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Diversify Your Student Portfolio: How Integration in the Classroom Can Improve Educational Outcomes for All

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Diversify Your Student Portfolio:
How integration in the classroom can improve educational
outcomes for all

Senior Project submitted to

The Division of Social Studies

of Bard College

by

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Abstract

The history of school policy intended to segregate the student population in the United States has had a lasting effect on how schools are composed racially and socioeconomically. While the 1954 Brown vs Board of Education decision led to schools being legally integrated, resistance movements, de facto segregation, and school choice among other things have shown how hard true integration is to achieve even now. To this day, many schools all over the country remain highly segregated. This segregation limits the exchange of skills and knowledge between different groups, causing children to lose out on the potential benefits of a highly diverse classroom. Regression data using student scores shows that having more white students increases a school's exam proficiency while higher number of low income students leads to a decrease in proficiency. The results highlight the importance of the intersection of race and class in the discussion about American schools.

Table of contents

Introduction.....1

Chapter One: History and Policy.....3

Chapter Two: Diverse Tools and Where to Find Them.....26

Chapter Three: ELA Regression and Results.....39

Conclusion.....52

References.....56

Introduction

Education in the United States has a long and complicated history when it comes to inclusion policy in public schools. From the legal school segregation of a pre *Brown vs Board of Education* world, to integration efforts at the end of the 20th century, and present day conversation about the benefits of diversity in the learning environment-- racial and socioeconomic integration in public schools have raised many questions about school policy that do not necessarily have clear answers. Growing up, I was always very conscious of the school districts in my area that divided towns by seemingly very segregated groups. In a world where people stress the importance of diversity and so often say “it takes all kinds” it struck me as odd that borders seemed to keep certain groups of people in schools separate from the rest of the population. For this project, I plan on examining the history of integration policy in schools, understanding the importance of diversity in the classroom, and analysing student data to see if being in a diverse classroom has a benefit to student performance.

The first chapter begins with the early history of race in public education in the United States. Large focus will be placed on institutional responses to the *Brown vs Board of Education* decision to declare separate schools for black and white students unconstitutional. The red lining of minority neighborhoods in the early 20th century made it hard for residents to invest in themselves, acquire wealth, build their communities, or live anywhere else. This proved to be another large difficulty as school districts are drawn by geographical boundaries meaning ethnically and socioeconomically segregated neighborhoods created by red lining result in segregated

schools. Policy to reduce the impact of segregated neighborhoods on school demographics have been tried in many areas and have been met with varying degrees of success. This conversation continues in the present day as schools remain heavily segregated while solutions that please everyone involved are few and far between.

The second chapter focuses on why diversity is so important in a learning environment. In his book *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*, Scott E. Page identifies the four cognitive tools everyone has and how they can be used in the group setting to better problem solve. Everyone's tools are affected by their lived experiences and these experiences can inform us when we use those tools to solve a problem. When people share their different tools with each other to come to an informed solution, they are likely to come to a better solution than if they had tried individually. Through the collaborative process of sharing tools to problem solve, people are given the opportunity to learn from one another, view and understand concepts in a way they could not have been able to before, come to more productive solutions, and widen their perspective. Page believes that the benefits of this exchange of diverse ideas have a place in how we operate in the real world. Existing literature on diversity in the classroom complements Page's ideas and shows that diversity in school often has benefits for everyone involved.

The third chapter uses New York State's English Language Arts (ELA) exam data in an attempt to find correlation between increased diversity and student proficiency. Data from the state's website provided scores and demographic details about every

school that had students in grades 3-8 that sat for the test. Using regression analysis, I attempt to find correlation between diversity and scores while accounting for things like school size and the concentration of poverty at the school. The results show that high poverty, not diversity had the largest marginal effect on student proficiency. They also showed that the whiter a school's population was, the higher the school's proficiency would climb. This likely has something to do with how intertwined income and race are in the United States.

History and Policy

The racial disparities in American schools have been well documented since well before the 20th Century. For most of the history of the United States, when minority groups were allowed access to public schools they were separated by race; with the difference in quality of these schools varying throughout time and place. Until 1954, 17 states had legally segregated schools of supposedly equal quality. Boozer, Krueger, and Wolkon measured difference in segregated school quality using: expenditure per student, student to teacher ratio, and the length of the school term. They found that school quality for black students relative to white students declined between 1890 and 1910. In 1900, the percentage of white children enrolled in school was 53.6% compared to 31.1% of black children.¹ By 1915, the average student to teacher ratio in states with legal segregation was 60.8 for black children and 37.6 for white children.² Boozer et. al's data shows that until 1960, there was a strong negative correlation between the number of

¹ Thomas D. Snyder, ed., "120 Years of American Education: A Statistical Portrait," *National Center for Education Statistics*, last modified January 1993, <https://nces.ed.gov/pubs93/93442.pdf>.

² Boozer, Krueger, and Wolkon, "Race and School," 282.

black students in a state with segregation and the ratio of student teacher ratios of white schools compared to student teacher ratios in black schools.³ Their findings show that school quality for black students relative to their white counterparts increased between 1925 until the Great Depression.⁴ However, the enrollment gap between black and white children was steadily closing with white children being enrolled at a rate of 75.6% and black children enrolled at a rate of 68.4% by 1940.⁵

While schools were legally integrated in 1954, the distribution of race in schools did not always suggest it. Local governments began to make creative efforts to keep their schools segregated while complying with the law through means of irregular zoning, vouchers, charter schools, and placement boards. In their paper, Boozer et. al created a cumulative distribution function that shows the concentration of students by race in schools. The conclusion from the function is that in the 1989-1990 school year about 30% of black or Hispanic students attend schools with a 95% non-white population while over 30% of white students attended schools with less than 5% non-white peers. The same year, data from The National Center for Education Statistics showed disparities between white, black, and Hispanic students on proficiency exams in reading, writing, mathematics, and science. White students outperformed black and Hispanic students in every subject and age group by a margin of at least 20 points in all but two instances.⁶

³ Boozer, Krueger, and Wolkon, "Race and School," 287.

⁴ Boozer, Krueger, and Wolkon, "Race and School," 269.

⁵ Snyder, "120 Years.", 14.

⁶ . Thomas D. Snyder, ed., "120 Years of American Education: A Statistical Portrait," *National Center for Education Statistics*, last modified January 1993, <https://nces.ed.gov/pubs93/93442.pdf>.

Before 1954, 17 states had the legal ability to segregate schools by race. Under the 1896 *Plessy v. Ferguson* decision, states were allowed to maintain separate public facilities so long as they were equal in quality.⁷ In 1954, Oliver Brown filed a suit against the Board of Education of Topeka, Kansas on the grounds that separate schools were inherently unequal⁸. The court agreed with Brown, ruling unanimously that separate schools were unequal and requiring schools integrate “with all deliberate speed.” As monumental as the *Brown v. Board of Education of Topeka, Kansas* was for the history of racial disparities in this country, it had a rather disappointing effect when it came to real world application. The open ended nature of the phrase “with deliberate speed” combined with the dissatisfaction many people had with the court ruling led to public unrest and uncooperative behavior on the part of the state to make any effort toward integration. The ruling resulted in states becoming far more hesitant to collect and report school data by race, making it harder to judge the differences in school quality. The attitude was that because the schools were supposed to be one integrated system, data did not need to be reported on the basis of race. Disaggregating data to put people into subgroups allows institutions to better understand and serve the unique needs of the population. Problems that may exist for certain demographics can be masked by the aggregate findings. This underreporting of school data also made it difficult for legal action to be taken against states who were not complying with school integration due to

⁷ *Plessy v. Ferguson*, 163 U.S. (May 18, 1896). Accessed December 17, 2017. <https://www.oyez.org/cases/1850-1900/163us537>.

⁸ *Brown v. Board of Education of Topeka, Kansas*, 347 U.S. (May 18, 1954). Accessed December 17, 2017. <https://www.oyez.org/cases/1940-1955/347us483>.

lack of evidence.⁹ For this reason and others, many schools remained segregated until as long as 1964.

After the *Brown v. Board of Education* decision, it was illegal for school districts to operate racially segregated schools. However, this did not hinder the ability of racists to repackage segregation into something more tolerable. For years after the ruling, states, school boards, private citizens, and politicians did what they could in order to keep the schools truly separated through “Massive Resistance”. Some school districts, Prince Edward County, Va, for example founded segregation academies or offered vouchers to encourage white flight away from newly integrated schools. Concerned citizens of the county pooled community funds to create a white only private school while the district handed out private school vouchers with the ability to determine eligibility on an individual basis. Prince Edward County would go on to become an important example of Massive Resistance as it made many types of attempts at maintaining segregation. States created Pupil Placement Boards to maintain the least amount of integration possible by controlling the placement of individual students. School boards and municipal authorities took advantage of their powers of allocating resources to dismantle and defund integrated public schools through voucher systems and tax tricks rather than comply.¹⁰

⁹ Boozer, Krueger, and Wolkon, "Race and School," 270.

¹⁰ Chris Ford, Stephanie Johnson, and Lisette Partelow, "The Racist Origins of Private School Vouchers: Center for American Progress," Center for American Progress, last modified July 12, 2017, accessed November 20, 2017, <https://www.americanprogress.org/issues/education-k-12/reports/2017/07/12/435629/racist-origins-private-school-vouchers/>

The decision demanded schools integrate “with all deliberate speed”, but did not give a specific timeframe for the school districts to do so. This legal grey area led to years of legal trouble between school districts and the public it was trying to disenfranchise. Harry F. Byrd Sr., a Senator representing Virginia during the time led a movement against integration called the “Southern Manifesto” and managed to pass a law called “Massive Resistance” that gave the state of Virginia certain abilities to maintain segregation in schools. Massive Resistance was a group of laws passed in 1956 that allowed for unrestricted cuts in funding at the state’s discretion, created placement boards to decide where students could go to school, and offered tuition grants with arbitrary criteria for white families who did not want to integrate.

In response to forced integration, many southern schools developed Pupil Placement Boards to maintain control of the demographics in their public schools. The first state to do so was North Carolina in 1955. Virginia followed suit in 1956. These boards kept black students from transferring to white schools by making them apply to transfer in and ultimately rejecting the applications. The criteria for these applications varied by district and included things like if the district believed the student had the psychological qualifications to handle the school, the effect the pupil might have on other students as well as the rigor of the school, whether the admission would disrupt community peace, the potential for economic retaliation from the community, and finally “other relevant matters”.¹¹ This criteria was broad and could vaguely be applied to any

¹¹ Ralph Lee Smith, "The South's Pupil Placement Laws: Newest Weapon Against Integration," *Commentary Magazine*, October 1, 1960, accessed November 20, 2017, <https://www.commentarymagazine.com/articles/the-souths-pupil-placement-lawsnewest-weapon-against-integration/>.

student to bar them from admission to public schools. Appeals of the placement board's decision often took months and were almost always negative. If the student chose to further pursue the matter, they would be required to go to court and prove that the placement criteria was applied illegally, forcing them to prove that they were denied solely on their race.

In 1957, the constitutionality of the North Carolina placement laws was called into question and upheld, resulting in a green light from the courts to continue this kind of institutional discrimination. The state of Virginia had reviewed 500,000 black applicants for transfer by 1959, but did not identify a single student that met the criteria the state claimed it was upholding. That year, under threat of contempt by the judge, the Norfolk, Virginia school board was forced to accept four applicants from their files that suddenly fit their criteria. By 1960, Alabama, Arkansas, Florida, Louisiana, North Carolina, Tennessee, Texas, and Virginia, as well as the city of Atlanta, Georgia all had placement laws in effect. These states were able to maintain segregation in most schools, only creating token black populations when under scrutiny. In 1960, the states of Arkansas, Virginia, North Carolina, and Florida, only about 500 black students of these state's 800,000 black student population were integrated. The remaining states: Alabama, Georgia, Louisiana, Mississippi, and South Carolina had not one integrated student from their combined black student population of 1,400,000 children.¹² These placement policies were an incredibly effective way to legally keep schools segregated.

¹² Ibid

Prince Edward County, a centrally located county in Virginia, fought the Virginia NAACP for years as they refused to give an official date to the start of school integration. After the initial ruling and integration order, Prince Edward County's Board of Supervisors chose to revoke school funding rather than integrate their schools. For the 1955 school year, district funds were slashed from the requested nearly \$700,000 budget to the state minimum of \$150,000 for the year.¹³ The next major change made by the board was to distribute the funding monthly instead of annually. This way, they had better control of the allocation of funding as well as the ability to completely defund a school within a month's notice. The county now had a simple way to shut down schools at the slightest threat of integration without worrying about money that has already been spent.

After years of uncertainty, the 4th U.S. Circuit Court of Appeals ordered Prince Edward County to integrate its schools immediately. This turned out to be a breaking point as the county board responded by using their funding powers to close the doors on the county schools rather than integrate. The school board chose to not levy taxes for the 1959-1960 school year; doing away with the major source of funding for public schools. At the same time, the state of Virginia introduced a "tuition grant program" that offered private school vouchers to white families. The white community of Prince Edward County banded together to create the funds to build a private school of their own. Prince Edward Academy, the school created from the community effort, would become a model for how to legally segregate schools. The academy was a private institution, so it was

¹³ Ford, Johnson, and Partelow, "The Racist," Center for American Progress.

under no obligation to integrate. At the same time, tuition vouchers were given out for private schools with eligibility determined on an individual basis by the district. The individual basis made it rather easy to reject black families looking for tuition breaks in private schools. The vouchers given to white families made it possible for all the white children of the county to attend private school. By September 1959, the county board made the decision to shut down the county public schools completely. For the white community of Prince Edward County, this meant very little as they had a private academy to turn to. However, the black community had a very difficult time finding a reasonable alternative to provide their children with education. Black families who could get tuition grants could not find schools to take them and those who tried to attend another public school were often barred from attending majority white schools by the state's Pupil Placement Board. Those who could move out of the area did; but those who could not often were left without schools for their children effectively ending the formal education of many young black children in the county.

Years of discrimination and school closures led to protests around Prince Edward County well into the summer of 1963 when the Kennedy administration took notice of the unrest and the U.S. Department of Justice was administered to the area to look for a solution. By the end of the summer, black and white community leaders from within the county announced that they had come to a solution. Prince Edward Free Schools, private schools funded by private donors, opened up to educate black children living in Prince Edward County. The schools were free and while primarily intended for black children, white children were permitted to attend the school. White students who wanted to continue attending the segregation academy continued to receive vouchers as Prince

Edward County now had a white private school, integrated private schools, but still no public school.

In 1964, the Supreme Court ruled in the case of *Griffin v. County School Board of Prince Edward County* that while there were schools for all races in the area, Prince Edward County was still violating the Equal Protection Clause from the 14th Amendment. By keeping the public schools closed while subsidizing the education of students at white-only academies, the county, state board of education and state superintendent were denying black students the same educational opportunities as their white peers. Once again, the county technically obeyed the ruling while violating the principle of integration. The county reopened their newly integrated public schools, but the budget for these schools was a very small \$189,000 annually. Meanwhile, the tuition voucher programs still only available to white children in practice had a budget of \$375,000.¹⁴

The voucher fight continued with the case of *Griffin v. State Board of Education* in 1965. The U.S. District Court for the Eastern District in Virginia ruled that the state's tuition grant program would not apply to schools that were segregated. While not directly citing the Civil Rights Act of 1964, the court used it as a basis to determine that the Prince Edward Academy was subject to the integration laws because of the public funding it received. It was far easier to identify segregated schools than it was to determine if the state was purposely giving vouchers to whites only. Because it was illegal for the state money from vouchers to go to segregated schools, it became more

¹⁴ Ibid

difficult for many whites to keep their children in private schools. While Prince Edward County was only one school district, it reflected much of the nation's attitude towards school integration and established a long racist history of educational opportunities.

The Civil Right Act of 1964 was adopted, authorizing the federal government to file cases for school desegregation. Title VI of the Act made practices of discrimination illegal for any program receiving federal funds. Segregation however, can take many creative forms that the Act could not change. De jure segregation like neighborhood zoning and separate schools was in the past but it's strong legacy maintained certain facets of a Jim Crow society. While race based zoning was outlawed in 1917, racially divided neighborhoods would continue to exist all over the country. Special census information collected to show migration patterns through the early 1960's showed that young black Americans were leaving Southern cities for Northern cities, and moving into all selected cities at a much faster rate than whites.¹⁵ The improving economic status of black people in the 1950's created demand for housing coupled with the decrease in white urban populations laid the foundation for black communities to expand their neighborhoods. The special census information shows extensive black communities forming in cities like Buffalo and Cleveland, with substantial black residential areas growing in the other select cities.¹⁶ Black communities were expanding all over the united states, and with a growing community comes a demand for schools for children in

¹⁵ Reynolds Farley and Karl E. Taeuber, "Population Trends and Residential Segregation Since 1960," *Science*, n.s., 159, no. 3818 (March 1, 1968): 953, <http://www.jstor.org/stable/pdf/1723557.pdf>.

¹⁶ Farley and Taeuber, "Population Trends," 954.

the neighborhood to attend. Now that school districts were being redrawn on the basis of location, policy makers had an opportunity to create boundaries based on these highly segregated neighborhoods. In 1960, 14% of all public schools in Philadelphia had 99+% black student bodies.¹⁷ Of New York City's 570 elementary schools in 1960, 75 had enrollments of black and Puerto Rican students of 90% or more.¹⁸ Throughout the 1960's, school boards all over the country were embattled in legal cases claiming that they had drawn irregular boundaries with the intent to segregate the races by their neighborhoods. In *Northcross v. Board of Education of City of Memphis*, the appellant's claim that when the board went from operating a dual school system to a desegregated district, the boundaries were drawn irregularly as to preserve maximum segregation.¹⁹ Dean of LeMoyne, College Floyd L. Bass, testified in this case claiming that of the roughly 40 schools in the area, the current zoning plan by the board would leave 39 of the schools almost completely white. The court found Dean Bass' argument persuasive and agreed that the board's zoning plan as it was maintained segregation, but did not come to a conclusion that the zoning was done purposefully by the board.

Coleman found that nationally, United States schools had become increasingly desegregated between 1968 and 1972.²⁰ However, Coleman notes that the national average does not show the variability of regional desegregation. The South East saw a dramatic drop in the school segregation rate going from the highest instance of

¹⁷ 1. Will Maslow, "De Facto Public School Segregation," *Villanova Law Review* 6, no. 3 (1961): 355, <http://digitalcommons.law.villanova.edu/vlr/vol6/iss3/2>

¹⁸ Maslow, "De Facto," 354.

¹⁹ *Northcross v. The Board of Education of City of Memphis*, 333 F.2d (6th Cir.). Accessed December 3, 2017. <https://www.leagle.com/decision/1964994333f2d6611856>

²⁰ James S. Coleman, "Recent Trends in School Integration," *Educational Researcher* 4, no. 7 (1975): 7, <https://www.jstor.org/stable/pdf/1174846.pdf>.

segregation to the lowest²¹, largely because it had the largest black population in the United States. Meanwhile the Mid-Atlantic and New England regions saw slight increases in segregation. In this paper, both segregation within the district as well as segregation caused by school boundaries were measured. School boards and policy makers were starting to be pressured into creating solutions for desegregation. In 1969, The National Association for the Advancement of Colored People won a case against the Charlotte-Mecklenburg school board; implementing a busing system to diversify the elementary schools. Black students from Charlotte were being bused to suburban schools while white students from the suburbs were being sent to attend city schools. The outrage in the Charlotte area was so severe that the judge who handed down the decision became a pariah and the school board abandoned its busing plan as the rioting proved busing “burdensome” The Supreme Court upheld the decision in 1971 and busing was a part of the Charlotte-Mecklenburg school system until 2002.

The most notable case of busing as a desegregation effort took place in Boston, Massachusetts. During the 1972-1973 school year, over 80% of black public school students in Boston attended schools that were majority black.²² In 1973 Federal Judge Arthur W. Garrity ordered the Boston school system desegregated and created a plan to bus 18,000 students around the city to achieve the desired racial balance. Of the city’s white population, the working and lower-middle class students were being bused at disproportionately higher rates than their suburban white peers.²³ Of greatest controversy

²¹ Ibid

²² Simon Hall, "Protest Movements in the 1970's The Long 1960s," *Journal of Contemporary History* 45, no. 4 (October 2008): 658, <http://www.jstor.org/stable/pdf/40543228.pdf>.

²³ Ibid

was the pairing of Roxbury High School, located in the heart of Boston's black neighborhood, with South Boston High School, which was predominantly Irish and working class. Those with anti-busing sentiments felt that busing was an assault on their freedoms. Incensed by the busing plan and encouraged by quite a few politicians, anti-busing activists began to organize. From 1974 to the end of the decade, Boston was a hotbed of riots and protests centered around busing. Some activists took to civil disobedience, such as the 34 person sleep in intended to disrupt a conference of mayors held at the Boston Sheraton in July 1975.²⁴ Many more protesters, however, turned to violence instead. The Boston Globe, a paper that had been accused of supporting busing, became reluctant to even report on the busing controversy after it saw its windows shot in and trucks hijacked and dumped in Boston harbor. White protesters broke through police barriers to attack full school buses, students were clubbing each other and bringing firebombs school, and men were being dragged from their cars and beaten solely for being black in Boston. Black Bostonians did not necessarily like busing, but acknowledged that in a city where neighborhoods were highly segregated, busing was a means to quality integrated education for their students. The police were often of little help, staging sick outs rather than do their job. Just days before they were due to protect students for the opening of the school, 120 Boston police officers called in sick ahead of the protests, prompting the deployment of 600 National Guardsmen to Boston.²⁵ In 1975, Judge Garrity had the school administration fired and the school in the hands of the court. The violence continued on both sides for years, culminating in 1979 when Darryl

²⁴ Hall, "Protest Movements," 660.

²⁵ Jane M. Hornburger, "Deep are the Roots: Busing in Boston," *The Journal of Negro Education* 45, no. 3 (Summer 1976): 244, <http://www.jstor.org/stable/pdf/2966901.pdf>

Williams, a football player from Jamaica Plain, being shot and paralysed by a white teenaged sniper while on the field. The busing continued and violence lessened as this chaotic decade came to a close. In 1987, control of Boston schools was given back to the School Committee by the Supreme Court who believed the committee to be truly committed to desegregation. In 1988, Mayor Raymond Flynn introduced a new busing program called Controlled Choice based on a busing plan implemented in Cambridge, MA. Controlled Choice divided the city into 3 geographical districts and one city wide district for magnet schools. Parents could send their children to any school inside their large district and high school students could attend any school in the city so long as it did not disrupt the demographics of the school.²⁶ Controlled Choice was heavily criticized by School Superintendent Laval Wilson and local leaders for lacking input of the community in development. The racial basis for school assignment was voted out of affect in 1999 and Controlled Choice still exists in Boston public schools today.

As the 20th century crept towards a close, segregation would once again be brought back into the spotlight. In 1991, for the case of *Board of Education of Oklahoma City v. Dowell* the United States Supreme court ended a federal desegregation order. While it was clear that schools would become segregated again, the court decided the district's unitary system met the requirements for the program to be dissolved.²⁷ Similarly in 1992, in the case of *Freeman v. Pitts*, the Dekalb County School System petitioned to be free from the court supervised desegregation orders it had been following since 1969.

²⁶ Luix Overbea, "After 14 Years, Busing in Boston Rolls to a Stop," *The Christian Science Monitor*, December 2, 1988, accessed December 3, 2017, <https://www.csmonitor.com/1988/1230/avisa.html>.

²⁷ *Board of Education of Oklahoma City v. Dowell*, 498 U.S. (Jan. 15, 1991). Accessed December 12, 2017. <https://www.law.cornell.edu/supct/html/89-1080.ZS.html>.

Despite the fact that allowing the district to have full control would allow for increased segregation of schools, the court allowed for the Dekalb County School System to regain full control determining “Where segregation is the product not of state action but of private choices, it does not have constitutional implications. It is beyond the authority and beyond the practical ability of the federal courts to try to counteract these kinds of continuous and massive demographic shifts.”²⁸ These decisions have precedent for other court ordered integration programs to be ended by reason that remaining segregation was the product of private choices and demographic patterns.

The modern era brought new challenges as immigrants from all parts of the globe were coming to the United States. The population of people who identified themselves as Hispanic or Latino in the United States grew 380% between 1968 and 2005.²⁹ Those who identify as Hispanic or Latino can be of any race, meaning segregation was no longer a black and white issue. According to the United States Census Bureau, 4.5% of the population identified as Hispanic or Latino in 1970.³⁰ By 2010, this figure jumped to 16.3% of the population identifying themselves as Hispanic or Latino.³¹ Because every child in the United States has the right to public education, this change in population would reflect in the population of students enrolled in public schools. From 1968 to 1999

²⁸ Freeman v. Pitts, 503 U.S. (11th Cir. Mar. 31, 1992). Accessed December 12, 2017. <https://supreme.justia.com/cases/federal/us/503/467/>.

²⁹ Gary Orfield and Chungmei Lee, *Historic Reversals, Accelerating Resegregation, and the Need for New Integration Strategies*, 15, August 2007, accessed December 12, 2017, <https://www.civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/historic-reversals-accelerating-resegregation-and-the-need-for-new-integration-strategies-1/orfield-historic-reversals-accelerating.pdf>.

³⁰ United States Census Bureau, comp., *US Population - 1940 to 2010* (United States Census Bureau), 10, https://www.census.gov/newsroom/cspan/1940census/CSPAN_1940slides.pdf.

³¹ *ibid*

the Hispanic student enrollment in American public schools increased by 218%.³² The American Latino population was first considered in cases of segregation in 1973 during the *Keyes v. School District No. 1, Denver, Colorado* case when the court recognized a need for desegregation measures specifically addressing the Latino student population while maintaining the legal differences of de jure and de facto segregation. This reaffirmation of the difference would however also make it harder for minority students to sue for further integration of schools. The rights to school integration for Latinos was rarely enforced and rather short lived. The Dowell decision in 1991 included Latino students who at the time already attended highly segregated Oklahoma City public schools that would no longer be forced to integrate. For the 1996-1997 school year, 74.8% of Latino students attended schools with a minority population of 50% or higher with 34.5% attending schools with minority populations of 90% or higher.³³ As this growing Latino population moved into American suburbs, the neighborhoods remained largely segregated. Data from the 1996-1997 school year showed that schools in these suburbs had an average minority population of between 60-64%.³⁴ Data from the same year also showed that the average Latino student attended schools where 46% of the student population was poor; compared to 18% for the classmates of white children.³⁵

In the United States, the government provides funding for schools by using local, state, and federal revenue. The responsibility of K-12 education falls on the shoulders of the state, so it is largely responsible for funding. The federal government began

³² NEWSEDITOR, "New National Study Finds Increasing School Segregation," Harvard Graduate School of Education, last modified June 8, 1999, accessed December 12, 2017, <https://www.gse.harvard.edu/news/new-national-study-finds-increasing-school-segregation>.

³³ NEWSEDITOR, "New National," Harvard Graduate School of Education.

³⁴ *ibid.*

³⁵ *ibid.*

supplementing school funding in 1965 with the enactment of the *Elementary and Secondary Education Act*. For the 2013-2014 school year, the 50 States and the District of Columbia collected \$623.2 billion in revenue for schools.³⁶ Of that amount, state and local government provided \$568.7 billion or 91.3% of all school revenues;³⁷ 45% coming from the local level and 46% coming from the state.³⁸ The national average expenditure per student that same year was \$11,066, with the low being \$6,546 in Utah and the high being \$20,577 in The District of Columbia.³⁹

Income segregation, closely tied to racial segregation, was beginning to enter into the conversation of divided schools in America. Since 1979, income inequality in the United States has been on the rise. Between 1979 and 2013, the after-tax income of households in the top 1% increased by 192%. In the same period, the after-tax income for the bottom 20% of households only grew by 46%.⁴⁰ As the distribution of national income changed across the nation, neighborhoods saw themselves changing too. The American middle class was beginning to shrink as more people saw themselves becoming either high or low income. Between 1991 and 2013, the amount of Americans in the middle class decreased from 62% -58%.⁴¹ Meanwhile, the number of people who are low

³⁶ U.S. Department of Education, *Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2013–14 (Fiscal Year 2014)*, by Stephen Q. Cornman and Lei Zhou (Washington, DC: National Center for Education Statistics, 2016), 1, <https://nces.ed.gov/pubs2016/2016301.pdf>.

³⁷ U.S. Department of Education, *Revenues and Expenditures*, 1.

³⁸ *Public School Revenue Sources*, March 2017, accessed December 16, 2017, https://nces.ed.gov/programs/coe/indicator_cma.asp.

³⁹ U.S. Department of Education, *Revenues and Expenditures*, 1.

⁴⁰ Congressional Budget Office, *The Distribution of Household Income and Federal Taxes, 2013*, by Congressional Budget Office (1996), 5, <https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51361-householdincometaxesonecol.pdf>.

⁴¹ Rakesh Kochhar, *Middle Class Fortunes in Western Europe*, 59, April 24, 2017, accessed December 16, 2017, <http://www.pewglobal.org/2017/04/24/middle-class-fortunes-in-western-europe/>.

or high income increased from 25-26% and 13-16%, respectively.⁴² This also had an effect on housing patterns as between 1980 and 2000 the number of middle income suburbs decreased by 15% as neighborhoods became increasingly high or low income.⁴³ Neighborhoods changing due to changes in income means there will also be a change in the demographics of public schools. From 1990 to 2010, income segregation between public school districts increased 15%.⁴⁴ Findings on school segregation are consistent with the data on neighborhood patterns; suggesting a move of lower and upper middle income households away from the middle rather than a segregation of low income families.⁴⁵ The implications of this change go beyond surface level diversity as much of school revenue comes from taxes levied on the local level, meaning some schools have likely seen a change in funding as income demographics shift.

As stated before, local funding for schools comes largely from property tax revenue taken from people who live within district boundaries. As the responsibility to fund schools has fallen more on the shoulders of the local government, the previously mentioned move away from middle class status and middle class tax plans has strained the budgets of low income schools. Low income neighborhoods have less land per person to tax and a higher concentration of people compared to wealthier areas. This means that the school districts that serve low income neighborhoods have more students but less resources to spread among them. Meanwhile, wealthy neighborhoods have less students

⁴² Kochhar, *Middle Class*, 59.

⁴³ Todd Swanstrom et al., "Pulling Apart: Economic Segregation among Suburbs and Central Cities in Major Metropolitan Areas," *The Living Cities Census Series*, October 2004, 1, accessed December 16, 2017, http://scholar.oxy.edu/cgi/viewcontent.cgi?article=1261&context=uop_faculty

⁴⁴ . Ann Owens, Sean F. Reardon, and Christopher Jencks, "Income Segregation between Schools and School Districts" (working paper, Stanford University, Stanford, CA, 2016), 25, accessed December 16, 2017, <http://cepa.stanford.edu/sites/default/files/wp16-04-v201605.pdf>

⁴⁵ *ibid.*

as well as more resources to spread among them. The high-low income achievement gap, defined as: the average achievement difference between a child from a family at the 90th percentile of the family income distribution and a child from a family at the 10th percentile”, reflects the previously mentioned changes in income inequality as well as the growing changes between school districts. For children born in 2001, the income achievement gap has grown 30-40% compared to children born 25 years earlier.⁴⁶

In 2002, President George W. Bush signed into law the *No Child Left Behind Act*. The Act was an update to the *Elementary and Secondary Education Act of 1965* that was meant to provide support for struggling schools. *No Child Left Behind* was intended to hold schools more accountable for student performance, specifically targeting the performance of English-language learners, special education students, low income, and minority students who typically trail their peers in achievement. The highest funded programs include: Title I Grants to Local Educational Agencies, Improving Teacher Quality Grants, Impact Aid, 21st Century Community Learning Centers, and English Language Acquisition.⁴⁷ Under the law, states must test their student’s proficiency in mathematics and reading from 3rd through 8th grade and again in high school. The schools must then report the results for the school as a whole and for the different subgroups of students. The law required schools to have all students meeting target proficiency on state tests by the 2013-2014 school year, but allowed states to determine what that target level would be.

⁴⁶ Sean F. Reardon, "The Widening Academic Achievement Gap Between the Rich and the Poor: New Evidence and Possible Explanations.," *Whither Opportunity? Rising Inequality and the Uncertain Life Chances of Low-Income Children.*,

⁴⁷ Clare McCann, "No Child Left Behind Funding," EdCentral, accessed December 16, 2017, <http://www.edcentral.org/edcyclopedia/no-child-left-behind-funding/>.

Schools track proficiency through a process known as Adequate Yearly Progress or AYP. If a school misses AYP goals two years in a row, it becomes known as a School in Need of Improvement or SINI. A SINI is required to submit a two-year improvement plan, work with local agencies on development, and provide students with the option to be transferred to a better performing school in the district. Under the law, there is funding available specifically for the purpose of helping a SINI meet the goals of their two year plan.⁴⁸ If a SINI fails to meet AYP goals for a third year in a row, it is required to provide state approved supplemental education services to low-income students in addition to the previous year's consequence.⁴⁹ If a SINI once again misses its AYP target for a fourth year in a row, it must amend its improvement plans with "corrective action." If the trend continues for a fifth year, the district and the state has a few options: close the school, turn the school into a charter academy, turn over administrative duties to the state or a private organization, replace most or all staff, and "other" restructuring. Furthermore, all schools with SINI designations lose 10% of their Title I funding which can mean a huge loss in school resources.

Funding is often a large criticism of *No Child Left Behind* because when it was not being used for punishment, there simply was not enough. Advocacy groups feel that Congress and the President left the law underfunded. The difference in authorization levels (the amount the government is allowed to spend) and appropriation levels (how much the government actually spends) was significant as the law does not require the

⁴⁸ Thomson Reuters, "What Happens When a School Fails to Make Adequate Yearly Progress Goals?," FindLaw, accessed December 16, 2017, <http://education.findlaw.com/curriculum-standards-school-funding/what-happens-when-a-school-fails-to-make-adequate-yearly-progress.html>.

⁴⁹ *ibid.*

federal government to appropriate funds at the maximum authorization levels. In 2007, only 51% of the authorized funds for Title I Part A Grants were actually appropriated to schools.⁵⁰ Essentially, Congress had required schools to put students through a lot of testing and submit plans for improvement but failed to provide the funds to accomplish what school improvement entailed; instead punishing the schools with further sanctions when they did not meet their goals.

By 2010, few schools had met their achievement goals. That year, 38% of schools had failed to meet their AYP.⁵¹ In 2011, President Barack Obama's Administration offered an alternative to the mandated consequences for states that have failed to meet their education goals. He introduced a system of waivers that allowed the states to have more flexibility with setting their own AYP and district redesign programs. In exchange for the waivers, states must either adopt the Common Core curriculum or have their state university system attest to the college and career readiness of their public education, identify and determine a plan for the 15% of schools struggling the most, and come up with general guidelines for teacher quality based on student scores. As of 2015, no states have reached 100% student proficiency set by the original *No Child Left Behind* standards.⁵²

Low income students in the United States are more likely to be assigned to inexperienced teachers or educators with no background in the subject they are instructing. According to data from the U.S. Department of Education's Schools and

⁵⁰ McCann, "No Child," EdCentral.

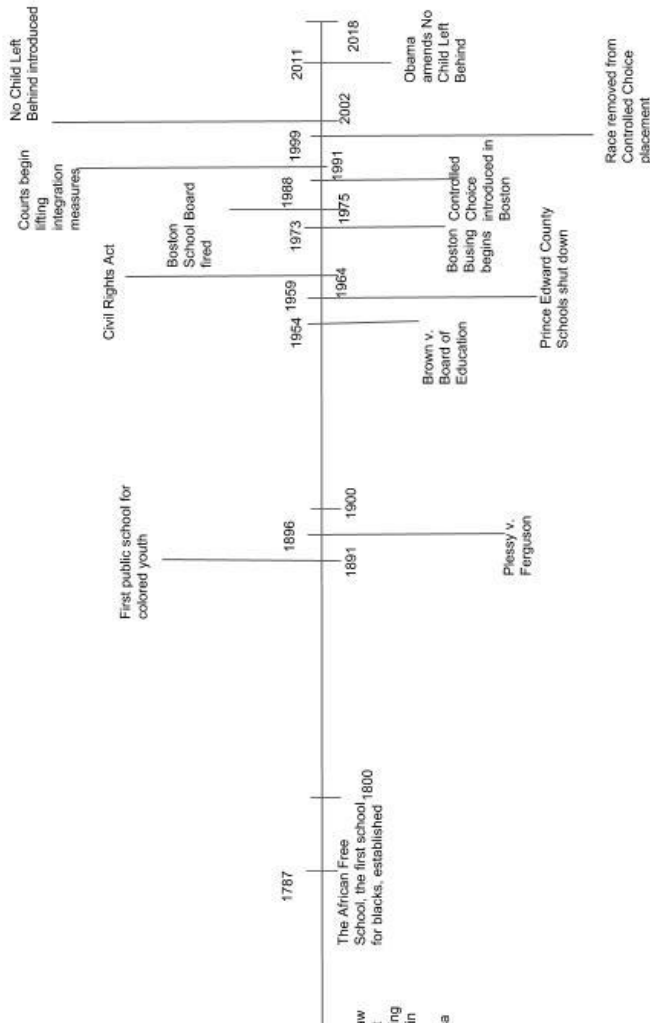
⁵¹ Klein, "No Child," Education Week.

⁵² Klein, "No Child," Education Week.

Staffing Survey (SASS) students in high poverty secondary schools are twice as likely as students from wealthier schools to have a core class with a teacher that has no background in the subject.⁵³ According to The Education Trust, this has an effect on how prepared students are in the classroom and in test taking. This disparity in teacher experience can reflect in the test scores of low income students. Because of the rules in place from No Child Left Behind, these lower scores can result in budget cuts, school takeovers, and school closings. Low income children are disproportionately assigned less experienced teachers which can result in the closing of educational opportunities as a punishment for taking a test they likely were not adequately prepared for. The sanctions from *No Child Left Behind* meant to support children in struggling schools instead penalized students for administrative issues that are out of their control.

⁵³ The Education Trust, "A decade after passage of No Child Left Behind, America's low-income students still disproportionately taught by out-of-field, inexperienced teachers," The Education Trust, last modified November 18, 2010, https://edtrust.org/press_release/a-decade-after-passage-of-no-child-left-behind-americas-low-income-students-still-disproportionately-taught-by-out-of-field-inexperienced-teachers-2

Timeline of Major Events from Chapter One



Diverse Tools and Where to Find Them

In his book *“The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies”* author Scott Page presents the reader with an unpacking of what he considers the diversity “Toolbox”. Inside the toolbox are frameworks for how diverse cognitive “tools” benefit the collective. When unpacked, Page presents the tools as: diverse perspectives, diverse interpretations, diverse heuristics, and diverse predictive models.

The first tool is everyone’s Diverse Perspective. According to Page, this is the way people represent situations and problems⁵⁴. He explains how many breakthroughs in physical science and technology are owed to someone having a perspective that allows them to look at a problem differently. The book gives a few great examples, my favorite being Mendeleev and the periodic table. Dmitri Mendeleev was a Russian chemist who was the first to organize the periodic table by atomic mass. At this point in time, atomic mass was irrelevant to scientists and there was no set way to organize the elements. Mendeleev choosing to organize the elements this way created the periodic table but also allowed for the further discovery of the elements missing. The main point of this chapter is that the right perspective can help find the most efficient solution. Most problems have multiple solutions with various levels of efficiency. Two people with different perspectives see a problem differently; they have different solutions. They are both right,

⁵⁴ . Scott E. Page, *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies* (Princeton, NJ: Princeton University Press, YEAR), 25

but one is better than the other. Now, the person with the less effective solution has seen a new way to solve the problem and can use it in the future to achieve better results. If the number of problem solvers were to increase, the group is now offered an array of solutions and can make even better choices. The implication is that when a group of people see a particular problem the same way, they are likely to be stuck on the same challenges and come to the same solutions. When people with different perspectives work together, they have the potential to come to better solutions faster and take the new solution with them should the problem arise in the future.

For example, a group of liberal arts students are having a wine and puzzle night and have just unboxed a beautiful 500-piece landscape. They are trying to decide how to best begin the puzzle. They begin putting the puzzle together by sorting and matching the pieces by color. This proves timely as the landscape is rather green and the friends grow frustrated. They will finish the puzzle, but at a very slow rate. However, someone suggests to put the puzzle together by looking at the shape of the pieces rather than color and then working inward from the flat edges of the puzzle. By connecting the edges first, they were able to distinguish the boundaries of the image and figure out where the rest of the pieces belong. While the result is the same no matter the method, one way saved the group a lot of time and they will likely repeat the method at puzzle nights in the future.

The third tool in the box are Diverse Interpretations. For the sake of clarity, I believe it is better to introduce the third tool before the second. This is the way people

categorize the things they perceive.⁵⁵ Instead of naming everything that is perceived, people organize things into categories. Two people can have the same perspective about an object, but can interpret it differently. For example, persons A and B are looking at a set of 12 blocks: 3 red circles, 3 blue circles, 3 red triangles, and 3 blue triangles. They both see the same dozen blocks, but A might choose to divide the blocks by shape while B may choose to organize by color. The blocks are the same and split into groups of 6, but organized differently. Each individual block does not have a name, just like individual perspectives and outcomes, but they all can fit into groups of things based on characteristics. This diversity in organization affects how people predict outcomes and make inferences when presented with a problem. When people see different patterns, they can share their different interpretations with the group. Now the group has the ability to compare the identified patterns and choose the one most relevant to the task at hand.

A television detective is trying to establish a connection feature between victims of a serial killer in hopes of stopping a future crime. At first, he believes the commonality is that they are all blond. This is proved wrong when a black haired victim appears. The detective then turns to eye color to link the victims, but is once again proved wrong. Then, his loose cannon partner considers that the similarity may not be physical at all. Upon looking into the daily routines of their victims, the detectives find that they all regularly grocery shopped at the same place on Thursday afternoons. The quick thinking detectives realize the criminal they are looking for is a cashier who regularly works on

⁵⁵Page, *The Difference*, 76.

Thursdays. The day is saved because while one person's perspective led them to find something physical in common, another considered categorizing them by routine.

The second is Diverse Heuristics, or the way people generate solutions to the problem in front of them. Page defines heuristics as “a rule applied to an existing solution represented in a perspective that generates a new (and hopefully better) solution or a new set of possible solutions”⁵⁶ Heuristics can be a range of general rules like turning off the water in the event of a basement flood all the way to methods of data analysis. Page says that heuristics must come with a perspective. A perspective on a problem is needed before a person can use heuristics. For a person to solve a problem using what they know, they first need the right perspective to bring the solution to fruition. Heuristics are how those perspectives are applied in the real world to create solutions. Perspectives are ways to see solutions while heuristics are ways of constructing solutions within the realm of possibility.

Let's say you are living in a rental home in an area that experiences all four seasons. As winter sets in, you notice that while the thermostat in your bedroom says the heat is on the space remains cold. Because of previous heating problems you have experienced, you assume that the problem would be with the wiring in the thermostat. However, when your landlord comes to fix the problem, she immediately goes to the basement to check on the breaker box. She finds that the switch on the circuit breaker responsible for the heat has been turned to the off position. She explains that the wiring in

⁵⁶Page, *The Difference*, 55.

the house is old, causing this to happen a lot. Her previous knowledge helped her fix the problem quickly; whereas you could have come to that conclusion eventually but may have put a hole in the wall first to explore the thermostat possibility.

The final tool is Diverse Predictive Models; the ways make people inferences about cause and effect. Predictive models are defined as “an interpretation together with a prediction for each set or category created by the interpretation”⁵⁷ People interpret the information given from their own diverse perspective and use their previous knowledge to predict the outcome. Even though people can perceive something the same way, their existing knowledge and experience can lead them to different predictions. Over time, people’s predictions can change. Page cites economic incentive or a desire for deeper understanding as reasons for improvements in people’s predictive model.

An example of this would be two friends in a car on their way to see a movie downtown. The driver plans on taking the main avenue through town, the driver knows it will take exactly 15 minutes to get to the theater but fears rush hour traffic will increase travel time and make them late. The passenger, a longtime resident of the area, suggests taking the backroads. While these roads normally take longer because they are less direct, the lack of traffic would allow them to recover any time potentially lost. Not only do these friends get to their movie on time, but the passenger has now shared knowledge about the best way to get to get downtown given certain conditions.

⁵⁷ Page, *The Difference*, 92.

From unpacking and attempting to understand how people use these tools, Page makes two claims: diversity beats homogeneity, and diversity beats ability. As stated before, people with the same perspectives often come to similar solutions. Diverse perspectives are often more useful than the same few perspectives from a homogenous group. Page also states that diversity has as much weight on problem solving as ability. The idea is that random collections of intelligent problem solvers can outperform an individual regardless of their talent.

The environment a person grows up in has an effect on how they interact with the world. These varied interactions create different perspectives as unique as the individual and environment they belong to. These differences in life perspective can influence how people pursue their education. Factors like poverty, race, and culture can have an impact on what a student can contribute to the classroom and what they can get from their education.

While the frequent test taking in the United States is often considered a burden by educators and parents, it does allow for a closer look at achievement differences by demographic. The differences in scores between demographics is known as the achievement gap. For example, on the National Assessment for Educational Progress (NAEP) 2011 Grade 8 Math Exam, black students scored 31% lower than white students on average.⁵⁸ Hanushek found that there is a significant link between racial density of a

⁵⁸ United States Department of Education, *School Composition and the Black-White Achievement Gap*, by NCES (Washington, DC: National Center for Education Statistics, 2015), 4, https://nces.ed.gov/nationsreportcard/subject/studies/pdf/school_composition_and_the_bw_achievement_gap_2015.pdf.

school and the achievement of black students. For black students, attending a school with a high percentage of other black peers harms scores. Racial density does not have the same effect on the scores of white children.⁵⁹ The results from a study on the racial achievement gap of kindergarteners support the idea that gaps by race/ethnicity are actually the result of higher rates of poverty and associated disadvantages among minority children than among their white counterparts.⁶⁰ They infer that the challenges minority children face as a result poverty directly impede their development and mediates for many factors that further the disparities in readiness to learn. Differences in both cognitive (reading, math, cognitive flexibility, and working memory) and non-cognitive (self-control, approaches to learning, internalizing problems, creativity, externalizing problems, and social interaction) skills were measured among cohorts. The findings were that students of lower socioeconomic status were less prepared in terms of these skills upon entering kindergarten. However, when these students attend schools in higher income neighborhoods, the benefits to their education that they receive are higher than if they had actually moved into the higher income neighborhood.⁶¹ In line with Page's book, the idea is that the students of lower socioeconomic status benefit from being in classrooms every day trading language and skills with students who have more advantages at home. While the lower income students may not have the benefits to

⁵⁹ Eric A. Hanushek and Steven G. Rivkin, "School Quality and the Black-White Achievement Gap" (working paper, October 2006), <http://www.nber.org/papers/w12651>.

⁶⁰ Emma Garcia, *INEQUALITIES AT THE STARTING GATE Cognitive and Noncognitive Skills Gaps between 2010–2011 Kindergarten Classmate*, June 17, 2015, accessed April 25, 2018, <https://www.epi.org/files/pdf/85032c.pdf>.

⁶¹ Heather L. Schwartz, "Housing Policy Is School Policy: Economically Integrative Housing Promotes Academic Success in Montgomery County, MD," in *The Future of School Integration*, ed. Richard D. Kahlenberg (Century Foundation, 2012), accessed April 26, 2018, https://www.researchgate.net/publication/234706018_Housing_Policy_Is_School_Policy_Economically_Integrative_Housing_Promotes_Academic_Success_in_Montgomery_County_MD.

education that come from living in a wealthy home, they benefit from being in proximity with students that do. Students with parents who have the resources and time to supplement their child's education pass those benefits along to their peers in everyday interactions while the increased parent involvement that comes with having a higher income parent population means more resources for the whole school.⁶²

A study on Canadian children found a negative association between socioeconomic disadvantage and life outcomes.⁶³ The life a person has at home before they enter the school system has an effect on how they will learn, this is called school readiness. School readiness is measured by: physical well-being and appropriate motor development, emotional health and a positive approach to new experiences, age-appropriate social knowledge and competence, age-appropriate language skills, and age-appropriate general knowledge and cognitive skills.⁶⁴ According to Ferguson, poverty is well known to have a negative effect on school readiness. There are six poverty related factors that contribute to school readiness: the incidence of poverty, the depth of poverty, the duration of poverty, the timing of poverty (the age of the child at the time of poverty), community characteristics (neighborhood crime, school, and poverty statistics) and the impact poverty has on the child's social network (parents, family, community support).

⁶² The Century Foundation, "The Benefits of Socioeconomically and Racially Integrated Schools and Classrooms," The Century Foundation, last modified February 10, 2016, accessed April 28, 2018, <https://tcf.org/content/facts/the-benefits-of-socioeconomically-and-racially-integrated-schools-and-classrooms/>.

⁶³ . Ferguson, S. Bovaird, and MP Mueller, "The Impact of Poverty on Educational Outcomes for Children," *Paediatrics & Child Health* 12, no. 8 (2007): accessed April 25, 2018, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2528798/>.

⁶⁴ Sharon L. Kagan, "Readiness Past, Present, and Future: Shaping the Agenda.," *Young Children* 48, no. 1 (November 1992):<https://eric.ed.gov/?id=EJ454923>.

Another study on Canadian children from lower income households found that they score significantly lower on measures of vocabulary and communication skills, knowledge of numbers, copying and symbol use, ability to concentrate and cooperative play with other children than children from higher income households.⁶⁵ By the time students are in the third grade, there is a clear cognitive difference between students from wealthy and low income neighborhoods.⁶⁶ The differences in cognitive and non-cognitive skills at the beginning of an education found by Garcia suggest that socioeconomic inequality affects all aspects of children's early development.

In the United States, income inequality has increased over the course of the last few decades. Due to the link between income and neighborhood, this means that neighborhoods become more segregated by income. This has had an effect on schools too as districts have seen a 15% increase in income segregation between 1990 and 2010.⁶⁷ The increased income segregation in schools effects some more than others. Black students in 1988 on average attended schools where 43% of the student body was low income; this number had increased to 59% by 2006.⁶⁸ Schools that high concentrations of disadvantaged children suffer from problems like: remediation, high student mobility,

⁶⁵ Eleanor M. Thomas, "Readiness to Learn at School Among Five-year-old Children in Canada," *Statistics Canada*, September 10, 2007, <https://www.statcan.gc.ca/pub/89-599-m/89-599-m2006004-eng.htm>.

⁶⁶ Marni Brownell, Noralou Roos, and Randy Fransoo, "Is the Class Half Empty?," *Choices* 12, no. 5 (October 2006): accessed April 28, 2018, <http://irpp.org/wp-content/uploads/assets/research/family-policy/is-the-class-half-empty/vol12no5.pdf>.

⁶⁷ Owens, Reardon, and Jencks, "Income Segregation,"

⁶⁸ Richard Rothstein, "The Racial Achievement Gap, Segregated Schools, and Segregated Neighborhoods – A Constitutional Insult," *Race and Social Problems* 6, no. 4 (December 2014): accessed April 28, 2018, <https://www.epi.org/publication/the-racial-achievement-gap-segregated-schools-and-segregated-neighborhoods-a-constitutional-insult/>.

more time spent on discipline, lack of parent involvement, and less exposure to mainstream society.⁶⁹

School integration can lessen the impact of neighborhood and other external effects on the scores of low income and minority students. A study from Montgomery County, Maryland found that students who lived in public housing but attended low poverty schools outperformed their peers who lived in public housing. The low income students in better schools were able to cut the achievement gap for math by half and the gap for reading by a third by the time they reached middle school.⁷⁰ The study also found that while disadvantaged students benefited from moving to areas with less poverty, they benefited more from attending schools with lower concentrations of poverty. It found that the school based economic integration in Montgomery County was twice as effective as neighborhood based economic integration in terms of low income student's educational outcomes.

For black students, being in a racially isolated classroom can have a negative effect on a student's score. Hanushek found that when there is a higher concentration of black students in a school, the scores of black students are reduced. However, this has no effect on the scores of white students in the class. Hanushek's estimate show that if the black student population was evenly distributed in public schools, the result would likely be an over 10% reduction in the black-white achievement gap.⁷¹

⁶⁹ *ibid.*

⁷⁰ Schwartz, "Housing Policy,"

⁷¹. Hanushek and Rivkin, "School Quality,".

While it has been established that the effect of integration on the scores of the majority students is insignificant, there are ways that they benefit from integration as well. According to a research brief by The National Coalition on School Diversity, majority students benefit from school diversity in many different ways. For example, when it comes to standardized tests in science and math, white students from diverse learning environments score better.⁷² They also receive the cognitive benefits from trading skills and ideas with students who may have a different perspective than their own. In Jefferson County, Kentucky ¾ of white students surveyed reported that being in a diverse classroom setting effected their “understanding of different points of view.”⁷³ The brief states that when learning is collaborative, meaning students work together, the benefits of diversity are maximized and white student achievement can increase. When students work together collaboratively, they have the opportunity to exchange ideas and teach each other something new. This exchange of perspectives between many types of people working in one group is exactly what Page was talking about in *The Difference*. For the students in Jefferson County, being in a classroom with people different from themselves prompted discussions and collaboration on subjects that they would not have had anywhere else. It also prepares them for the future as we move towards a more international world and job market. Majority students from diverse classrooms are found to have reduced prejudice, reduced likelihood of stereotypes, increased likelihood for friendship across racial lines, and higher levels of cultural competency. In a world where

⁷² Genevieve Siegel-Hawley, *How Non-Minority Students Also Benefit from Racially Diverse Schools*, October 2012, accessed April 28, 2018, <http://school-diversity.org/pdf/DiversityResearchBriefNo8.pdf>.

⁷³ *ibid.*

United States firms spend an estimated \$8 billion⁷⁴ annually on diversity training for their employees annually, these students will have a leg up.

Diversity can help firms be productive and innovative; this can influence how a firm chooses to operate. For example, Florida and Gates found that tolerant cities were more likely to host high tech industries. Firms looking for employees will naturally locate themselves where the ideal employee would live.⁷⁵ Their work states that diverse cities tend to attract the more creative types of people. When different types of people live in proximity, they can exchange their knowledge and skills. The proximity and exchange of knowledge between people makes everyone more tolerant of each other's differences. The growth of knowledge and tolerance leads to more diverse and creative people relocating to that area. The effects reinforce themselves and areas can become hotbeds for certain types of industry. Ottaviano and Peri found that this development of multicultural cities increases the consumption amenities of the natives and the influx of different people brings skills that are complementary to that of the natives.⁷⁶ Not only is the workforce diversified by this growing industry, but also the general population that includes schools. The increase in certain industries in the area can improve school quality through higher property taxes, leading to children who attended diverse, high quality

⁷⁴ Joanne Lipman, "How Diversity Training Infuriates Men and Fails Women," *Time*, January 25, 2018, accessed May 1, 2018, <http://time.com/5118035/diversity-training-infuriates-men-fails-women/>.

⁷⁵ Richard Florida and Gary Gates, "Technology and Tolerance: The Importance of Diversity to High-Tech Growth," *Research in Urban Policy* 9 (December 2003): accessed April 29, 2018, doi:10.1016/S1479-3520(03)09007-X.

⁷⁶ Gianmarco I.P. Ottaviano and Giovanni Peri, "The Economic Value of Cultural Diversity: Evidence from US Cities" (working paper, November 2004), accessed April 28, 2018, <http://www.nber.org/papers/w10904>.

schools one day entering the workforce with all the benefits diversity has to offer. Firms that know this can use the knowledge that diverse cities promote creativity to predict the best place to open an office. According to Page, there would be an economic incentive to this prediction as the firm can now have the best employees on their payroll making them more efficient and innovative.

The exchange of knowledge stemming from diversity can be seen at the classroom level as well. Virginia Maestri looked into the effects of non-native students on the scores of different cohorts of Dutch students. She writes that diversity can help the minority learn the dominant skills and cultures while enriching the learning environment for both majority and minority groups leading to higher productivity.⁷⁷ The increase in productivity is especially noted for She notes that having many and smaller minority groups has a greater benefit than just one large minority. While her data only finds significant benefits for the minority scores, the benefits to the majority (like increased productivity) she had described may not be able to be measured by student scores.

What all this tells us is that all students benefit in many different ways from increased socioeconomic and racial diversity in the classroom without making other students worse off. One analysis found that for math scores on all grade levels, students

⁷⁷ Virginia Maestri, "Can ethnic diversity have a positive effect on school achievement?," *Education Economics* 25, no. 3 (2007): accessed April 28, 2018, doi:10.1080/09645292.2016.1238879.

from schools that are more socioeconomically and racially diverse do better on average.⁷⁸ All students would be able to benefit from additions to their cognitive “toolbox”, cultural skills, and perspective. Some students, especially the disadvantaged ones, will see an additional increase in their test scores.

ELA Regression and Results

In this Chapter, I will be running a regression to find a relationship between ethnic diversity in the classroom and increased cognitive ability in students. The intention is to measure student exam proficiency as a result of ethnic diversity, the income level of the area, and the size of the school. 8th Grade ELA scores are an outcome of many inputs related to education. To understand how diversity works as a factor in education, the effects of things like poverty and class size must be taken into account as well. The outcome is represented by the percentage of students from each cohort who ranked proficient on the ELA. Observations and variables not relevant to the regression as well as observations that were empty were removed leaving 2125 schools. Here, ethnic diversity (*div*) in each school will be measured by how close the non-white and white population of each school is to being representative of the state.⁷⁹ This is done by finding the white population of test takers from each school and dividing it by the white population of the test takers from the whole state. If *div* is below 1, it means that non-

⁷⁸ Siegel-Hawley, *How Non-Minority*.

⁷⁹ Michael Hansen and Diana Quintero, "4 ways to measure diversity among public school teachers," *Brown Center Chalkboard*(blog), entry posted November 17, 2017, accessed April 28, 2018, <https://www.brookings.edu/blog/brown-center-chalkboard/2017/11/17/four-ways-to-measure-diversity-among-public-school-teachers/>.

white groups are overrepresented. If *div* is above 1, that means white students are overrepresented. The closer to 1 a school's *div* is, the closer it is to representing the state. Income matters because typically, schools in high income areas have more resources to give to students which often gives in those schools an advantage.⁸⁰ The size of the school is important as well because schools with large populations often struggle with having less resources, higher student to teacher ratios, and lower scores.⁸¹ Both income and school size however, are very much related to the ethnic makeup of classrooms. Students of color are more likely to attend schools with high instances of poverty.⁸² Attending a large school has a negative impact for both ethnic minorities and low income students.⁸³ Historically, classrooms have seen some segregation through direct and indirect means. However, this may be keeping students at a disadvantage as they may not have as much contact with people like them. This bar on the trade of knowledge would affect all school children by denying them the benefits of a more diverse classroom setting. My goal is to

⁸⁰ 1. Raj Chetty and John N. Friedman, *School Quality & Income Inequality*, 5, Summer 2011, accessed April 26, 2018, https://www.bostonfed.org/-/media/Documents/cb/PDF/Chetty_Friedman_early_childhood_ed.pdf.

⁸¹ Anna J. Egalite and Brian Kisida, "School size and student achievement: a longitudinal analysis," *Journal School Effectiveness and School Improvement* 27, no. 3 (2016): accessed April 26, 2018, <https://www.tandfonline.com/doi/abs/10.1080/09243453.2016.1190385?journalCode=nses20#abstract>.

⁸² Sean F. Reardon, Joseph P. Robinson, and Ericka S. Weathers, "Patterns and Trends in Racial/Ethnic and Socioeconomic Academic Achievement Gaps," *In H. A. Ladd & E. B. Fiske (Eds.) Handbook of Research in Education Finance and Policy (Second ed.)*, 2014, accessed April 26, 2018, <https://cepa.stanford.edu/sites/default/files/reardon%20robinson-cimpian%20weathers%20HREFP%20chapter%20april2014.pdf>.

⁸³ Kathleen Cotton, "School Size, School Climate, and Student Performance," *Close-Up* 20 (May 1996): accessed April 26, 2018, <http://educationnorthwest.org/sites/default/files/SizeClimateandPerformance.pdf>.

measure the effect of diversity on the scores of students to understand these benefits in action.

Data available from the New York State Department of Education allows for the correlation between diversity and student proficiency. The New York State 3-8 Assessment Database provides information about the Math and English Language Arts exam scores for all students in grades 3-8 who attend public school in New York. The data shows the proficiency breakdown of students in 17 groups: The data given splits the students into groups: All Students, Male, Female, American Indian or Alaska Native, Black or African American, Hispanic or Latino, Asian or Native Hawaiian, White, Multiracial, General Education, Students with Disabilities, Non-English, Language Learners, English Language Learners, Not Economically Disadvantaged, and Economically Disadvantaged, Not Migrant, and Migrant. The dataset is published annually on the New York State Education Department's website and for the purposes of this regression the scores used will be from the 2016-2017 assessments. The state collects this data in order to understand how to best serve different schools and demographics. If a certain group or area struggle in an area of the exams, identifying who specifically has the problem helps find a fitting solution. In an initiative to promote openness the state has published many public records and datasets online, including school information.

Student outcome will be represented by New York State 8th Grade English Language Arts (ELA) scores. Rather than the mean score of the school, I chose to focus on the percent of students at each school who scored proficient on the exam (*totalpctpro*).

While high scores are good measures of individual student success, when the goal is an equitable education, the focus should be on benefitting the most children possible. Using the school's rate of proficiency better reflects the benefits spread across the school population. In New York, ELA proficiency means scoring on performance level 3 or 4 on the exam. This level of proficiency means that students are on track with the Common Core Learning Standard for the ELA at their grade level. So to measure the outcomes for each school, I will use the percent of students at each school who have scored at level 3 or 4.⁸⁴ Reaching Level 3 means that "Students performing at this level are proficient in standards for their grade. They demonstrate knowledge, skills, and practices embodied by the New York State P-12 Common Core Learning Standards for English Language Arts/Literacy that are considered sufficient for the expectations at this grade."⁸⁵ The exams for each grade have different numbers of total points possible ranging from 402 to 428. For 3rd through 6th grade students, proficient means scoring above 320 on the exam. For 7th and 8th graders the necessary scores are 318 and 316, respectively.

This exam was chosen for this measurement because I believe it best reflects the benefits to student's cognitive abilities that come from learning in a diverse setting. The exam requires students to answer comprehension questions based on short passages and write responses to open ended questions based on stories, articles, or poems that they read or listen to. 8th Grade was chosen as the benchmark year because the effects of

⁸⁴NYSSED, "Definitions of Performance Levels for the 2017 Grades 3-8 English Language Arts Tests," chart, NYSED, July 7, 12, accessed April 26, 2018, <http://www.p12.nysed.gov/irs/pressRelease/20170822/documents/ScaleScoretoPerformanceLevelELA.pdf>

⁸⁵ *ibid.*

diversifying a classroom can be best seen by that time.⁸⁶ While intelligence and cognitive ability cannot always be measured by standardized testing, this exam requires students to make inferences and understand context which provides a good point of view to understand the cognitive effects of diversity.

Poverty, or the lack thereof, can be more difficult to measure in a school district. Income data by school district is not readily available; so for the purposes of this regression, I will be using the percent of students from each school who sat for the test and were designated by the state as Economically Disadvantaged (*pov*). The state determines this status by family enrollment in economic assistance programs like: free or reduced-price lunch programs, Social Security Insurance (SSI), Food Stamps, Foster Care, Refugee Assistance (cash or medical assistance), Earned Income Tax Credit (EITC), Home Energy Assistance Program (HEAP), Safety Net Assistance (SNA), Bureau of Indian Affairs (BIA), or Family Assistance: Temporary Assistance for Needy Families (TANF).⁸⁷ This also gives us an idea as to how much money the school has to spend on its students as school funding comes from property taxes and low income neighborhoods typically have lower property taxes. While this measure may have the potential to be imperfect due to the nature of the program, income and poverty related

⁸⁶Heather L. Schwartz, "Housing Policy Is School Policy: Economically Integrative Housing Promotes Academic Success in Montgomery County, MD," in *The Future of School Integration*, ed. Richard D. Kahlenberg (Century Foundation, 2012), accessed April 26, 2018, https://www.researchgate.net/publication/234706018_Housing_Policy_Is_School_Policy_Economically_Integrative_Housing_Promotes_Academic_Success_in_Montgomery_County_MD.

⁸⁷NYSED, "GLOSSARY OF TERMS - REPORT CARDS DATA," New York State Education Department, accessed April 26, 2018, <https://data.nysed.gov/glossary.php?report=reportcards>.

measurements are typically not found by school district making it the best available option.

Enrollment, or the number of students in a class, matters because the number of pupils affects the way resources are allocated to students. To measure class size, I will be using the number of 8th grade students at each school who have taken the exam (*schooltotal*). Because the exam is mandatory for all New York students who have been in school in the United States for over a year, this gives us a good estimate of the general student population. This cannot accurately measure the number of students inside each individual classroom, but can give a rough estimate as a brick and mortar school can only have so many classrooms. Knowing how many 8th grade students took the test over all can clue us into how many students are divided into classrooms. Larger schools will likely have more students per classroom and spread resources differently.

The data set includes the number of students from various ethnic groups that sat for the test. Because the test is mandatory for public school students in New York State, this will give us a good picture of the ethnic makeup of each school.

The dataset also gives the statewide average for all these variables. The total number of 8th grade students who sat for the exam or *schooltotal* for the state is 137,565. The percent of 8th grade students in the state who are white is 36.88%, but seeing as the state represents itself, the div here is 1. 45% of the 8th grade test takers ranked proficient on the 2016-2017 ELA exam, meaning the *totalpctpro* for the state is 0.45. The number

of economically disadvantaged test takers in the state was 79,358, meaning the *pov* for the state is 0.58 or roughly 58% of test takers.

Variable	Average
<i>totalpctpro</i>	0.45
<i>div</i>	1
<i>pov</i>	0.58
<i>schooltotal</i>	137,565

I suspect that when controlling for the effects of class size and poverty, there will still be a significant correlation between student proficiency and diversity in the school. While these are not the only determinants of a student's score, I believe students who have the opportunity to meet students different from them have the added benefit of constant exposure to diverse ideas.

The model for my regression is below:

$$totalpctpro_j = \beta_0 + \beta_1(div_j) + \beta_2(schooltotal) + \beta_3(pov_j) + \varepsilon_i$$

The subscript *j* represents an individual school. β_1 is the coefficient for diversity and is the independent variable of focus for the purpose of this regression. The coefficient β_1 will show us the strength of the relationship between *div* and *totalpctpro*

Naturally, my regression will have some shortcomings. Poverty, for example, is difficult to measure on a school level. Income data is not typically organized by school district, meaning there had to be a stand in for income to represent the concentration of poverty in the area. The information provided by the dataset is very helpful, but there can be snags to using program enrollment data. While the data is probably close, the opt in nature of the assistance programs means that some struggling families may not be counted as they have chosen not to enroll. Class size, is another less solid measure. Schools are rather finite resources and the number of classrooms remains constant independent of how many children are enrolled. However, it is impossible to know how many individual classrooms every middle school has.

The model does not capture the full breadth of diversity in schools. Due to limitations of data and resources, the full diversity of each school is not shown. Non-white minorities are not one homogenous group and calculating diversity by lumping them all together ignores the potential differences between minority groups. Using this method, a school that is 80% non-white would be seen as not diverse while in reality there could be multiple evenly split ethnic groups within that large majority.

The model also does not take into account each school's expenditure per student, which affects the resources available to each student. While school size and the instance of poverty can be helpful clues to understand resource allocation, they are not perfect substitutes for expenditure data. As students who attend schools with more resources tend to outperform students at schools with less, this means the model may not be properly

accounting for something relatively important. Before doing the regression it is also worth noting the connection between expenditure and race. At the national average, American schools spend \$334 more on white students than non-white students each year.⁸⁸ This means that there may be a relationship between higher white populations in the school and higher test scores as a result of increased expenditure in my regression.

The results are represented by the following equation:

$$\text{totalpctpro}_j = .5051285 + .0206998(\text{div}_j) + -.1830398(\text{pov}_j) + 4.62 \times 10^{-6}(\text{schooltotal}_j) + 0$$

*subscript j indicates individual school

Linear regression

Number of obs = 2152
 F(3, 2148) = 72.86
 Prob > F = 0.0000
 R-squared = 0.0676
 Root MSE = .23226

totalpctpro	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
div	.0206998	.0046351	4.47	0.000	.01161	.0297896
schooltotal	4.62e-06	2.24e-06	2.06	0.040	2.14e-07	9.02e-06
pov	-.1830398	.0201836	-9.07	0.000	-.2226212	-.1434583
_cons	.5051285	.0129613	38.97	0.000	.4797105	.5305466

The marginal effect of diversity at the average is 0.02, meaning that for every 1-unit increase in diversity, student proficiency went up by 2.07%. The relationship

⁸⁸ Center for American Progress, "Students of Color Still Receiving Unequal Education," Center for American Progress, last modified August 22, 2012, accessed April 27, 2018, <https://www.americanprogress.org/issues/education-k-12/news/2012/08/22/32862/students-of-color-still-receiving-unequal-education/>

between diversity and proficiency is positive and significant with the coefficient of *div* at 0.02 with a p-value of 0.00. For poverty, the marginal effect on proficiency is -0.18; or for every 1-unit increase in poverty student proficiency falls by -18.3%. The relationship between poverty and total proficiency is unsurprisingly negative and significant with *pov* having a coefficient of -.18 and a p-value of 0.00. When it comes to class size, there is a marginal effect of 0.00000462 at the average. The relationship between class size and proficiency is small and positive, with *schooltotal* having a coefficient of 0.00000462 and a p-value of 0.040. For every 10,000 increase in the number of students, proficiency goes up by 4.62%. Total school size may have a positive effect on proficiency, but it does not appear to be that important. Marginal effects do not represent the causes that lead to scores but the correlation between scores and factors like class size, poverty, and diversity.

The Prob(F) of my regression is 0.0000, meaning it is highly unlikely that these results came out by chance. The R-squared of my regression is 0.0676 meaning that the variation in the independent variables explain roughly 6.8% of variation in test scores. This means that while some part of the student outcomes is explained by the independent variables, there are other factors at play. The root mean square error or MSE is .23226 meaning the data has a slight variance from the regression line.

In order to check my regression for heteroskedasticity, I used the Breusch-Pagan /

Cook-Weisberg *hettest* command in Stata. This returned the output $\chi^2(1) = 0.04$ with $\text{Prob} > \chi^2 = 0.5266$. This means my regression is unlikely to suffer from heteroskedasticity.

The results tell me that while not everything can be explained by the model, diversity and poverty do have an impact on student exam outcomes. Classrooms that represent the world students live in can help improve proficiency. The negative effect of poverty on performance was expected here. However, I did not expect it to be so large. The very small effect from *schooltotal* suggests class size may not be important. However, existing literature including what was mentioned above counter the notion that class size doesn't matter.⁸⁹

The importance of poverty came as no surprise as schools in low income neighborhoods do not have the same resources as a school in a wealthy neighborhood and an increase in the instance of poverty in the district would negatively impact student proficiency. It is important however, to note the correlation between race and poverty. Non-white children are more likely to live in poverty than white children in the United States.⁹⁰ In 80 of the 100 largest American cities, at least half of all non-white students attend majority low income schools.⁹¹

⁸⁹ CPE, "Class size and student achievement," Center for Public Education, accessed April 26, 2018, <http://www.centerforpubliceducation.org/research/class-size-and-student-achievement>.

⁹⁰ "Children in poverty by race and ethnicity," *Kid Count Data Center*, last modified September 2017, <https://datacenter.kidscount.org/data/tables/44-children-in-poverty-by-race-and-ethnicity#detailed/1/any/false/870,573,869,36,868/10,11,9,12,1,185,13/324,323>

⁹¹ Janie Boschma and Ronald Brownstein, "The Concentration of Poverty in American Schools," *The Atlantic*, February 29, 2016, accessed April 26, 2018, <https://www.theatlantic.com/education/archive/2016/02/concentration-poverty-american-schools/471414/>.

While my results show that increasing white students would improve overall proficiency, this result lacks a fair amount of context. First, existing children cannot simply be replaced by white children to increase overall proficiency. Second, the grouping of all non-white students lead to a very one dimensional measure of diversity. Due to the limitations in data, the five non-white ethnic groups New York uses were represented by one group. I think the lack of nuance in how diversity is defined created a bit of a problem in measuring how diversity could impact proficiency. At the same time, the results come as no surprise because on average, schools with high white populations have higher scores. This can be explained by the fact that schools with high white populations typically have lower poverty,⁹² more qualified teachers⁹³, better resources⁹⁴, and smaller class sizes⁹⁵. As *div* increased in schools, student proficiency increased. Because of the way diversity is measured here, this means that proficiency improves with the more white students a school has enrolled.

When it comes to class size, I believe the disparity between existing literature and the results of the regression come from lack of information in the data. The dataset gives the total number of students in each grade, but there is no way to know how many

⁹² *ibid.*

⁹³ Frank Adamson and Linda Darling-Hammond, *Addressing the Inequitable Distribution of Teachers: What It Will Take to Get Qualified, Effective Teachers in All Communities*, 1, December 2011, accessed April 26, 2018, https://edpolicy.stanford.edu/sites/default/files/publications/addressing-inequitable-distribution-teachers-what-it-will-take-get-qualified-effective-teachers-all-_1.pdf.

⁹⁴ Linda Darling-Hammond, "Unequal Opportunity: Race and Education," Brookings, last modified March 1, 1998, accessed April 26, 2018, <https://www.brookings.edu/articles/unequal-opportunity-race-and-education/>.

⁹⁵ *ibid.*

students are in each classroom. Using the total number of 8th grade students who took the exam to measure class size implies that all schools have roughly the same number of classrooms as that data is not available. The slight positive correlation may come from larger schools having more students meaning they have more potentially proficient pupils or the relation between class size and race. In predominantly non-white general education classrooms, class sizes are 80% larger overall.⁹⁶ Perhaps a better measure of how class size impacts proficiency would have been to use the teacher to student ratio off each school to see how resources are spread around.

When it comes to measuring output, I believe using the 8th grade ELA exam proficiency of each school was the correct choice. Using proficiency means that I can pay more attention to the total collective benefit rather than mean scores that may be increased by a few high achievers. The effects of diversity on student ability are more pronounced the longer students are exposed to the diverse environment⁹⁷; so choosing the last year these students take these exams means being able to hopefully find the largest effect on proficiency possible. The comprehension focus of the exam gives students more room to creatively apply their own ideas and skills to the problem than the mathematics exam would. As the ELA exam questions may not necessarily have one correct answer, students can choose from and demonstrate the most suitable original and learned skills to find a solution.

⁹⁶ibid

⁹⁷ Schwartz, "Housing Policy,"

Ideally, I would have used different measures for the other variables in my regression that may better show the connection between diversity and proficiency. For diversity, my ideal measure would have a way to include all 6 ethnic groups given in the 3-8 Assessment dataset. If everyone was properly counted, the true diversity of the population would could be measured and the coefficient would likely reflect that. While the percent of disadvantaged students representing poverty did a decent job at capturing the magnitude of the effect poverty has on proficiency, my results could be better if there was a school district level measure for poverty that did not require families to opt in to be counted. A better choice to represent the allocation of classroom resources than the total number of 8th grade students at each school would have been either the student to teacher ratio of classrooms or the average class size in each school. The weaknesses of my regression identified earlier in this chapter likely had a hand in my results being so inconsistent with my hypothesis. I believe that a better designed model using the types of data I previously mentioned in this paragraph would return results more consistent with the hypothesis that increased ethnic diversity in schools benefits students.

Conclusion

History shows that United States public schools have not been apt to change at the time of integration. Current data shows that in many places this is still the case. Post Brown vs Board of Education movements led by school boards like Massive Resistance were able delay integration efforts for years while de facto segregation maintained the legitimacy of irregularly but purposefully drawn districts. Policy to alleviate segregation

and the problems it causes frequently receives pushback at implementation or reversal when the problem has been deemed solved. These policy reversals along with the increasing growth of income inequality in the United States have seen schools become more segregated leading into the 20th Century.

In his book, Scott E. Page lists the four cognitive tools that we use and share in collaborative work environments. Our own diverse perspectives, interpretations, heuristics, and predictive models inform everyday decision making and allow us to come to what we know as the best solution to a problem. When there are more people with different ideas to share, the number of solutions to choose from grows and it is likely that they will come to a better solution compared to a person working alone. The same is true for schools as students from all groups show that collaborative learning allows for a better exchange of ideas, perspectives, and problem solving methods.

The results of the regression using ELA exam scores showed that the higher the white population of a school is, the more proficient the student body is. The results also show that the concentration of poverty in a school has a large negative effect on student proficiency. The limitations of data meant that diversity was measured in one dimension and very closely tied to income. This proves problematic as policy cannot and should not make schools whiter or richer in order to provide an equitable education for all children.

Diversity in the classroom has very clear benefits to the minds of young people, but the implementation of diversity in the classroom through policy has left much to be

desired. Historically, it seems like our approach to school integration has lacked some very necessary context. To come to a real solution to school segregation there has to be an understanding of the United States' history of segregated education, racially zoned neighborhoods, current policy, current culture and demographics, and the intersections of things like race, neighborhood, income, and educational attainment. My regression showed the significant impact of poverty on scores and previously mentioned research indicates that minority students are more likely to attend schools impacted by poverty. The intersection of race and income is incredibly important and a firm understanding of it would likely show that the problems of school quality and segregation by ethnicity and socioeconomic status are deeply related. Present day policy to treat this will need to explicitly address segregation and it's many factors in order to truly solve the problem we have in schools and spread the benefits of diversity to all students.

In 2014, a study from UCLA showed how lacking in diversity many New York Public Schools were. It found that in 2010, NYC public schools were on average 38% less diverse than the total metropolitan area.⁹⁸ In 2015, the School Diversity Accountability Act passed in New York City required the New York City Department of Education to release demographic information about schools and programs offered in the city. All schools must report on the number of students in each grade that require special education and free or reduced lunch. All middle and elementary schools must also report on the number of students who are living in temporary housing, English language learners, and attending schools outside of their home district by grade.⁹⁹ Two years later

⁹⁸ Kucsera and Orfield, *New York*.

⁹⁹ 1. Sabrina Rodriguez, "De Blasio Signs Law Requiring New School Diversity Reports," Chalkbeat, last modified June 17, 2015, accessed February 13, 2018,

in 2017, New York City announced its intention to better integrate public schools in terms of race and socioeconomic status. The “Diversity in NYC's Public Schools” plan had three goals by 2022: Increase the number of students in a racially representative school by 50,000; Decrease the number of economically stratified schools by 10% (150 schools); and Increase the number of inclusive schools that serve English Language Learners and Students with Disabilities.¹⁰⁰ In New York City, black and Hispanic students make up 70% of the total student population.¹⁰¹ According to the city’s diversity plan, schools should represent the population by having a student body that is between 50-90% black or Hispanic.¹⁰² As of the release of the plan, 30.7% of the schools in New York City were racially representative of the student population.¹⁰³ Meanwhile, 70.6% of city schools were economically stratified in 2017.¹⁰⁴ What is most interesting about the 13 page release of the plan may be the absence of the words segregation and integration.

<https://www.chalkbeat.org/posts/ny/2015/06/17/de-blasio-signs-law-requiring-new-school-diversity-reports>

¹⁰⁰ . New York City Department of Education, "Equity and Excellence for All: Diversity in New York City's Public Schools," news release, June 6, 2017, accessed February 13, 2018, http://schools.nyc.gov/NR/rdonlyres/D0799D8E-D4CD-45EF-A0D5-8F1DB246C2BA/0/diversity_final.pdf.

¹⁰¹ *ibid.*

¹⁰² *ibid.*

¹⁰³ *ibid.*

¹⁰⁴ *ibid.*

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