

Assessing Equity in Boston High School Choice Model

A Case Study of Charlestown High School and the Charlestown neighborhood

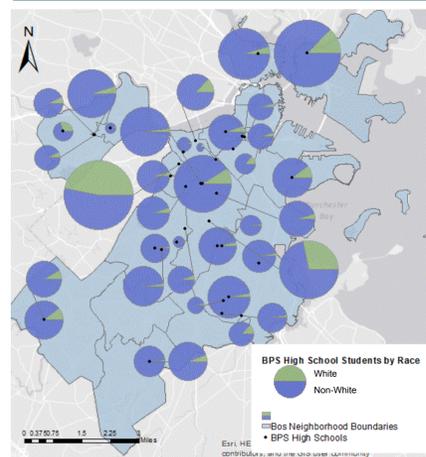
Introduction

“School Choice” is a common concept included in conversations around education reform today. While supporters tout the benefits of a “free market” model, options for youth, and a strategy to desegregate schools in areas with high residential segregation, critics cite the ways in which this movement exacerbates inequalities, creates a divided school system and breaks strong community ties. The Boston Public School (BPS) system currently utilizes a complex school-choice model that factors in student choices, sibling priority (having multiple siblings in one school), a two mile “walk zone” priority and any admissions requirements of specific schools.

My research question is: does this system promote integration and increase access for all students or does it exacerbate inequalities and school segregation? In a city that is 53% White, the public school system is only 14% White, with over 6,000 White students attending schools outside of the public system. Around 50% of students in BPS are also economically disadvantaged.

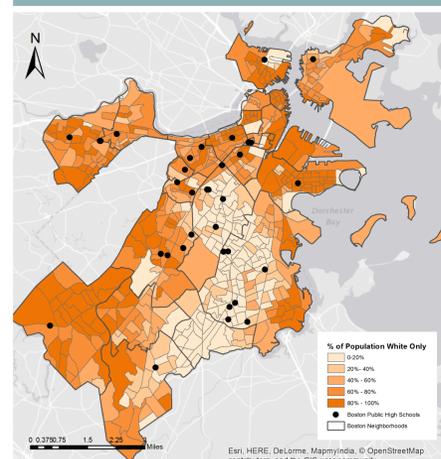
Focusing on the Charlestown neighborhood, and Charlestown High School (CHS) I am looking at the home locations of Charlestown students, their access to transportation, their access to the 2-mile walk-zone priority for BPS high schools, and where students who live in the Charlestown community themselves are attending school, to assess whether this system of choice increases equal access. Given that the community of Charlestown is around 70% White and has an average income (combined 2008-2012) of \$89,105 compared to a student body at CHS that is 6% White and 87.5% low-income, this comparison will serve as the data to answer questions about desegregation, and access for all students in Boston.

High School White/Non-White Ratios

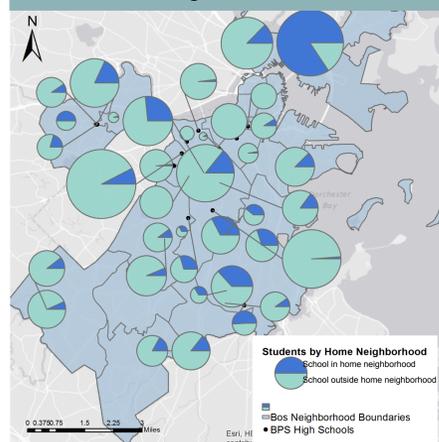


self are attending school, to assess whether this system of choice increases equal access. Given that the community of Charlestown is around 70% White and has an average income (combined 2008-2012) of \$89,105 compared to a student body at CHS that is 6% White and 87.5% low-income, this comparison will serve as the data to answer questions about desegregation, and access for all students in Boston.

% of White Population in Boston



Ratio of Students Attending School in Home Neighborhoods



Methodology

High School White/Non-White Ratios and Ratios of Students Attending School in Home Neighborhoods: The racial data by school as well as neighborhood breakdown for each school came directly from BPS. After geocoding the addresses of each school, I utilized a join and symbology to create pie charts of racial data for each school. As for neighborhood data, I reorganized data to only include the number of students from the neighborhood the school was located in, as well as the total student population to then create pie charts through symbology.

% of White Population in Boston and CHS Distribution in Charlestown: Social Explorer provided the % White Only data for each census block in Boston and the school points were geocoded using school addresses. To create the inset map of Charlestown, I created a shapefile of Charlestown (using select by attribute) and clipped the map of % White in Boston.

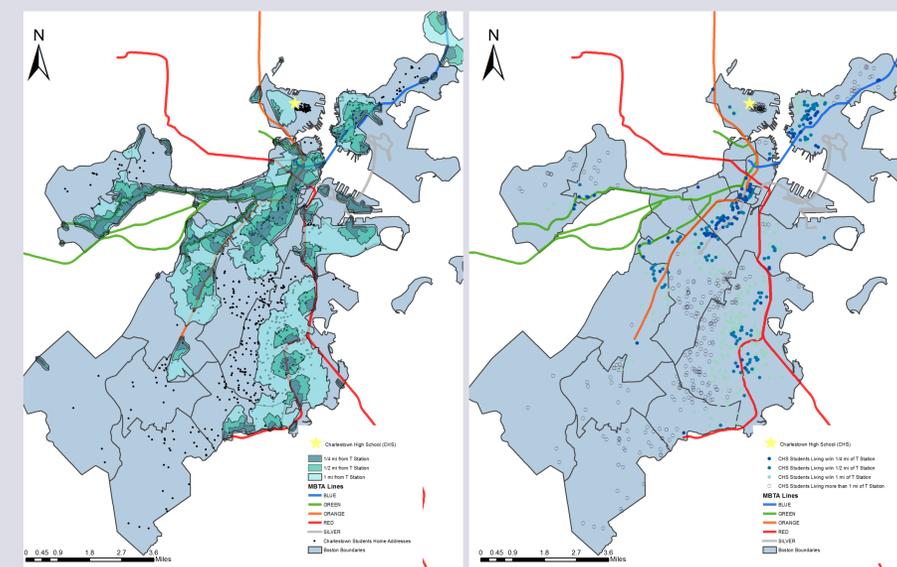
Transit Accessibility for Students Attending CHS and CHS Students and Walk Zones: These maps were both created using network analysis service area to analyze the walking distance from MBTA stops and BPS high schools. The T lines and stops were an existing shapefile in MassGIS. Using Tiger streets data, I was able to determine different service areas around these points. Using “selection by location,” I was able to distinguish points within or outside of the mapped service area.

Results and Discussion

This combination of maps suggests that the current model of school choice in Boston does not lead to equitable outcomes for students. The first maps highlight the contrast between a large White population in Boston and a majority non-White school system. Exam schools such as Boston Latin School, with a student body of 48% White and 33% low-income students, serve as outliers to this trend. Clustering in Charlestown shows residents attending CHS are living in the small non-white section of the neighborhood and other Charlestown residents are attending some of the top ranked schools in the city. Additionally, a significant number of CHS students don't have access to the priority that BPS gives when to some students in “walk-zone” of two miles. Instead, to fill the seats at CHS local residents aren't filling, these students are commuting across the city to get to school each day (often living extremely far from this public transport).

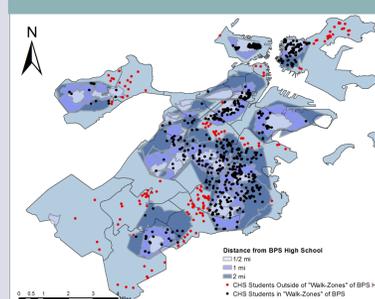
Some limitations of my research are mostly related to the complexity of the BPS schools. The schools can be grouped by admissions requirements, schools only serving special high-need populations or school specialization. Additionally while all schools included are high schools, some of this data combines middle school populations as well. Additionally in the “walk-zones” map, the different admission requirements or populations served are not differentiated. That being said, it seems likely this policy still leaves out a significant number of BPS students.

Case Study: Charlestown and Charlestown High School (CHS)

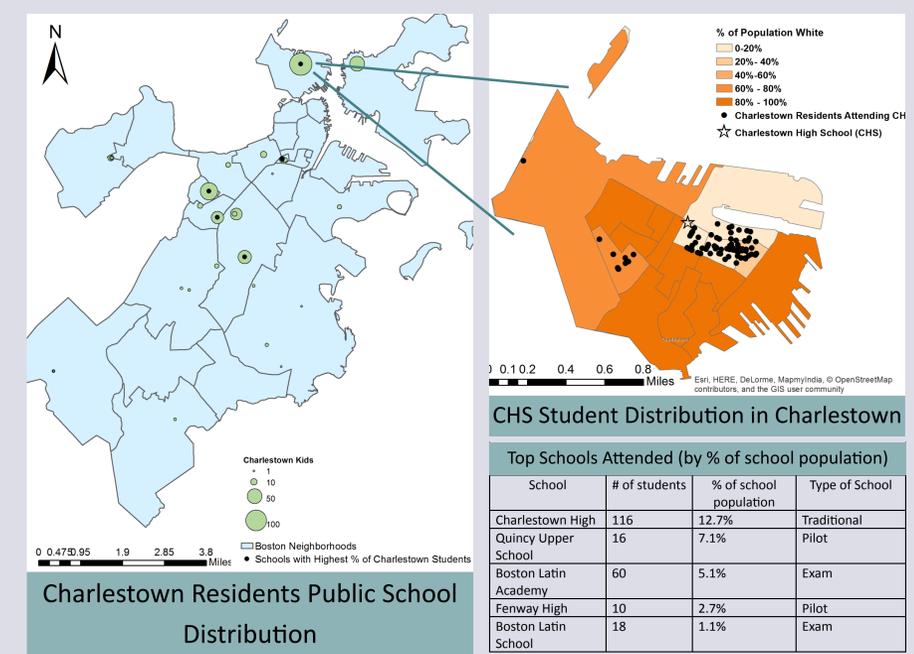
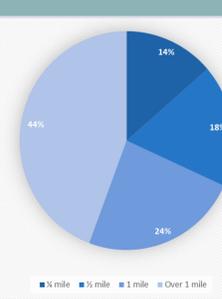


Transit Accessibility for Students Attending CHS

CHS Students and BPS “Walk-zones”



Breakdown of Transit Access



Poster by: Danielle Mulligan
 Produced on: December 19, 2016
 GIS101: Introduction to GIS
 Geographic Coordinate System: NAD_1983_StatePlane_Massachusetts_Main and_FIPS_2001_Feet
 Projection: Lambert_Conformal_Conic

Sources:
 1. Boston Public Health Commission. “Social Determinants of Health,” 2015 2014. http://www.bphc.org/healthdata/health-of-boston-report/Documents/HOB-2014-2015/2_SocDetermin_HOB%202014-2015.pdf.
 2. BPS, 2016
 3. Billingham, Chase. “Parental Choice, Neighbourhood Schools, and the Market Metaphor in Urban Education Reform.” Urban Studies 52, no. 4 (March 1, 2015): 685–701. doi:10.1177/0042098014528395.
 4. MassGIS Data, MBTA Rapid Transit, 2014
 5. Social Explorer Tables, ACS 2015 (5-year estimates), (SE), ACS2015_5yr, Social Explorer; US Census Bureau

