gaps, and their relationship to each other, the following hypotheses are presented:

Hypothesis I: Districts with racial awareness and outreach programs will have a lower achievement gap.
Hypothesis II: Districts with racial awareness and outreach programs exclusive to black students will have a greater achievement gap.
Research Question: Why are some school districts much more likely to have large black-white achievement gaps than others?

5.1 Dependent Variable and Independent Variables

The dependent variable in this observational study will be the percentage difference between black and white passing test scores – or, the achievement gap. Observing ten different school districts of North Carolina (some county-wide and others city-wide), I will measure this achievement gap. These school districts were selected from a list of schools on the North Carolina government website; this study could be improved upon with a random sample.

The independent variables are the existence of racial awareness outreach programs and whether or not they are racially inclusive or racially exclusive in a given school district. These variables are meant to measure the effect of inclusive outreach programs on reducing racial discrimination and the racial achievement gap.

5.1.1 operationalize and measure – dependent variable

The achievement gap can be observed through the annual test scores of students in each school district – or, more specifically, students categorized as grade-level proficient by the North Carolina Department of Public Instruction (NCDPI)[5,6]. The NCDPI provides a disaggregated report of student testing each academic year that is broken down into many subcategories, including race, gender, grade, and scoring categories. One of these scoring categories is GLP, or grade-level proficient, and includes all students of any grade level who received state-mandated testing and passed. The difference in the percentage of total black students tested and total white students tested who are placed in the GLP category will represent the achievement gap for this study. A large percentage will show a large achievement gap, and a small percentage will demonstrate a smaller achievement gap.

5.1.2 operationalize and measure – independent variables

The number (and character) of outreach programs will be the first set of variables to represent discrimination. These programs will be accounted for and categorized through school district websites. Spending no more than 2 minutes on a particular district's page, a school district will be coded with the number 1 if any racial outreach programs are publicly announced on their website, and coded with 0 if none can be found. While this is not a failproof indicator of the presence of racial outreach programs, it is likely that if a school district is trying to promote such a program, it will be on their official website. Racial programs promoted from outside sources (such as a community center), will be excluded because this study focuses on school districts and their individual efforts.

The second measure of discrimination will involve categorizing outreach programs among the districts that have them. An outreach program will be categorized as "inclusive" or "exclusive" based on their description. Basing this analysis on Shapiro's[8] model of analyzing equity programs, program descriptions will be searched for keywords. The

keywords “community,” “educators,” or “family” will all be associated with an inclusive program; whereas “anti-racism,” “black empowerment,” or “changing white attitudes” would be phrases associated with exclusive programs. Outreach programs will receive a coding of 1 if they are inclusive, and 0 if they are exclusive. In districts that have more than one outreach program, the description of each will be quickly read, and if even one outreach program fits an inclusive description, the district will receive a coding of 1.

6. Controls

Size: The total number of students enrolled within the district for that year, or the estimate thereof. The size of the school appears to directly impact funding, which in turn can affect the achievement gap. This number will include a composite of students tested at all grade-levels to show the size of the entire district. Rather than provide enrollment data, the North Carolina Department of Public Instruction (NCDPI)[5,6] prefers to count students by Average Daily Membership, which is a complicated calculation based on whether or not a student is on an attendance roll call sheet. This number (for Asheville City Schools, for example), is far lower than the number of students given standardized testing by the end of the year (in fact, it is lower by over a thousand). Since it’s not possible to test nor count students that don’t exist, I will use the number of students tested as my enrollment figure. (This issue will be explained in detail during my analysis.)

Racial Make-Up: The count of white students tested and the count of black students tested. Because this study focuses exclusively on black-white discrimination and achievement gaps (or lack thereof), other races were omitted. This count is necessary to show achievement gap through the percentage of total students considered GLP.

EDS (Economically Disadvantaged Students): Of the total students tested in a district, these are the total number considered economically disadvantaged. It is assumed that these students are those who qualify for free or reduced lunches.

City or County Median income: The median income will be given for either the city or county, depending on the school district. If socioeconomic status impacts the achievement gap, then poorer schools are likely to have a higher achievement gap.

District Funding: Using an NCDPI expenditures report for the 2016-17 fiscal year, the *total* funding for the school district for that year is reported. This includes all categories of funding that North Carolina uses (from special needs funding to child nutrition, or free lunch, funding). According to researchers like Farkas (2003), this funding should directly impact the achievement gap.

GLP by race: The number of tested students by race, and the percentage, who were considered grade-level proficient after testing. Students who scored a passing or above-passing score are reported by the North Carolina Department of Public Instruction.

GLP Difference: The two percentages of GLP students, subtracted. A high percentage in this column shows a large achievement gap, while a smaller percentage shows a smaller achievement gap.

Table 1. Controls for Ten School Districts in North Carolina

School District	Size	Racial Make-Up	EDS	City or County Median Income	District Funding	GLP by Race	GLP Difference
Asheville City School District	5,606	Black: 1,215 White: 3,426	2,334 (42%)	Asheville City $44,946	$25,529,915	Black: 298 (25%) White: 2,833 (83%)	58%
Clinton City School District	4,008	Black: 1,430 White: 1,124	2,415 (60%)	Clinton City $29,432	$18,077,793	Black: 644 (45%) White: 814 (72%)	27%
Durham Public School District	41,763	Black: 19,393 White: 7,492	25,587 (61%)	Durham County $54,093	$195,406,840	Black: 7,052 (36%) White: 5,988 (80%)	44%
Edenton-Chowan School District	2,772	Black: 1,164 White: 1,323	1,753 (63%)	Chowan County $41,156	$14,834,470	Black: 450 (39%) White: 937 (71%)	32%

Guilford County School District	94,884	Black: 38,204 White: 31,509	47,027 (50%)	Guilford County $46,896	$403,041,693	Black: 15,271 (40%) White: 23,892 (76%)	36%
Kannapolis City School District	7,017	Black: 1,943 White: 2,334	3,385 (48%)	Kannapolis City $45,863	$30,324,937	Black: 600 (31%) White: 1,354 (58%)	27%
Lexington City School District	4,118	Black: 1,227 White: 925	2,502 (61%)	Lexington City $27,437	$19,699,165	Black: 512 (42%) White: 491 (53%)	11%
Onslow County School District	33,589	Black: 6,689 White: 18,897	16,471 (49%)	Onslow County $46,786	$139,938,783	Black: 2,728 (41%) White: 11,939 (63%)	22%
Rutherford County School District	10,401	Black: 1,209 White: 7,593	4,638 (45%)	Rutherford County $36,144	$51,979,311	Black: 512 (42%) White: 4,855 (64%)	22%
Yancey County School District	2,874	Black: 15 White: 2,391	1,596 (56%)	Yancey County $36,993	$15,990,264	Black: 10 (67%) White: 1,775 (74%)	7%

Table 2. Summary Statistics: Ten School Districts (Median Incomes of Counties and Cities Measured Seperately)[9]

School District Controls	Min	Max	Mean	Median	Mode	Std. Deviation
School district population	2,772	94,884	20,703	6,331.5	No recurring values	29,489.9
Number of Black Students	15	38,204	7,249	1,329	No recurring values	12,322.2
Number of White students	925	31,504	7,701	2,909	No recurring values	9,985.3
Number of EDS Students	1,596	47,027	10,771	2,944	No recurring values	15,031.7
Median income of 4 cities*	$27,437	$45,863	$36,917	$37,184	No recurring values	$9,835.8
Median income of 6 counties*	$36,144	$54,093	$43,678	$43,971	No recurring values	$6,874.6
District Funding	$14,834,470	$403,041,693	$99,870,323	$30,324,937	No recurring values	$130,216,513

Table 3. Summary Statistics: Difference in Student Test Scores by GLP (Passing Students)

School District	GLP Difference
Asheville City School District	58%
Clinton City School District	27%
Durham Public School District	44%
Edenton-Chowan School District	32%
Guilford County School District	36%
Kannapolis City School District	27%
Lexington City School District	11%
Onslow County School District	22%
Rutherford County School District	22%
Yancey County School District	7%

Table 4. Summary Statistics Shown as Decimals for GLP

Min GLP Difference	Max GLP Difference	Mean	Median	Mode	Std. Deviation
.07	.58	.29	.27	.27	0.150422

The largest, most well-funded school district in this sample is Guilford County School District, with 94,884 students tested in the 2016-17 academic year, and over $403 million in funding for the same year. Guilford is also the school district with the largest population of black students, at 38,204, and the largest population of white students at 31,509. The smallest school district with the least amount of funding is Edenton-Chowan School district, with 2,772 students tested and just over $14 million in funding for last year.

The most segregated school districts on this list (or, schools in which one racial population comprises more than half the other) are Yancey County, Onslow County, and Durham Public Schools. In Yancey County there are only 15 black students who took state tests last year, compared to 2,391 white students. By contrast, there are 19,393 black students in the Durham Public School District and only 7,492 white students. Finally, in Onslow County, white students far outnumber black students with a population of 18,897 white students to 6,689 black students.

In every school district, regardless of funding or median income, nearly half of the student population is considered economically disadvantaged. North Carolina determines this status by students who qualify for free or reduced lunch programs. If this is true for every district listed here, including those that comprise mostly white students, then it follows that not all economically disadvantaged students are black, and not all test score differences are contingent on socioeconomic status.

The greatest achievement gap of the ten districts sampled exists in Asheville City School District. Asheville City is the second most well-funded of the city school districts and has the second highest median income of the four city districts. The smallest achievement gap exists in Yancey County School District, a district that does not have the greatest nor the least number of economically disadvantaged students. In fact, Yancey County has the fifth highest percentage of economically disadvantaged students, placing it directly in the middle. Yancey also has the second lowest district funding of all the school districts, and the second lowest median income of the six counties.

Yancey County School District is also the only school district in which more than half of tested black students passed testing as grade-level proficient. It is important to acknowledge that Yancey County also has the lowest population of tested black students with only 15. It is possible that individual attention and tutoring were made easier by such a small population.

7. Analysis

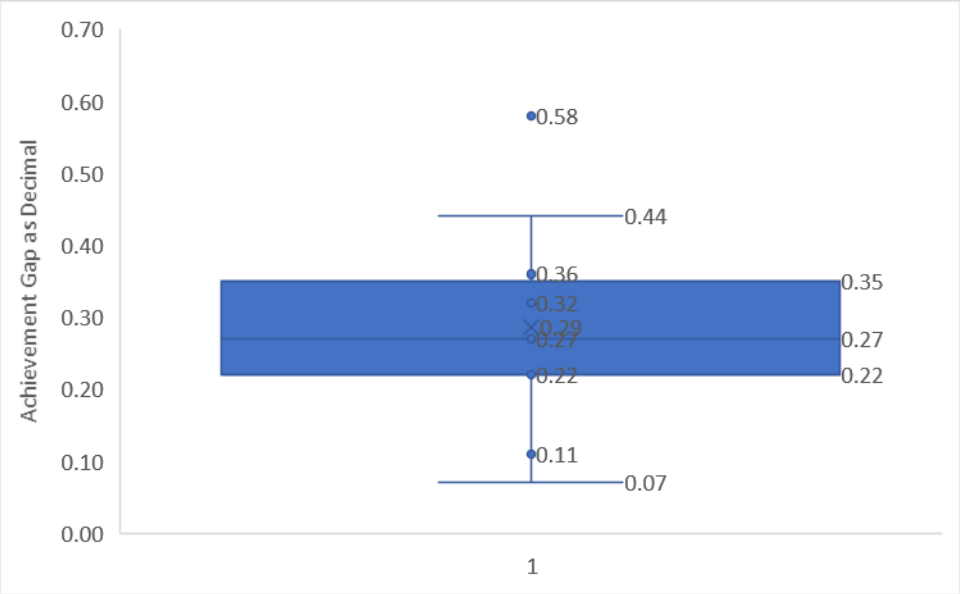

Figure 1. Box and whisker plot of achievement gaps as percentages.

The box and whisker plot is a method for graphically representing data in quartiles to highlight outliers and groupings of data. It shows that Asheville City School District is the only real outlier in the series of achievement gaps. Interquartile range calculations show that the first quartile is 0.36, the second quartile (median) is 0.27, and the third quartile is 0.22. Most schools have an achievement gap that falls within these three ranges. The interquartile range is 0.14. This range demonstrates the distance between quartiles. The third quartile minus the IQR (multiplied by 1.5) is 0.57, meaning that Asheville City School District remains an outlier, at 0.58. An achievement gap of 58% is much higher than the other schools and districts observed.

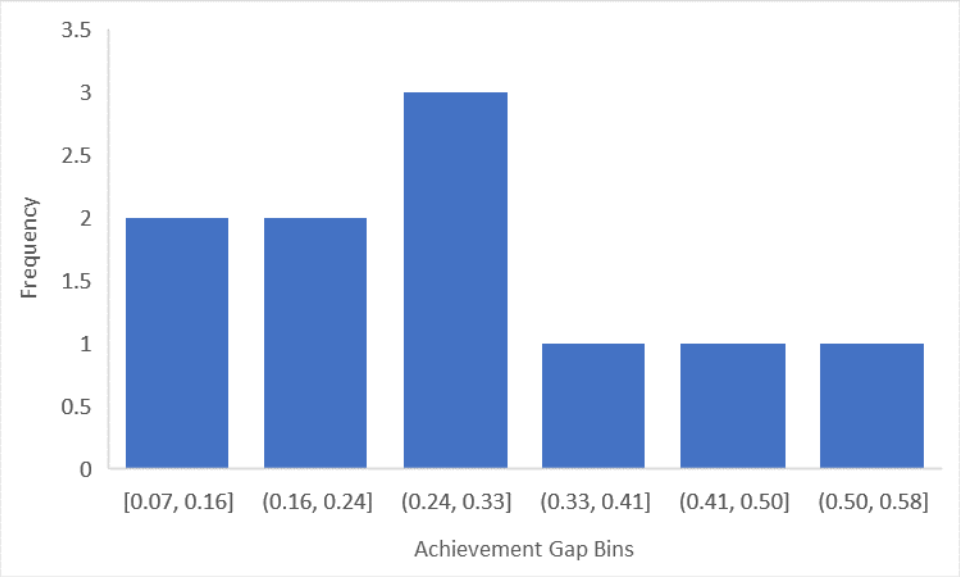

Figure 2. Histogram of Achievement Gaps among the ten school districts.

The histogram above shows that achievement gaps are not normally distributed among the ten school districts. The greatest number of school districts have an achievement gap between .24 and .33. The average school district has an achievement gap between 24% and 33%, making this bar on the histogram the largest one. Asheville City School district falls among other districts which have unusually low or unusually high achievement gaps.

Table 5: Existence of Outreach Programs

Outreach Programs	Number	Relative Freq.
Yes (1)	3	30%
No (0)	7	70%
Total	10	100%

Table 6: Existence of Inclusive Programs

Inclusive	Number	Relative Freq.
Yes (1)	3	100%
No (0)	0	0%
Total	3	100%

Of the ten counties, only 3 (30%) had any racial outreach programs at all, and all three were inclusive programs. Because there were no exclusive programs in this sample, the second independent variable doesn't vary, and will not be included in further statistical tests.

8. Results

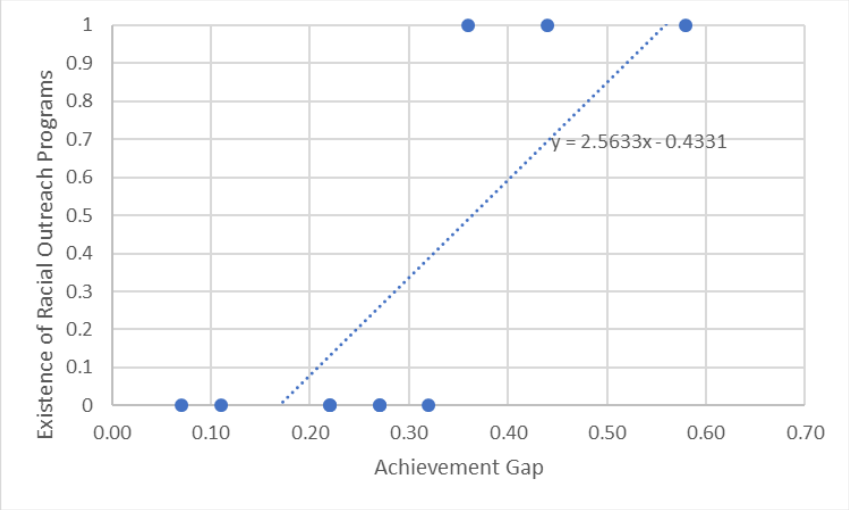

Figure 3: Scatterplot: Achievement Gap and Racial Outreach Programs. The scatterplot shows a rise in achievement gap with the existence of an outreach program.

For every 1-point increase in achievement gap (or 100%), a racial outreach program is 2.5633 (or 256%) more likely to be present. Put in more reasonable terms, for every 10% increase in achievement gap, there is a 25% greater chance that a racial outreach program exists.

Table 7: Regression Analysis

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-0.433	0.218	-1.981	0.083
Achievement Gap	2.563	0.684	3.748	0.005

The achievement gap coefficient is more than twice the standard error, showing that this result is statistically significant (the p-value is also fairly small).

Table 8: Multiple Regression Analysis with Six Controls

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Intercept	0.211 (0.036)	0.229 (0.036)	0.357 (0.250)	0.230 (0.040)	0.222 (0.034)	0.094 (0.196)	0.231 (0.036)
Outreach program	0.249 (0.066)	0.322 (0.079)	0.239 (0.071)	0.284 (0.073)	0.343 (0.084)	0.214 (0.089)	0.327 (0.080)
Size (in 1000 students)	--	-0.002 (0.001)	--	--	--	--	--
EDS (in proportions of total)	--	--	-0.268 (0.452)	--	--	--	--
White students (in 1000 students	--	--	--	-0.004 (0.004)	--	--	--
Black students (in 1000 students)	--	--	--	--	-0.005 (0.003)	--	--
City / county median income (in 1000 dollars)	--	--	--	--	--	0.003 (0.005)	--
Funding (in millions)	--	--	--	--	--	--	0.000 (0.000)

Table 8 Shown here are regression coefficients and standard errors in parenthesis for seven models. The dependent variable is the achievement gap. The left column shows each variable tested against the dependent variable.

For every outreach program, achievement gaps increase by roughly 25%. For every district where 100% of the student population is economically disadvantaged, the achievement gap actually decreases by 26%. Put another way, for every 10% increase in the number of economically disadvantaged students, the achievement gap would shrink by 2.6%. However, this result is not statistically significant – and neither are any of the other regression coefficients. The only coefficients that are more than twice the standard error are those of the outreach programs.

The greatest change in achievement gap appears in Model 5, in which black students (in 1,000 students) were added as a control. The achievement gap decreases by 0.5% for every 1,000 black students when there is an outreach program present.

The issue of endogeneity becomes more apparent after seeing this regression table. It certainly cannot be said that income or funding have any impact on the achievement gap, but achievement gap and outreach program seem inversely connected. However, the greater the achievement gap, the more likely it seems to be that an outreach program will be in place, rather than an outreach program causing a lesser (or greater, if it is a poorly executed program) achievement gap.. A school district with a high achievement gap will likely take steps to correct the achievement gap and may well utilize racial outreach programs.

9. Improvements to this Study

First and foremost, a random sample (and a larger sample at that) would vastly improve the validity of this study. With a sample size of only 10 that wasn't random, the results here are exploratory or suggestive at best.

The length of time that a racial outreach program has been in place would also be a vital addition to this analysis. It is possible that the outreach programs were put in place as a response to high achievement gaps, and that those programs hadn't had a chance to have any effect on achievement gaps before being measured. Determining a standard

length of time for all outreach programs to work would allow for better measurement validity as well and would reduce the chance of an endogenous result.

A better method for discovering racial outreach programs would aid the validity of this study. It is entirely possible that many school districts coded with 0 for "no outreach program" actually did have outreach programs. Relying exclusively on a district's website omits the chance that an outreach program exists but is not advertised. Direct access to school district information on this subject would provide a clearer picture. Further, a better method for determining exclusive and inclusive programs is recommended, since no exclusive programs were found using my measuring process.

Finally, and importantly, a third hypothesis was excluded from this study due to lack of data. Steele (1992) contends that black students are unfairly and disproportionately placed into remedial and special needs education. He further argues that these students (many of whom are not intellectually disabled) then identify with special needs education and suffer from low confidence from their academic lives. An attempt was made to collect data on students considered special needs by each school district; however, the NCDPI does not report the race / ethnicity of special needs students. Access to such information would allow for a third hypothesis: The higher the percentage of black students in special needs education, the higher the achievement gap in a given school district.

10. Conclusion

The lack of a large random sample makes a conclusion from this regression analysis difficult. P-values, while not shown, were relatively high for all controls, and nearly all coefficients were less than twice the standard error. The only exception to this was the coefficient for outreach programs.

It is clear that outreach programs and achievement gaps have a relationship. Yet that relationship may be contingent on the length of time an outreach program has been able to operate. Based on this analysis, achievement gaps increase by 25% when an outreach program is present. Endogeneity becomes clear: a greater achievement gap likely causes a district to create or utilize outreach programs instead.

11. References

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