BUILDING FOR EQUITY, PROVIDING FOR GENTRIFICATION: A CASE STUDY OF BEX FUNDING IMPACTS ON SOUTH SEATTLE ELEMENTARY SCHOOLS

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Abstract

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This descriptive case study explores the impacts of school funding through Seattle's Building Excellence Capital Levies (BEX). As Southeast Seattle Public Schools receive a 62.5% increase in capital funding, with the addition of an equity measure to the allocation of the 2019 BEX V levy, this study explores potential impacts to an area widely represented by nondominant communities. Two pairs of elementary schools, a funded and neighboring school, were selected from BEX IV (Southwest) and BEX V funding (Southeast). The study found that overall enrollment increased at funded sites and decreased at neighboring schools. Despite overall shifts, all sites demonstrated decreased enrollment for students of color and increased white student enrollment. The case study challenges if schools selected under an equity measure, ultimately enroll the students the measure was constructed to serve.

1. OVERVIEW

Capital facilities are a symbolic window into the opportunities available at a given school. In contrast to the esteem in which community members hold these spaces, there is very little evidence linking new buildings to increased student outcomes (Martorell, Strange, & McFarlin, 2016). In the City of Seattle, a storied history of oppressive policies led to a great geopolitical divide between neighborhoods that dazzle and decay. School buildings stand as artifacts which reflect how students' race, socioeconomic status and educational attainment were constructed in parallel. As an equity measure in prioritizing capital projects leads to more school construction in South Seattle, the burdens and benefits on nondominant communities[1] remain unclear. This paper questions largely untested practices in providing capital projects as an effective measure to close historic equity[2] gaps in student outcomes and quality learning experiences. If we build it, who will come?

1 Usage of the term nondominant communities will rely on Gutiérrez and Arzubiaga's (2012) definition, referring to a diverse set of peoples with relatively less power than the dominant community. This includes groups whose power is diminished by socially constructed perceptions of sociopolitical, economic, and educational factors (as well as the intersections of these factors).

2 Equity will be used in two contexts for this paper. First, it will be used to describe a specific funding formula applied to a ranking system for Seattle Public Schools' capital outlays. This formula is described in Appendix A. It will also be used to describe an exemplar criteria of resource allocation. The purpose of defining equity is central to the challenges of distribution. Distribution affects communities and inequality destroys them (Stone, 2012). This paper interprets equity as "attention to the fairness of outcomes within the context of an unequal playing field" (Ishimaru & Galloway, 2014, p. 94). When applied to the school context, policies that work towards true equity will create "learning environments that connect in deep ways to the life experiences of all students" (Nasir, Rosebery, Warren, & Lee, 2006, p.700). This acknowledges student outcomes are the direct result of equitable distribution of learning opportunities through environments that reflect a diversity of human experience. This is the lens the paper takes to the differential benefits and burdens placed on nondominant communities.

2. INTRODUCTION

2.1 Why build new schools?

In the United States, deteriorating infrastructure drives debate around the social, economic, and political dimensions of capital improvements (Economic Development Research Group, 2016, p.4). Schools find themselves at the center of this deliberation, where local planning departments are tasked with uncovering equitable solutions. Across the country, capital improvement projects are traditionally funded at the local level. 82% of funding for all schools in the United States are from local sources (Filardo & Vincent, 2017). Although each state provides a portion of funding once students are in the building, putting up the walls largely relies on the votes of resident taxpayers (Martorell, Stange, & McFarlin, 2016).

There are a number of reasons to construct a new school building, ranging from improving safety structures to creating an environmentally sustainable space (Filardo & Vincent, 2017). Likewise, families, educators, and community members represent stakeholders with a wide range of perceived benefits. Many communities tout gains in safety, health and opportunities to grow "21st century learning" (Penn State, 2015). It is a commonly held belief that new school spaces confer these benefits and in turn, improve students' schooling experience. This opinion, that buildings contribute to learning, is widely maintained across judicial arguments. Key precedent was set by school facility differences captured in the landmark *Brown v. Board of Education* case. School facilities were a salient feature to the argument brought forward, as student learning spaces were seen as the central mechanism for dismantling racial inequity and segregation (Strauss, 2019). Modern court cases regarding school funding have widely cited the need for safe, appropriate structures for students to learn in, families to value,

and communities to offer equal access to all children (Filardo, Vincent, & Sullivan 2018). Low-income communities may receive increased benefit if the school offers a uniquely-equipped learning environment; a rare safe space that supports basic needs and advanced learning (CAF, 2016). These benefits are elevated when they include a dedicated location for meals, healthcare services, and adult courses, like language learning and job training (Filardo et.al, 2018). Many see school facilities as an opportunity to close achievement gaps between thriving and underperforming schools (Kutash, Nico, Gorin, Rahmatullah, & Tallant, 2010). The repair or improvement of a facility offers a visual symbol to contrast with segregation or inequity.

The American Society of Civil Engineers' (ASCE) *2009 Report Card on America's Infrastructure* gave school infrastructure a D-rating, citing a $160 billion need for investment nationwide (Quade, 2009). They ended their report with a declarative statement; there would be "little hope for improvement" (Quade, 2009, p.131), particularly in the face of data gaps, which failed to describe the full picture of school funding. As students from low-income backgrounds are more likely to attend older schools, this reinforces concerns around school facilities' ability to perpetuate an income equity gap (Barrett, Treves, Shmis, Ambasz, & Ustinova, 2019).

Despite this need, there is a lack of evidence to support the number of claims made around capital funding and its potential ties to teacher longevity and student achievement (Filardo et al., 2018). Capital funding improves physical conditions, but lacks causal evidence in its relationship to teacher or student outcomes. In a review of studies which measured these outcomes in lieu of capital facility projects, Martorell, Strange, & McFarlin (2016) found little evidence to support claims that capital funding retained teachers or increased student achievement. The exception to this was unique, large-scale investments in a school system, that previously demonstrated "very poor conditions" (p.13). This suggests a value and information

gap between community goals in implementing capital projects and actual outcomes. As many communities attempt to close perceived equity gaps with capital funding, they are doing little to improve outcomes for nondominant students.

School success is often empirically defined as changes in student test scores or attendance rates, though the approach to measurement varies widely. It might include students reaching desired end-goals, shaping future-focused behavioral outcomes, and developing or mastering a set of valued competencies (Hulleman, Schrager, Bodmann, & Harackiewicz, 2010). The relationship between students demonstrating these skills and attending a new school lacks consensus. As there are no culture-free measure of ability (Cole, 1985), research in this area may remain unapproached because of potential confounding factors. Though the challenges to quantifying success or achievement will not be fully explored in this paper, it remains a central challenge in educational research. In centering improved student outcomes in the capital funding structure, accurate and unbiased assessments will be required to fully demonstrate impacts across a variety of students and their families (Barrett et. al, 2019, p.25).

Regardless of the mechanism for measurement, many consider student success as the primary goal of schooling. As young people self-identify as successful students across social and academic realms, their self-concept is constructed in a social context, mediated by the physical space (Martin & Goicoechea, 2000, p.229). Therefore, the perceived benefits of a new school may be extended to include the building's role as an artifact or a "tool in a part of a system" (Barab, Thomas, Dodge, Squire, & Newell, 2004, p.258) that contributes to overall student outcomes. This suggests that an interaction of factors contribute to a student's experience and the school building should be one of many efforts to equitize education.

An area in which new school capital facilities demonstrated measurable impacts on community life was increased prices in the housing market (Martorell et.al, 2016). Using the assumptions in Tiebout's model, Cellini, Ferreira, & Rothstein (2010) approached housing prices as a symbol of the value residents assigned to marginal increases in school capital funding. Among other assumptions, Tiebout's model assumes that people "vote with their feet" (Robbett, 2015, p.523) and possess the mobility to move to desirable areas. Therefore, controlling for other factors, new residents demonstrated value for a new school building by moving to the neighborhood. Cellini et.al (2010) found that when a capital bond passed in California, housing prices increased in that school district. The opposite was also true, where neighborhoods might drop in their perceived desirability, as funding was offered at sites outside of that neighborhood (p.222). Populations whose socioeconomic status allowed them to move, possessed the ability to shape neighborhoods, and access improved schools.

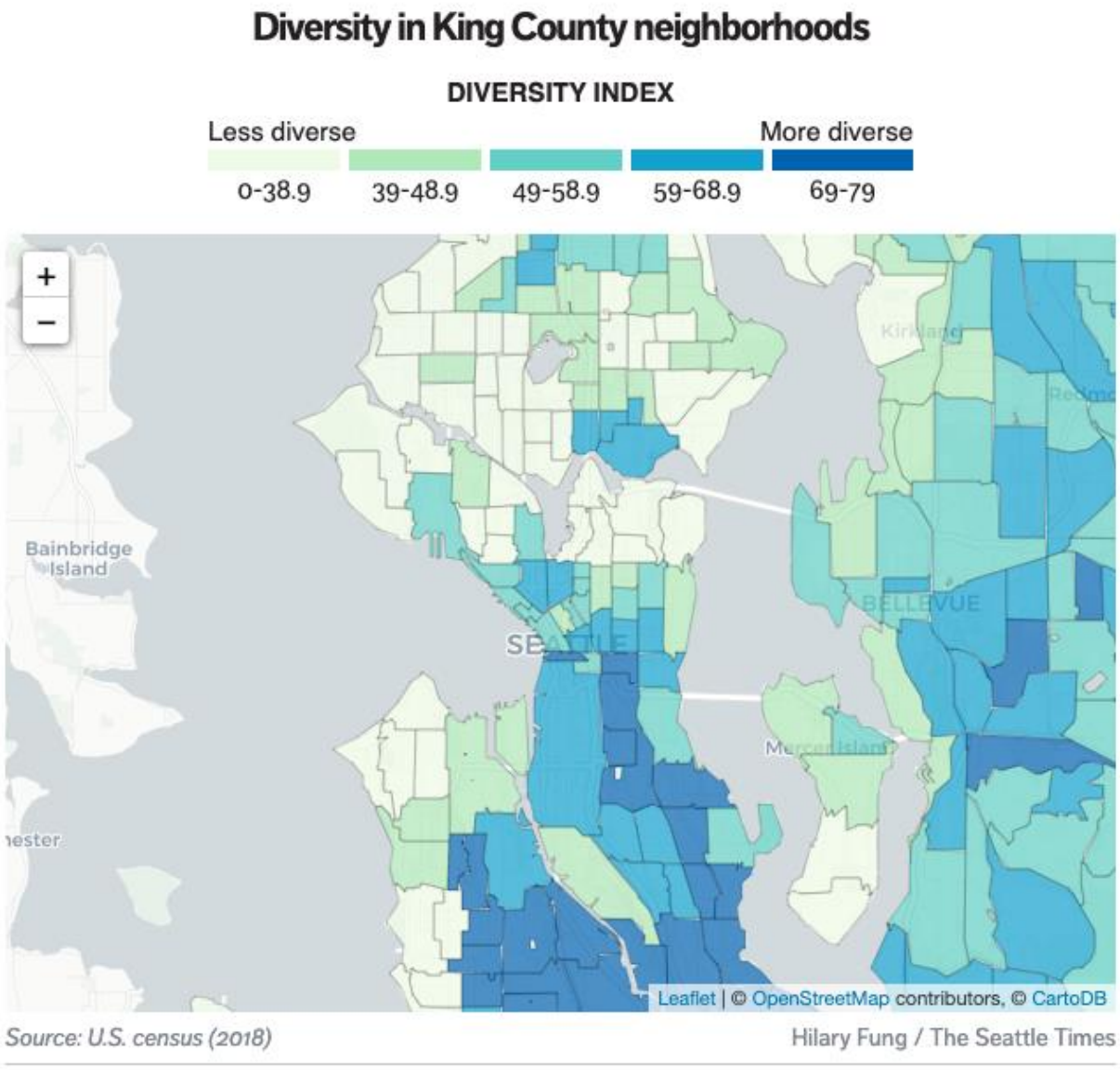
People perceive safety, modernized learning opportunities, and student achievement as benefits associated with a new neighborhood school (Penn State, 2015; Filardo & Vincent, 2017, p.3). Improvements towards safety and increased learning opportunities have demonstrated connections to student success when wide-reaching measures are employed under extreme circumstances. Yet, student outcomes remain untested and demand further research (Martorell et.al, 2016, p.28). Without a stronger basis for research, very little can be said about the connection between school facilities and student life. What is known is that new school facilities increase housing prices (Cellini et.al, 2010) and in response, may shift the composition of social and economic communities surrounding the school facility. These realities are crucial considerations for areas that employ capital funding as a way to equitize larger districts. In a growing area, like Seattle, that seeks revitalization without displacing residents from

nondominant communities, it is essential to consider the numerous perceived and realized benefits in comparison to costs.

2.2 Racialized Exclusion and Disruption Amid Progressive School Reforms

Seattle is widely known for its progressive politics. Washington State is a leader in large-scale efforts to address social and economic inequities affecting its citizens, including raising the minimum wage (Vigdor & Romich, 2015), instituting paid family leave (La Corte, 2020), and same-sex marriage (Neroulias, 2012), serving as evidence of a culture of catalyzing change (Gomez, 2017). Yet, underlying these perceptions of progress, lives a history of racialized exclusion and disruption. This includes a host of discriminatory practices, ranging from policies that justified the harassment of citizens of color after sundown (Loewen, 2005), redlining neighborhoods to deny home loans to racially nondominant communities (Judge, 2007, p.2), and racial covenants which effectively closed communities to people of color (Seattle Civil Rights & Labor History Project). These strategies led to a concentration of many communities of color in South Seattle (Fowler, 2016, p.5), restricted for generations in their ability to build assets. Demonstrated in Figure 1 by the Seattle Times' *Diversity in King County neighborhoods* map (Balk, 2020), the North colored green and the South in blue, continue to represent opposite sides on a spectrum of racial representation.

Figure 1



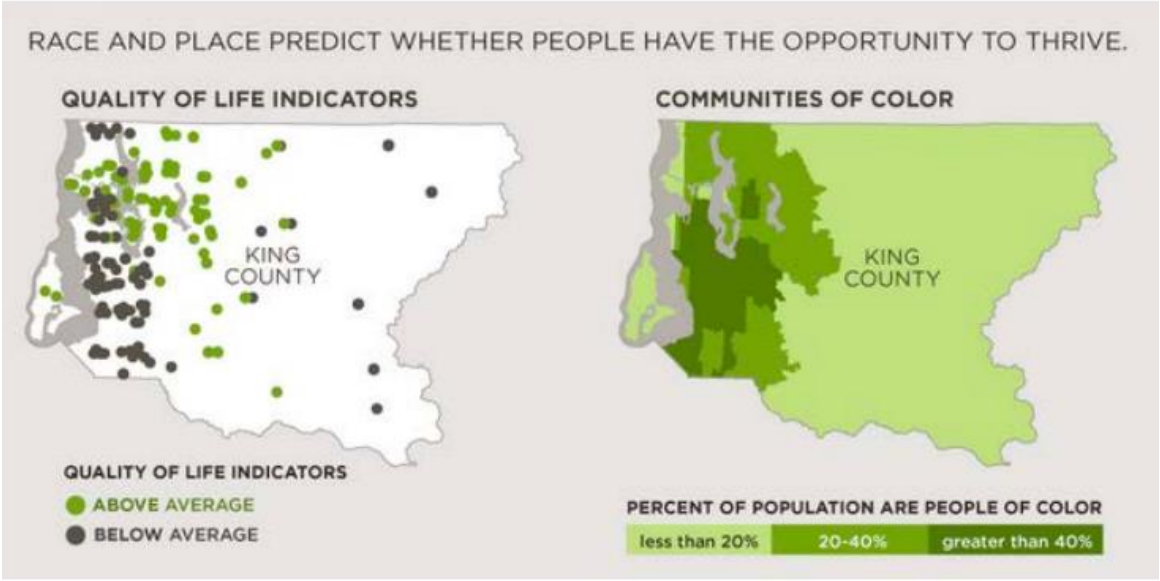
Note. Reprinted from the Seattle Times (2019) article by Daniel Beekman *How rising costs of living and displacement are changing politics in Seattle and South King County.*

Seattle's Neighborhood Portal (2018), produced by the City of Seattle using 2013-2017 American Community Survey data, describes Northeast Seattle as 28.9% nonwhite with 4.2% of families below the poverty line. It describes Southeast Seattle as 70.9% nonwhite with 14% of families below the poverty line. This captures the division of city, where North Seattle residents

are whiter and more likely to grow assets. Homeownership is an asset that contributes to intergenerational wealth (Miller-Adams, 2002), with homeowners' children 7 to 8 percent more likely to own their own home in future years. In South Seattle, the lasting effects of exclusionary housing policies, like redlining and predatory mortgage practices (Judge, 2007), are quantified in the lacking assets of nondominant families. This is starkly reflected in homeownership rates. Citywide, only 28 percent of black households own homes, in comparison to 42 percent nationwide (Balk, 2017). The racial earnings gap is similarly pronounced, with a gap of almost $40,000 between Black and White residents (Murnan & Park, 2015, p.9). Below, in Figure 2, is a *2015 Race and quality of life indicators* map retrieved from The United Way of King County. Overwhelmingly, concentrations of communities of color overlap with "below average quality of life indicators," (Murnan & Park, 2015, p.23) representing the lasting effects of oppressive policies.

Figure 2

2015 King County Race & Quality of Life Indicators



Note. Reprinted from the United Way (2015) report by Murnan & Park Understanding King County Racial Inequities: King County Racial Disparity Data. United Way of King County.

It is no surprise that Seattle does not demonstrate racial parity in academic achievement. The Educational Opportunity Project at Stanford University, analyzed student test score data between 2009 and 2015. Researchers found that black students were 3.7 grade levels behind white students in third grade (SPS R&E, 2018). As Seattle slips into its role, as a modern symbol of progression, it sets a dangerous precedent that "there is no problem" (Judge, 2007, p.8) in our post-racialized school system. Despite data that suggests the farther we move away from our fraught history, the wider racialized student achievement gaps continue to grow.

At the same time students of color are underserved by Seattle Public Schools, their families may not be able to stay the course of their education in the district. Housing security is increasingly threatened for low-income families. Since 2012, prices for single family homes increased by 198 percent in Southwest Seattle and 136 percent in Southeast Seattle (Rosenberg, 2018). Until recently, South Seattle widely resisted the forces of gentrification (Fowler, 2016). How the area maintained a "stability of diversity [in spite of]… the growth in the economy, a period of radically rising housing costs in the region, and extensive gentrification pressures in other parts of the city" is unknown (Fowler, 2016. p.13). But more recently, Fowler (2016) notes that increased prices in other neighborhood markets and an increase in private investment, contributed to an astronomical jump in housing prices which continues to threaten the stability of residents. Challenges in housing stability create significant barriers to remaining in the district.

2.3 School Funding Mechanisms

Washington state school funding is required by law to uphold the "paramount duty of the state to make ample provision for the education of all children" (WA State Legislature, 2017). At the state level, Washington school funding operated under a model where dollars were broadly

attached to student enrollment until 2007. In that year, the Weighted Staffing Standards (WSS) model replaced the previous funding structure. This model prioritized teacher training and experience at a given school (Seattle Public Schools, 2019). Seattle Public Schools referred to WSS as a simpler method for approaching needs-based funding (Levin, J., Manship, K., Hurlburt, S, Atchison, D., Yamaguchi, R., Hall, A, & Stullich, S., 2019). WSS marked a first in Washington and nationwide. It was the first system where dollars for students were largely determined by the teaching professionals in the building.[3] Experienced teachers not only improve student outcomes, but confer benefits to their colleagues and entire schools (Kini & Podolsky, 2016). Under Seattle's WSS model, schools are also provided additional funding if a significant portion of the population receives free and reduced lunch ("equity dollars"),[4] special education, and language learning services. However, these ratios are high. For example, seventy bilingual students are required to receive one full-time ELL teacher (Seattle Public Schools, 2017). In theory, WSS meant more experienced teachers drew more dollars to their school and created incentive to maintain long-term educators. In practice, it is more complicated, as funding gaps are exacerbated at some schools, whose allocated funding feels mismatched to student need (Dornfeld, 2017; Brazile, 2019). However, many of these challenges came to light following *McCleary vs. Washington,* a five-year lawsuit beginning in 2012, in which the Washington State Supreme Court ruled that the state was "not meeting its constitutional mandate to fund public education" (Bartlett, 2018). The result was an increase in statewide property tax slated for K-12 education and a cap on the amount that can be collected through local levies (Bazzaz, 2019). Despite the various challenges McClearly raises, a core challenge to the WSS model remains, the

3 It is important to note that this system is not connected to teacher salaries, which exist on a separate schedule, passed by the legislature in 1969 (WA State Legislature, 1969).

4 *Weighted Staffing Standards* uses the term "equity dollars" to describe the allocation for students who qualify for free and reduced price lunch.

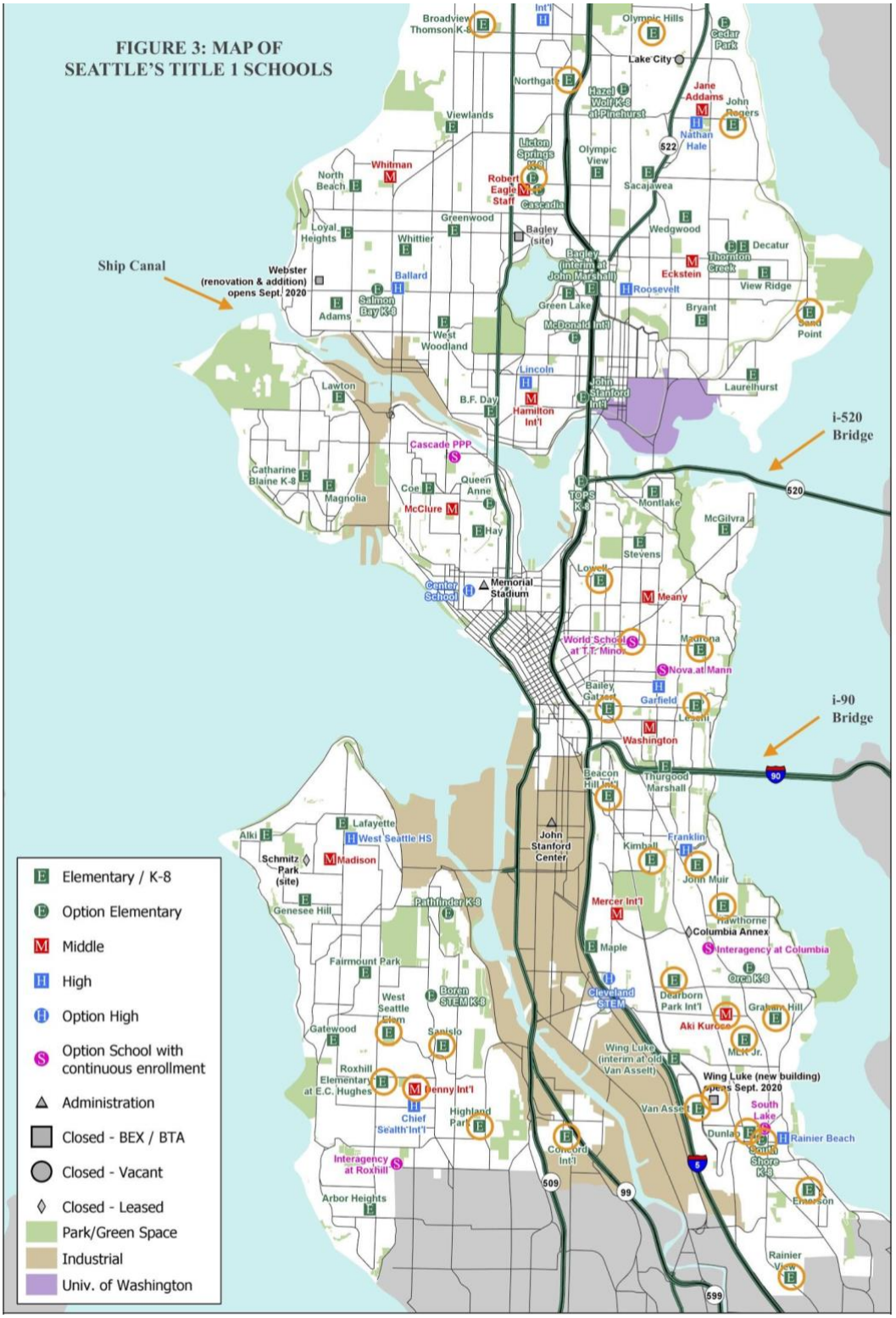
most experienced teachers are attracted to the wealthiest schools (Kini & Podolsky, 2016; Cardichon, Darling-Hammond, Yang, Scott, Shields, & Burns, 2020). The poorest schools fail to reap the well-defined benefits offered by more experienced teachers (Flannery, 2019). Components of WSS funding may be cyclical in reinforcing economic differences, as low-income and nondominant families are not consistently privileged across the funding structures (Brazile, 2019).

In Washington, data suggests that the poorest schools not only have the highest turnover rate, but the rate of teacher attrition may increase alongside poverty measures (Cohen, Keller, Corso, Franck, Kelliher, & McCorry, 2009). Of those teachers who choose to leave, 21 percent are teachers of color (Bazzaz, 2018), despite teachers of color representing only 11.7 percent of teachers in all of Washington State (Bazzaz, 2019). It's no surprise this rate is so high, the most diverse group of teachers are most likely to work in the poorest schools (Carver-Thomas, 2018). This further exacerbates inequities in schools, where the limited proportion of teachers of color do not represent the 46.6 percent students of color (Washington State Office of Financial Management, 2018). When teachers of color are maintained, educational outcomes of students of color are improved (Carver-Thomas, 2018). Higher turnover creates a continuous stream of new teachers, many teachers of color, whose lack of measured experience generates lower funding, and provides their students with less financial support.

Schools receive additional support through Title I, Part A federal funding when a high percentage of a given school's student population are from low-income households. The goal of the funding is to offset income-related disadvantages which may create gaps in student academic attainment (Seattle Public Schools Grants Department). Of all of Seattle's one hundred and four (Seattle Public Schools, 2019) public schools, thirty-one qualify for schoolwide Title I, Part A

funding. Of those schools, twenty-five are located south of the ship canal and I-520 bridges. The full list of Title I schools can be found in Appendix B. Below in Figure 3 is a Seattle Public Schools' map which illustrates all schools in the 2019-2020 school year. The edited orange circles demonstrate the geographic concentration of Title 1 schools in 2019. 70% of all Title 1 schools across the SPS system are concentrated south of the Interstate 90 bridge.

Figure 3



Note. Reprinted and altered from the Seattle Public Schools (2019) 2019-20 *All District Schools Map*.

Bridges and waterways constrain neighborhood designations and population shifts in the Greater Seattle area. In the absence of formal neighborhoods, undefined since 1910 (Wilma, 2002), these plentiful geographic features define local boundaries. I-90 divides the central district and is considered the modern division of North and South Seattle by the Seattle City Clerk's *Geographic Indexing Atlas* (2020). This line was formerly at the Ship Canal Bridge, the city's equivalent of the "Mason-Dixon line" (Judge, 2007). However, as gentrification creeps further South, spaces for nondominant community gatherings largely disappear from the northern reaches of the Central District (Mosley, 2013). In regard to socioeconomic status, these realities are reflected in the map, as the bulk of low-income households are concentrated at and below the i-90 bridge.

2.4 Resource Allocation: From teacher-led funding to student need

In the same year WSS was adopted in Seattle, a different model of weighted student funding (WSF) was in its first few years in Baltimore, Boston, Chicago, Cincinnati, Denver, Fort Collins, Houston, Los Angeles, New York City, Oakland, Saint Paul, San Francisco, across Connecticut, Hawaii and Nevada (Snell, 2009). Weighted Student Funding, also called student-centered funding, refers to a broad model that assigns dollar amounts to different categories of students. As of 2019, nine percent of the nation's students were enrolled in a school that employed WSF (Levin et al., 2019). Each district creates their own set of prioritized communities through funding structures. For instance, Boston Public Schools utilizes an *Opportunity Index* (2019) which places children who've recently immigrated, moved extensively, and live in areas with excessive violent crime as funding priorities. Although, WSS base funding is supplemented by discretionary funding for enrollment, the presence of a special education program, and students receiving free and reduced priced lunch (Levin et al., 2019), it

is much less sensitive to intersectional student need than most WSF systems. Across WSF districts, funding structures broadly accounted for grade level, family income, language learning, learning differences, housing security, student performance, and specialized programming like gifted/talented student groups. Though it is important to note that no funding structures placed race as a weight in their model. (Levin et al., 2019). WSF looked different in each district. For instance, some schools prioritized the youngest students, while others, the oldest with a range of assigned weights (Levin et al., 2019). The most represented critique of WSF was lacking responsiveness to keep pace with student population changes; like other systems, it still remains easiest to cut funding to individual and small group roles over large group instructors. The most represented positive support was of the funding structure's ability to provide the most resources to students with the greatest need while offering transparency in the process (Levin et al., 2019).

2.5 Capital Levies and Planning

Similar to other states, Seattle mostly relies on local dollars to construct new school buildings. These dollars are raised through levies. Seattle school levies are designed to bridge the gap between student need and allocated state funding. Historically, levies have been passed with significant voter approval. In 2019, the Educational Programs and Operations Levy (EP&O) levy and the Building Excellence Capital Levy (BEX) passed with 73 percent voter approval (Seattle Public Schools, 2019). The two varieties of levy, EP&O and BEX, include discrete capital and operation funds with both renewed every three years (Seattle Public Schools). In Seattle, funds are levied to cover the remaining 30% of per pupil spending. The state provides only 70 cents on every dollar required for school system support (Nyland, 2016). Therefore, levies are necessary to fully cover student needs.

The process for receiving a capital funding project is laid out in Seattle Public Schools Capital Planning Department's guiding documents, including the Facilities Master Plan. The Facilities Master Plan identifies school improvements to be made in the next BEX funding cycle (Seattle Public Schools, 2018). Overall, SPS capital planning strives to streamline building use, manage student capacity, and make capital resources cost-effective (Seattle Public Schools Capital Projects and Planning). This places capacity constraints as one of their top priorities when allocating funding to different sites. Beginning in 2006, declines in student population led to the closing of a number of schools, whose low capacities could not justify operational costs (Seattle School Board, 2008; Higgins, 2013). However, student enrollment unexpectedly spiked in North Seattle following 2008, despite continuing to decline in the South (Solomon, 2008). Where North Seattle schools were unable to accommodate local applicants, only 15% of anticipated enrolled students ever made it into the doors of Rainier Beach High School. Teachers and school leaders attributed this shift to lower class sizes and more attractive programming including music and the arts (Heffter, 2008) available in North Seattle. As private leases expired on former SPS buildings, capital planning refurbished schools to meet emerging community needs (Holden, 2009). In the wealthiest areas of the city, this led to a significant focus on new buildings and upgrades to capacity constrained facilities located in North Seattle (Solomon, 2008). In response to the inherent challenges of a funding structure which favored overcrowded schools, embedded in whiter and wealthier neighborhoods, the SPS Capital Planning Department and Seattle School Board devised an equity measure to include in funding allocation. This measure was first used in ranking projects approached in the BEX V funding cycle using an 'equity tiers' approach (Anderson, 2019). As the results of the 'equity tiers' approach faced initial criticism (Gross, 2018), it was updated to include an underlying equity index (Gross,

2018; Seattle School Board, 2018). The process for ranking projects under 'equity tiers', with and without an underlying equity index, can be found in Appendix A. It includes categories for underserved students of color, low-income students of color, low income students, English language learners, immigrant students, and homeless Students (Anderson, 2019).

Table 1

BEX V Project Scoring: Comparison of Two Equity Methods

SW/SE/WS
NW/NE
C

	OVERALL SCORE with Equity Factor (33% Weight)					
	First Version- Equity TIERS			Second Version- Equity INDEX		
	33%			33%		
Facility	School Equity Tier	OVERALL SCORE	Rank	School Equity Index	OVERALL SCORE	Rank
Northgate ES	3.75	3.71	1	3.91	3.77	1
Mercer International	2.5	3.29	5	3.58	3.65	2
John Rogers ES	1.25	2.99	11	2.91	3.54	3
Viewlands ES	2.5	2.23	8	3.34	3.52	4
West Seattle ES	3.75	3.32	3	4.03	3.42	7
Kimball ES	1.25	2.67	16	3.09	3.29	8
Rainier Beach	5	3.29	4	4.47	3.12	10
Sacajawea ES	1.25	2.68	15	2.56	3.12	11
Aki Kurose MS	5	3.29	6	4.36	3.08	12
Montlake ES	1.25	3.29	7	0.63	3.08	13
Alki ES	1.25	2.86	14	1.33	2.89	17

Note. Table edited to depict Seattle Public Schools receiving major school infrastructure projects under BEX V. Van Asselt/Rising Star Elementary was not included in original chart. Adapted from the Seattle School Board's BEX V work session on September 26, 2018. Included in *Parents Criticize Seattle Public Schools' Process For Choosing Which Schools To Rebuild* written by Ashley Gross and published by KNKX on October 10, 2018. Entire table printed in Appendix C. Scoring methodology in Appendix A.

Above is an example of both scores offered to schools with proposed capital improvements under initial planning for BEX V. Demonstrated are the significant changes to

overall Southeast school scores with the underlying index measure, including Kimball Elementary which moved from a score of 2.67 to 3.29 and Rainier Beach High School which moved from 3.29 to 4.47.

Under BEX V, five of twelve major construction projects are focused on Southeast Seattle (Bazzaz, 2018). This signals the largest proportion of funding to this area, under any BEX levy and largely balances major construction over all five funding cycles. Below, the Seattle Public School Board offers a comparison of Seattle Public School capital funding by region, since 1995.

Figure 4

BEX/BTA Capital Levy History

BEX/BTA Capital Levies
Funding by Region, 1995-Present

Region	# of Locations	Total Funding	% of total funding
Southeast	23	$ 449.8	19.3 %
Southwest	19	$ 489.4	20.9 %
Central	26	$ 408.8	17.5 %
Northeast	21	$ 511.5	21.9 %
Northwest	20	$ 477.7	20.4 %

Note. Adapted from Seattle School Board's BEX V work session on September 26, 2018. Included in the article *Parents Criticize Seattle Public Schools' Process For Choosing Which Schools To Rebuild* written by Ashley Gross and published by KNKX on October 10, 2018. Entire table printed in Appendix C.

Capital planning depends on long-term solutions, with planning beginning years before levy passage and eventual construction. For BEX IV, plans were developed from the 2012 Facilities Master Plan (Seattle Public Schools, 2013) and for BEX V, plans were developed from the 2015 Facilities Master Plan (Seattle Public Schools, 2018). This gap in responsiveness requires another mechanism to more quickly meet student need. The Enrollment Planning Department at Seattle Public Schools can offer a faster response to capacity constraints. With an

ability to assign an appropriate amount of students to each building, enrollment planning also predicts long term capacity and makes choices based on birth rate trends (Seattle Public Schools Enrollment Planning).

2.6 Enrollment Planning

In 2010, the Enrollment Planning Department at Seattle Public Schools changed their school assignment mechanism to a neighborhood-based assignment system which prioritizes student proximity to their assigned school (Higgins, 2013). The previous system faced deep criticism for inequitable practices, intended to correct the history of reductive policies, like redlining. The issue was elevated to the U.S. Supreme Court in the case *Parents Involved in Community Schools v. Seattle School District No. 1* (LII, 2007), where the use of race as an admissions "tie breaker" was deemed unconstitutional. The new neighborhood-based system does not mention race. This positions the capital funding equity measure an even greater outlier, as this is the only step in the current process of filling schools, that can respond using race as an indicator.

All individual student movements are assessed under the *Student Assignment Transition Plan* (2020). Boundary changes are proposed yearly as student populations shift and new capital facilities are made available. Families are offered a spot at their local elementary school, which moves progressively into predetermined middle and high school placements (p.15). Families may rank desired sites for their students to attend. Students may be placed on one school's waitlist if all choices are full. The waitlist is held over the duration of the summer (Seattle Public Schools Enrollment Planning). If there are numerous openings, without a predicted population growth overtaking availability, then the student is moved into their requested school. If there are limited openings, students are assessed by sibling location and the lottery order of their family's

request (p.13). Movement of the waitlist may be more likely when students are requesting to leave a school with capacity constraints for a less crowded school. At this point, the student leaving a desirable school and the students higher on the list, who applied earlier, may be moved into their requested school to combat overall system constraints. In this fairly new system, equity and fairness is largely related to siblings, time of application and ability to create room at other, more desirable schools. It is far from the definition of equity offered in the introduction, as attention to the fairness of outcomes in an unequal playing field is widely ignored.

2.7 Challenges to an Equity Measure

In the introduction, we reviewed lacking evidence around improved student outcomes following new capital facilities (Martorell et.al, 2016, p.28). As schools are widely valued as catalysts for change, this highlighted the incredible need for further data at the local and national level (Quade, 2009, p.131). Understanding what advantages students may confer from new schools is crucial, as funding measures are often scarce and influenced by previous funding. It would be false to assume that constructing a new building in a previously underfunded area would confer a sufficient range of benefits as a sole equity measure. This is particularly salient when working with students and families that are from nondominant communities. In comparison to white residents, Black Seattle residents shoulder a wealth gap of nearly $40,000 (Murnan & Park, 2015, p.9) and a school achievement gap of 3.7 years (SPS R&E, 2018). These symptoms of systemic disadvantages maintain a longstanding racialized divide in geographies between North and South Seattle. They also raise concerns around the unintended consequences of school funding, including rising housing prices that may lead to displacement (Cellini et.al, 2010). As racialized legacies are countered with equity measures, their effectiveness and full range of benefits and consequences must be tested.

My case study highlights population changes that occured at future school sites between planning and building. It begs the question, for whom is the new school for and for whom will it maintain? As various measures put forth by SPS Capital and Enrollment Planning seek fairness in the process of building spaces and allocating students, it is shadowed by questions around equity and perceived benefit.

3. THEORETICAL FRAMEWORK

3.1 Bourdieu's Capital

Bourdieu asserted that structural violence existed across pedagogical spaces (Bourdieau, 1990, p.5). Whether intentional on the part of the individual, ingrained into a group as an accepted way of thinking, or institutionalized in formal societal structures, this violence served to suppress less dominant groups (p.5). Bourdieu saw educational spaces as recreating cycles of oppression, as students are taught that particular symbols have meaning, without questioning who constructed that meaning (p.8). Under this model, constructed school buildings exists as a pedagogic action imbued with an anticipated set of reactions. Underserved communities may feel grateful, lucky, and hopeful for their children, whose new building unlocks boundless potential for their future. But is this potential an 'objective truth' (p.9)? Connecting new physical structures to a narrative of gap closing is arbitrary and relies on falsified 'logical reasoning' (p.10) to ensure spaces remain highly valued. Have we subscribed to an unsubstantiated narrative: that new schools are inherently good without their consequences? This question is not posed to suggest that a new school is bad, but rather, it may not be entirely good. In Seattle, an area with a storied history of systemic oppression, capital funding is one of many models that serves to achieve equity through fast and symbolic actions.

Bourdieu (1986) described capital as “accumulated labor” demonstrated as “materializations” of those actions in material and immaterial structures, as well as our underlying expectations of regularities in the social world. In the material sense, he argued the accumulation of capital, led to the development of future capital and its inequitable distribution perpetuated regularities in the social world. In later writing, he would claim both of these instances of accumulated labor led us towards a “genesis amnesia,” a state where we believe things have always been the way they are and once it is represented as “one way” in history, it becomes that way (Bourdieu, 1990, p.9). In the context of this paper, this amnesia exists across how we build assumptions around the broadly defined benefits of infrastructure. Although many policies have changed regarding how schools are funded, buildings built, and classrooms organized, one objective truth remains, some groups are privy to accumulating capital from interactions with school, while others are not.

3.2 Community Capitals Framework

Bourdieu (1986) contested that all forms of capital: economic, social, and cultural had intrinsic value, regardless of its utility in economic markets. Utilizing Bourdieu’s examination of social capital and Coleman’s (1998) extension of social capital’s role in developing other forms of capital, Flora and Flora (2008) created an applied framework to investigate community-wide external and internal resources (Pitzer, & Streeter, 2015). This brought about the construction of the Community Capitals Framework, a social policy-minded approach to the resources owned, shared, and sourced in a community.

Figure 5

Community Capitals

Note. Reprinted from *Promoting community vitality and sustainability: The Community Capitals Framework* by Beaulieu at Purdue (2014).

In their model, capitals are described as "any type of resource capable of producing additional resources," (Flora, Flora, & Fey, 2004, p.165) allowing for reinvestment in the community. These included the natural, cultural, human, social, political, financial, and built capitals (Beaulieu, 2014) in which balanced investments would lead to strong communities. This framework, illustrated in Figure 5, is ideal for investigating capital funding structures at schools, where the benefits may be diffused over multiple areas and vary across groups.

The Community Capitals Framework is intertwined with the wide literature available on asset-building. Asset-building is centered on diverse resources, which lead to increased economic access (NCSL, 2008). They may involve owning an item, like a car or home; engaging with a service, like a savings account; or interacting with a community that provides connections, information and support (ACF, 2008). In Flora & Flora's model, assets are uninvested forms of capital (Emery, Fay & Flora, 2006). Investment occurs when access to the asset is offered to future generations. Emery et.al (2006) offered the example of developing a mentoring program between youth and community elders which invests assets of historical knowledge, through a

mentorship program, ultimately establishing that knowledge as cultural capital. This transformation places emphasis on the importance of programs that privilege the reproduction of generational knowledge.

Asset mapping is a tool that helps visualize the possible strategies for harnessing community resources. It describes the affirmative power of assets, identifies the essential involvement of community members, and plans future steps toward asset utilization (Emery et.al, 2006). Emery et.al (2006) presented participant-led asset mapping as a strategy for applying the Community Capitals Framework. Participant-led design centers participant voice in the mapping process through prioritizing their leadership at all stages of inquiry (Aldridge, 2016). As this study is retrospective, it lacks family voice and cannot strictly adhere to the steps of asset-based community development presented by Emery, et.al (2006). Therefore, the model will not be used as designed, to investigate the large array of capitals utilized by South Seattle residents. This would be most effectively mapped by their participation and should be a primary consideration in future research. However, an adapted version of Emery et.al's (2006) model is used to investigate a range of assets associated with an equitized[5] capital funding allocation. In Figure 6, opportunities for asset building are listed. These are limited by the perspective of the creator of the map. This asset map serves as a starting point to consider the assumptions that accompany capital outlays and identify windows of opportunity for investment that might transform assets into capital.

[5] Refers to the use of the Seattle Public Schools' Capital Planning department's defined equity measure.

Figure 6

Asset Mapping

What assets are available to Southeast Seattle families through the allocation of Seattle Public Schools capital outlays?

	Natural	Cultural	Human	Social	Political	Financial	Built
Asset: BEX Funded Capital Project	School as a significantly improved component of landscape	Space designed for population assessed for equity measure	Investment in student education	Perceived value of school to families Growing number of families	Equity measure reallocates funding locally	Funding allocated for construction	School building

Note. Adapted from Emery, Fay, & Flora's (2006) steps to strategize and monitor using the *Community Capitals Framework*.

For this analysis, the school building is considered beyond its contributions to built capital. This includes improvement to the landscape, design to fit the assessed population, perceived value of investment, and local allocation for funding. In the discussion section, Emery, Fay, & Flora's (2006) steps will be used to consider the transition from asset to capital. Examples of strategies used for asset transformation will be reviewed in the implications section.

3.3 Problem Statement

There is too little data to investigate the benefits and burdens of using capital outlays as a mechanism to equitize access to learning opportunities in nondominant communities in South Seattle.

3.4 Research Questions

1. What impact does a major school infrastructure project have on student enrollment at BEX-funded South Seattle elementary school sites?
2. What impact does a new South Seattle elementary school have on student enrollment at a neighboring site?
3. What implications can be drawn from the Southwest BEX IV replacement project at Arbor Heights to inform similar enrollment shifts emerging at the Southeast BEX V Kimball Elementary replacement project?

4. METHODOLOGY

4.1 Data

As a component of my internship with the Seattle Public School's Enrollment Planning Department in Summer of 2019, I was provided access to a set of student data from the greater Seattle area. Data was retrieved from the Seattle Public Schools internal system with the support of the Enrollment Planning Department. This line of questioning is descriptive and provides a brief overview of potential impacts of major capital projects, but does not control for other factors. Data was released in anonymized form under FERPA compliance. However, the data is publicly available online through OSPI[6]. The data set included all elementary-aged students at selected SPS schools and was compiled from required enrollment materials for students entering the Seattle Public Schools' system.

6 Data aggregated by year, school, and student race can be found in the OSPI Data Portal.

Key study variables under investigation included funding treatment at school sites, overall enrollment, enrollment by race, and the race of resident families in the enrollment area. Other contextual variables under consideration included change in housing prices and teacher experience. Overall enrollment and enrollment by race were prepared by an Enrollment Planning team member for my use. Racial categories included Asian, Black, Hispanic, Native/American Indian, Multiracial, Pacific Islander, and White. Additionally, a categorical description of non-white and white students was included. Although race is socially constructed and identity driven, it will be beholden to the data boundaries of racial categories. The term race will be primarily used for the purpose of drawing conclusions from available aggregated data. Selected years under analysis aligned with stages of the planning, approval, and building of the BEX IV and V funding cycles. Structured Query Language used to develop data sets can be found in Appendix D. Each dataset begins at the "planning stage," the school year which encompasses the published Capital Planning Department's Facilities Master Plan. The 2012 Revision to the Facilities Master Plan informed BEX IV. This Southwest data set begins in school year 2012-2013. The 2015 Revision to the Facilities Master Plan informed BEX V. This Southeast data set begins in school year 2015-2016. The data was intended to illuminate: 1) any changes in elementary student enrollment at a capital improvement sites following the passage of a BEX capital levy in South Seattle, 2) any changes in elementary student enrollment at school sites neighboring a capital improvement project following the passage of a BEX capital levy in South Seattle, 3) racial disparities in those enrollment changes, and 4) similarities or differences in enrollment shifts following levy passage across four South Seattle Public Elementary School sites.

4.2 Sample Selection

The potential impacts on Kimball Elementary, located in Southeast Seattle, was of particular interest to the author. The author's positionality statement in regards to the research can be found in Appendix E. As noted earlier, of Southeast Seattle's thirteen major construction projects, five were included in BEX V (Bazzaz, 2018). With close to a 62.5% increase in revitalized buildings, potential impacts on the Southeast community are the primary focus of this case study. Therefore, criteria was designed to select a comparative BEX IV school site to Kimball Elementary (over the BEX V funding cycle).

All sites under consideration were Seattle Public Schools and received funding through BEX IV. Criteria for case study selection included schools listed as "major construction projects" on the Seattle Public Schools website[7], serving only elementary-aged students (K-5), and geographically located in South Seattle, below the Interstate 90 bridge. As mentioned above, i-90 is often considered anecdotally as the modern division of North, Central, and South Seattle (Mosley, 2013). Sites matching this criteria are listed below. Next, overall enrollment was considered. Below were enrollment numbers (OSPI, 2011; OSPI, 2017) at the levy planning stage (two years prior to levy ballot vote for BEX IV and BEX V).

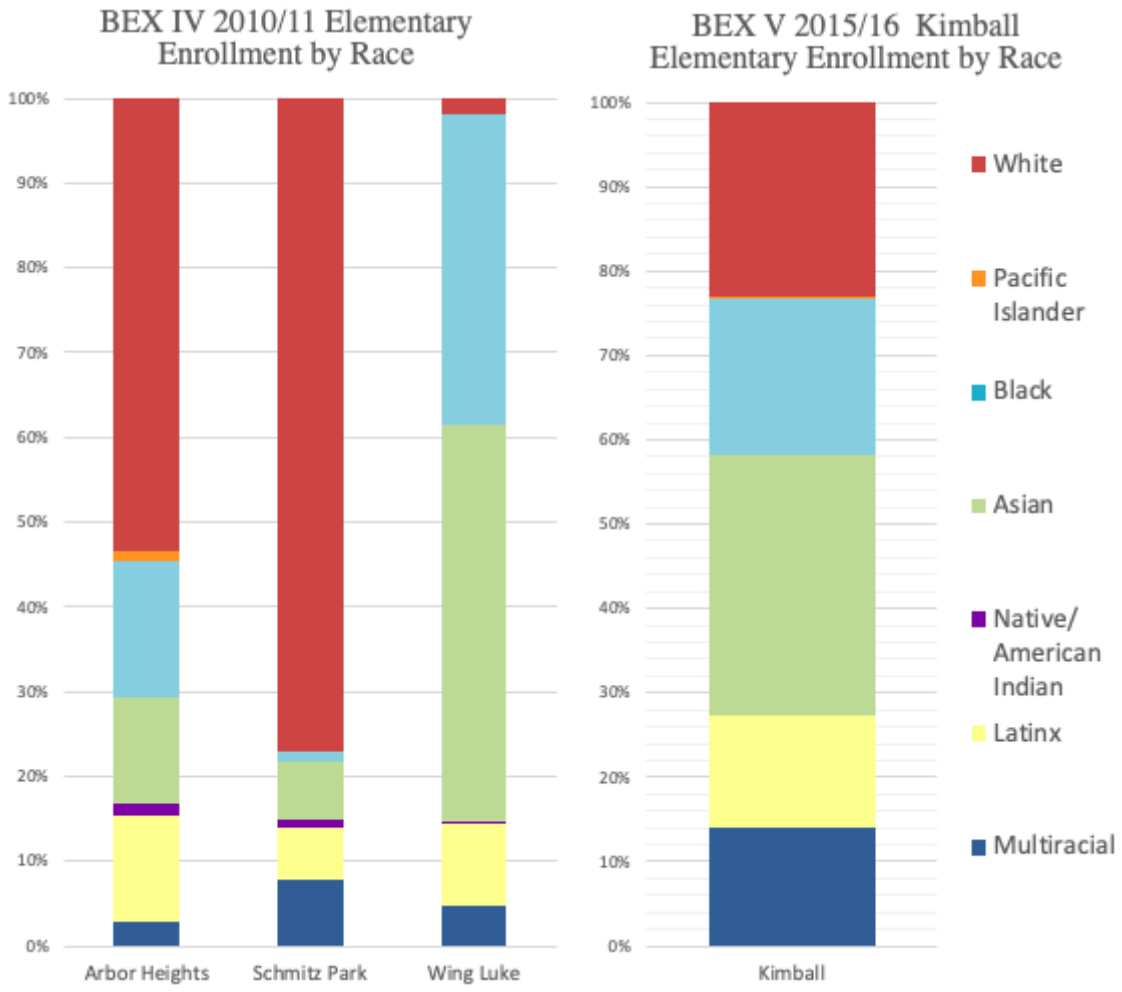
[7] "Major construction projects" in the BEX V funding cycle can be found at Seattle Public Schools.

Table 2

ALL ☑ Funded for major building projects ☑ Elementary-only ☑ South of i-90	
BEX IV Sites	**Enrollment at Planning Stage (2010-2011)**
Arbor Heights Elementary	376
Fairmount Park Elementary (closed prior to renovation)	0
Genesee Hill Elementary (formerly Schmitz Park)	414
Wing Luke Elementary	356
BEX V Site	**Enrollment at Planning Stage (2016-2017)**
Kimball Elementary	431

Arbor Heights, Genesee Hill and Wing Luke Elementary schools demonstrated a difference of 75 students or less, in comparison to overall enrollment at Kimball Elementary. These differences appeared minor, leading to an exploration of racial representation across student populations. No school was a perfect fit; the comparison across student race variables can be seen below in Figure 7.

Figure 7



Note. Complete data set available in Table E1 and Table E2, Appendix E.

Using the metric of white and nonwhite students, Arbor Heights Elementary was 47% nonwhite and 53% white. Schmitz Park (Genesee Hill) was 23% nonwhite and 77% white. Wing Luke was 98% nonwhite and 2% white. These figures were in comparison to Kimball Elementary, which was 77% nonwhite and 23% white. Arbor Heights was selected for continued review, as Schmitz Park (Genesee Hill) and Wing Luke represented a more extreme distribution of nonwhite and white student populations.

To monitor potential direct effects of capital structures and indirect community effects, each capital funded school used a paired neighboring elementary school site for study. These neighboring school sites were assessed for distance between schools, BEX funding recipients, planned capital improvements, overall and nonwhite enrollment, relative location, and enrollment boundary changes. This comparison is seen in Table 3.

Table 3

	BEX IV: SW Seattle	**BEX V: SE Seattle**
Capital Funding	Arbor Heights new building approved 2013	Kimball new building approved 2019
Enrollment Boundary Changes	2016 boundary change	No planned boundary change; capacity challenges in neighboring areas
Relative within Pair Location	One mile apart	One mile apart
Enrollment in planning year	**2011/12** Arbor Heights: 364 Roxhill: 347	**2016/17** Kimball: 414 John Muir: 402
Non-White Enrollment	Arbor Heights: 40.7% Roxhill: 86.7%	Kimball: 77.1% John Muir: 81.1%
Middle School Attendance	Both: Denny International	Kimball: Mercer John Muir: Washington

4.3 Southeast and Southwest Pairs

For analysis, the direct and indirect impacts of capital projects are considered from the perspective of each school. Additionally, the sample is divided to represent a Southeast and Southwest pair of elementary schools. Their locations are illustrated on the map in Figure 8.

Figure 8

Map of Southwest & Southeast School Case Study Pairs

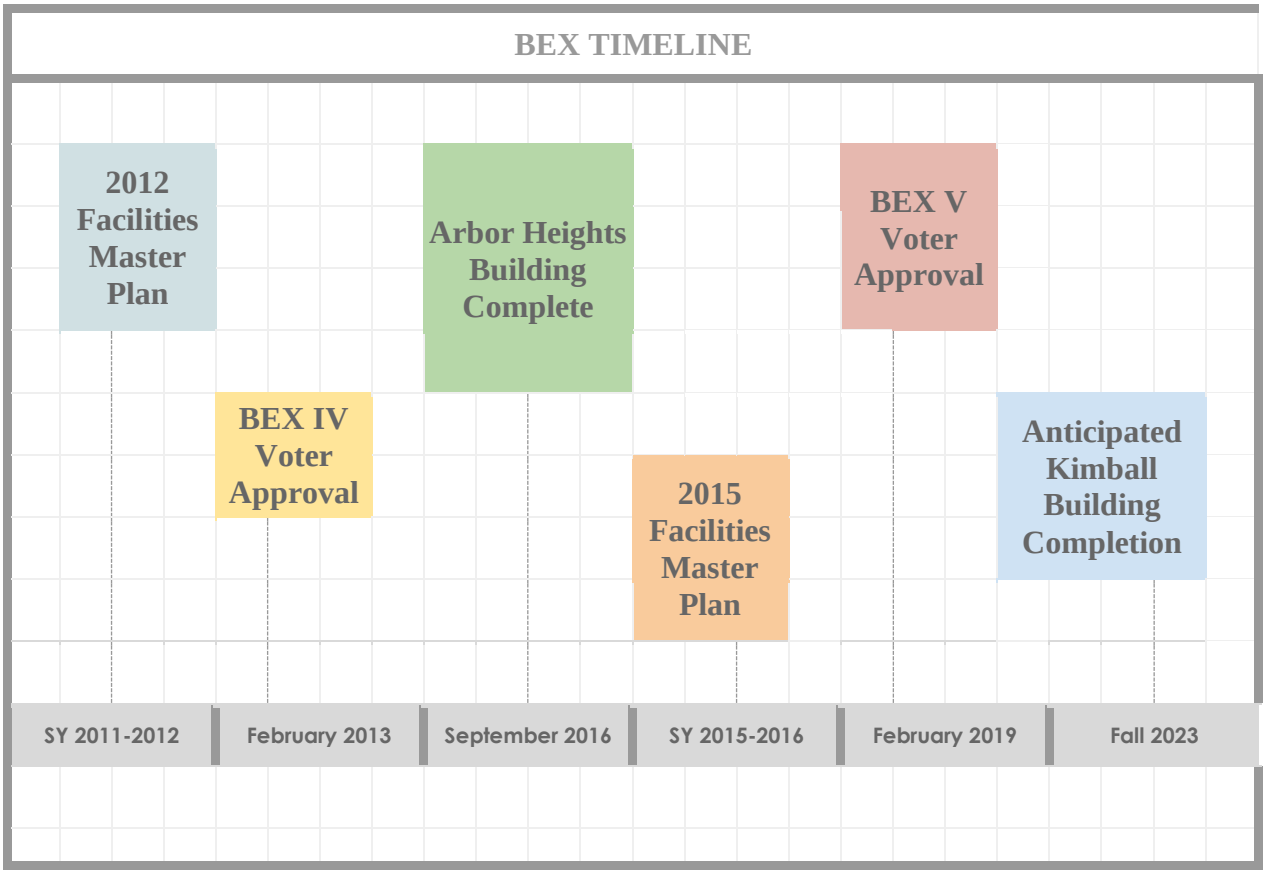
Note. Reprinted and altered from the Seattle Public Schools (2019) 2019-20 *All District Schools Map*. In purple are BEX funded sites and in yellow, neighboring sites. Green indicates the previous site of Roxhill Elementary.

In its most populous year,[8] the Southwest sample included on average 974 students from Arbor Heights and Roxhill Elementary over the 2011-2018 school years. In its most populous

[8] Data constraints do not allow for a known quantity of overall study participants. Seattle Public Schools does not track individual student movement. This creates barriers to counting all students in the study. The highest number of students over a given year is offered to reveal the scope of the data. However, it is likely a vast underestimation of the number of actual participants.

year, the Southeast sample included 816 students from Kimball and John Muir Elementary over the 2016-2018 school years. The timeline for BEX IV and BEX V projects is illustrated below in Figure 9.

Figure 9



4.4 Methods

This case study uses a descriptive research design to explore potential impacts on enrollment, following a Seattle Public Schools' major building project. In addressing RQ1, *what impact does a major school infrastructure project have on student enrollment at BEX-funded South Seattle elementary school sites,* I will analyze percentage changes in overall enrollment and enrollment by race at both Arbor Heights Elementary and Kimball Elementary. My

hypothesis was that enrollment would rise at Arbor Heights and Kimball Elementary, as capacity increased and allowed more students to attend. I assumed a small portion of students may move to the neighborhood, as their families were attracted to a new school facility. Housing in the Seattle area is relatively expensive and I assumed predominantly white, wealthy families would be overrepresented in the relocated group. The Arbor Heights analysis begins in the planning stage for capital funding (2010-2011), two years before voter approval, and ends two years after building construction (2017-2018). The Kimball analysis also begins in the planning stage, two years before voter approval (2015-2016). The analysis ends in the 2017-2018 school year, as this was the most recently available data. Over these time periods, data will be constrained to summarize student enrollment growth or attrition over that period of time, rather than yearly losses and gains. Percentages are used to capture overall proportional differences in student racial representation at each school site.

I will address RQ2 , *what impact does a new South Seattle elementary school have on student enrollment at a neighboring site,* by examining enrollment shifts illustrated within SE and SW pairs. Comparing funded sites to neighboring sites within pairs investigates if there are spillover effects in funding capital outlays. The underlying assumption is that changes to a neighboring site are perpetuated by the changes at a bordering funded site. The independent variable will be the new building, with the moderator variable as the location of the school, Southwest or Southeast. The dependent variable will be the outcome of enrollment. The exposure to capital funding will be measured by overall student enrollment and enrollment by race. Data will be analyzed as percentages to observe proportional enrollment changes by race.

RQ3, *what implications can be drawn from the Southwest BEX IV replacement project at Arbor Heights to inform similar enrollment shifts emerging at the Southeast BEX V Kimball*

Elementary replacement project, will be informed by enrollment trends demonstrated in the Southwest pair and emerging trends demonstrated by the Southeast pair. When comparing between pairs, the assumption is that the full cycle of planning, construction, and occupancy demonstrated at Arbor Heights and Roxhill, may lead to considerations for Kimball and John Muir, as they begin their planning phase. Kimball Elementary BEX V funding lacks data, as they are at the "beginning" of their funding cycle. Between pair comparisons allude to the potential for growth and displacement in the SE pair to follow a similar pattern as the SW pair. Growth and attrition rates will be compared as percentages across the two pairs. This will inform overall enrollment trends and enrollment by race.

4.4 Limitations

Schools Schools in this case study were classified as "BEX funded" if they received capital projects listed as a "major construction project" on the Seattle Public Schools' Capital Levies website. However, other schools in the study received less significant levied funding. For example, under BTA IV, John Muir received firm alarm upgrade (Seattle Public Schools) and under BEX V was prioritized for a CR Addition, seen in Appendix C. Between 2013 and 2018, a number of changes occured in the schools in this case study. In 2018, Roxhill Elementary moved buildings from the Interagency site to E.C. Hughes, 1.8 miles from Arbor Heights (West Seattle Blog, 2018). E.C. Hughes was modernized in response (Seattle Public Schools) under BEX V. Likewise, there were a number of leadership shifts and social challenges which placed some sites in the media. For example, in 2016, John Muir Elementary found itself at the center of an act of solidarity turned controversy, at an event supporting children's positive social construction of Black men. This led to a well publicized debate, with many SPS teachers wearing 'Black Lives

Matter' shirts to school (Cornwell, 2016). There is no way to know how minor capital funding, building changes, and politicized attention may have impacted enrollment.

The manner in which SPS data is managed, does not capture specific student movement. This supports the confidentiality of students under FERPA regulations, but challenges claims around the true number of students participating in this study. Though the maximum number of students participating in a given year is known, the overall number over a span of years is unknown. Similarly, student movement between sites is largely unknown, though it is likely that movement occured.

Design The 2016 to 2018 school years serve as a preliminary time period which only capture the potential impacts of BEX V Capital Levy passage. At this time, the new Kimball Elementary building has not been constructed nor have any boundary changes associated with its construction been planned. These small impacts may be indicators of a future trend or indicative of other neighborhood changes.

This case study did not control for multiple variables in its design. These variables could have impacted enrollment in neighborhoods served by the Southwest or Southeast school sites. This includes trends in housing prices, low-income housing projects, changes in local zoning, average earned income, transportation shifts, or changes occuring at other community spaces. This creates challenges to the validity of any claims made. A more sophisticated analysis of capital projects and their impact on enrollment could offer a clearer picture between geographic distance, neighborhoods, and overall community impacts.

Uncaptured in the data are the various cultural differences among the four schools. Anecdotally, this was a concern expressed by the Enrollment Planning Department at Seattle Public Schools, but was widely inaccessible through the available data. Students in this study are

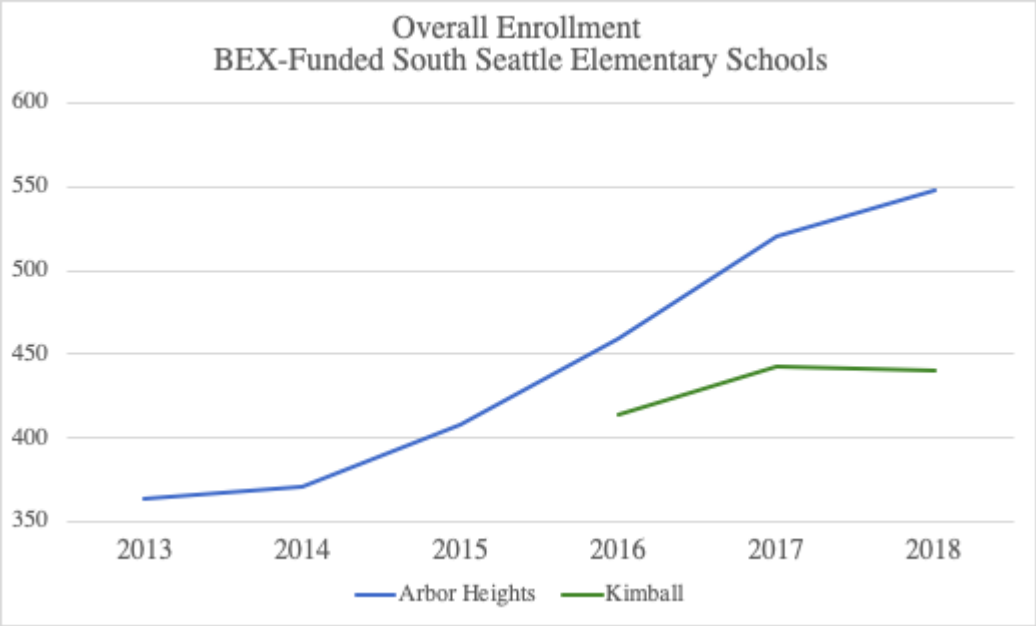
grouped by broad categories, such as ‘non-white’ which fail to explore the nuances of racial, ethnic, and culture communities with long standing histories in their neighborhoods. This analysis choice allowed for exploration of a largely unapproached area of study, but greatly limits the extent of claims. The nature of this case study does not allow for causal inference. Although education systems and educational spaces may contribute to challenges associated with racial inequity, it is the construction of a number of sociopolitical factors. Seattle’s rapid growth continues to change demographics, gentrify communities, and displace long-standing community members. At this time, we cannot understand how school funding contributes or is symptomatic of the larger problem.

5. RESULTS

5.1 Findings Summary

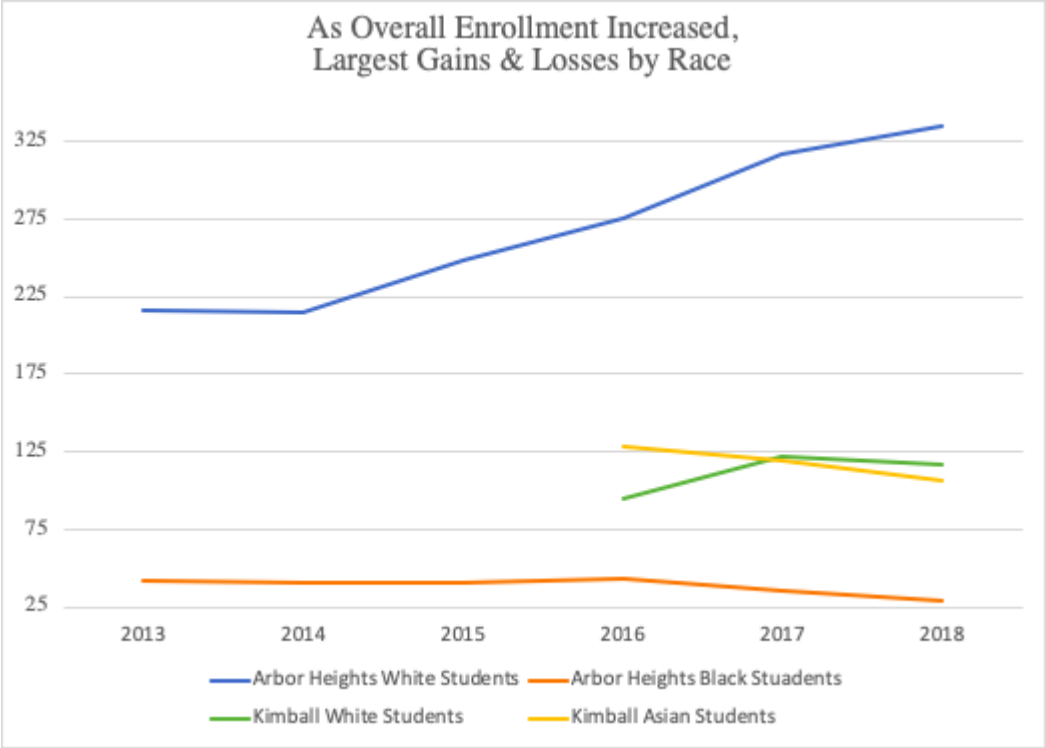
RQ1: *What impact does a major school infrastructure project have on student enrollment at BEX-funded South Seattle elementary school sites?*

Figure 10



As seen in Figure 10, ***BEX funded sites increased in overall student enrollment.*** At Arbor Heights Elementary (SW) under BEX IV (2013-2018), enrollment increased by 184 students. At Kimball Elementary (SE) under BEX V (2016-2018), enrollment increased by 26 students. The overall increase in enrollment was not proportionally distributed. As seen in Figure 11, ***white students were the fastest growing enrolled student group.*** At Arbor Heights Elementary (SW) white students increased their representation by 3% from 2013-2018. At Kimball Elementary (SE) white and black students both increased their representation by 4% from 2016-2018.

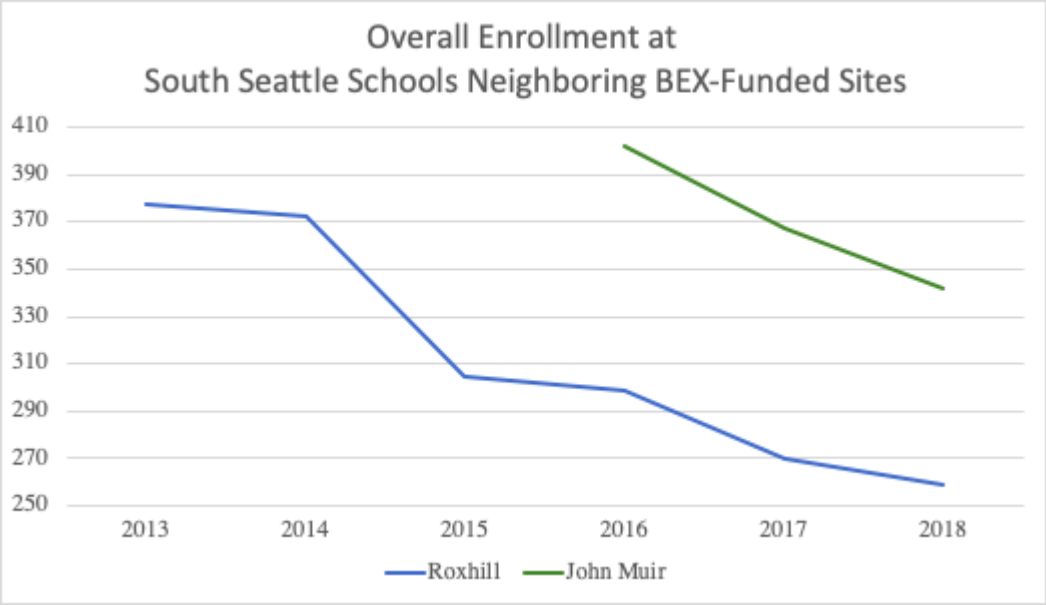
Figure 11



Despite an overall increase in enrollment, each funded site saw a decrease in enrolled students of color. The population that demonstrated the highest attrition rate was different at each site. Depicted in Figure 11, Arbor Heights Elementary (SW), Black students had the highest attrition rate. Their representation decreased by 7% from 2013-2018. At Kimball Elementary (SE), Asian students had the highest attrition rate. Their representation decreased by 7%

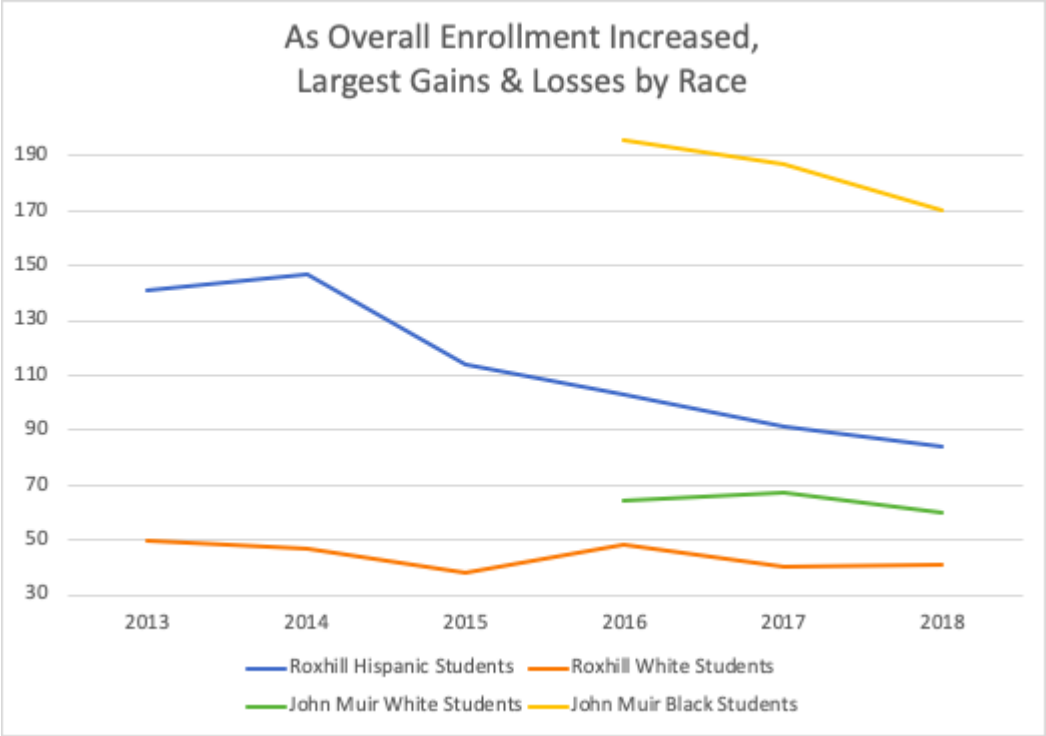
RQ2: *What impact does a new South Seattle elementary school have on student enrollment at a neighboring site?*

Figure 12



As seen in Figure 12, ***Schools neighboring major BEX-funded, elementary school building projects decreased in overall student enrollment.*** At Roxhill Elementary (SW) under BEX IV (2013-2018), enrollment decreased by 118 students. At John Muir Elementary (SE) under BEX V (2016-2018), enrollment decreased by 60 students. The overall decrease in enrollment was not proportionally distributed across the population at neighboring sites. ***When student enrollment decreased at neighboring sites, students of color represented the highest attrition rates.*** Seen in Figure 13, Roxhill Elementary (SW) Hispanic students had the highest attrition rate with fifty-seven Hispanic exiting the school between 2013 and 2018. Hispanic student representation dropped by 5%. Thirty Asian students and twenty-nine Black students represented the next highest attrition rates. At John Muir Elementary (SE) Black students had the highest attrition rate with twenty-six black students exiting the school between 2016 and 2018. Sixteen Hispanic students represented the next highest attrition rate.

Figure 13



Despite an overall decrease in students, the white student population was increasingly represented at neighboring sites. Seen in Figure 13, although the number of white students decreased slightly, the decrease in students of color Roxhill Elementary (SW), increased white student representation by 3% from 2013-2018. The same occurred at John Muir Elementary (SE), where white students increased their representation by 2% from 2016-2018.

RQ3: *What implications can be drawn from the Southwest BEX IV replacement project at Arbor Heights to inform similar enrollment shifts emerging at the Southeast BEX V Kimball Elementary replacement project?*

Emerging enrollment trends at the SE school pair mirrors overall enrollment shifts at the SW school pair. This is captured in the findings above, where 1) overall enrollment grew at funded sites, as white students were increasingly represented and students of color were

decreasingly represented; and 2) overall enrollment decreased at neighboring sites, despite a declining population, white students were increasingly represented and students of color were decreasingly represented.[9] Resident data confirms these shifts are consistently with movement to and from the area and cannot be attributed to movement requests honored by enrollment planning.

5.2 BEX IV in SW Seattle: Arbor Heights and Roxhill

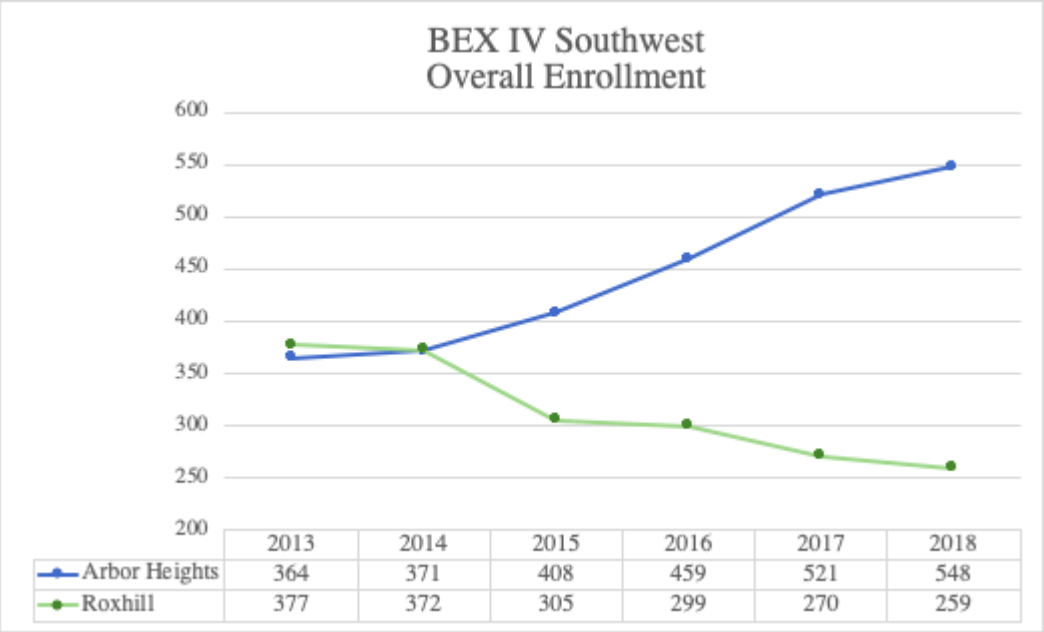
Background In February of 2013, Seattle voters passed BEX IV funding and provided $694.9 million dollars (Seattle Public Schools) towards capital improvements for Seattle Public Schools. Arbor Heights Elementary School received a full replacement of their building in this levy funding cycle. The Arbor Heights Elementary School attendance area borders the Roxhill Elementary attendance area. Roxhill did not receive a replacement building from the BEX IV funding. In 2016, the new Arbor Heights building opened and the neighborhood underwent an enrollment boundary change.

Findings The Southwest Seattle pair uses data from the year the BEX IV levy was passed in the 2012-2013 school year to five years later in the 2017-2018 school year. These will be referred to as 2013-2018 in alignment with Seattle Public Schools' school year descriptions.

In the 2012-2013 school year, Arbor Heights and Roxhill demonstrated similar enrollment numbers. Arbor Heights enrolled 364 students and Roxhill enrolled 377 students. Over five years, Arbor Heights grew its total enrollment by 51%. Over this same five year period, Roxhill saw a 31% decline in enrollment. This is demonstrated below in Figure 12.

[9] Complete enrollment data can be found in Appendix E.

Figure 14



Seen in Figure 14, between 2013 and 2018 Arbor Heights Elementary grew by 184 students. Demonstrated in Table 3, the highest rate of growth was in White (119), Multiracial (45), and Hispanic (23) enrolled students. Table 4 demonstrates this growth as a percentage of the overall population.

Table 4

In 2013, Arbor Heights students represented ___% of the overall student population:		**In 2018, Arbor Heights students represented ___% of the overall student population:**	**% change**
Asian	6%	6%	
Black	12%	5%	-7%
Hispanic	11%	11%	
Native	2%	>1%	

Multiracial	10%	15%	+5%
Pacific Islander	>1%	>1%	
White	59%	62%	+3%

Between 2013 & 2018, resident population in the Arbor Heights Elementary district grew by 112 students. The highest rate of growth was in White (59), Multiracial (50), and Hispanic (16) resident students. This mirrored school enrollment. All other populations remained the same or demonstrated decline. Table 5 demonstrates this growth as a percentage of the overall population.

Table 5

In 2013, student *residents* of Arbor Heights Elementary represented___% of the overall resident population:		**In 2018, student *residents* of Arbor Heights Elementary represented___% of the overall resident population:**	**% change**
Asian	6%	4%	-2%
Black	6%	3%	-3%
Hispanic	11%	12%	+1%
Native	>1%	>1%	
Multiracial	11%	17%	+6%
Pacific Islander	>1%	>1%	
White	65%	62%	-3%

At Roxhill Elementary, between 2013 and 2018, enrollment declined by 118 students. Student attrition was highest in Hispanic (57), Black (29), and Asian (30) students. Almost all

racial and ethnic groups declined in student enrollment, with the exception of students who identify as Multiracial or Pacific Islander. Table 6 demonstrates attrition as changes in representation within the overall enrolled population.

Table 6

In 2013, Roxhill students represented ___% of the enrolled population:		**In 2018, Roxhill students represented ___% of the enrolled population:**	**% change**
Asian	14%	9%	-5%
Black	27%	27%	
Hispanic	37%	32%	-5%
Native	1%	1%	
Multiracial	7%	12%	+5%
Pacific Islander	1%	2%	+1%
White	13%	16%	+3%

Between 2013 and 2018, the resident population in the Roxhill Elementary enrollment area declined by 45 students. Demonstrated in Table 7, the highest rate of attrition was in Hispanic (22), Asian (16), and Black (12) resident families. This mirrors enrollment trends for Roxhill. The resident population of White students grew by ten.

Table 7

In 2013, student *residents* of Roxhill Elementary district represented represented ___% of the overall resident population:	**In 2018, student *residents* of Roxhill Elementary district represented represented ___% of the overall resident population:**	**% change**

Asian	10%	7%	-3%
Black	22%	21%	-1%
Hispanic	28%	23%	-5%
Native	1%	>1%	
Multiracial	10%	12%	+2%
Pacific Islander	>1%	1%	
White	28%	34%	+6%

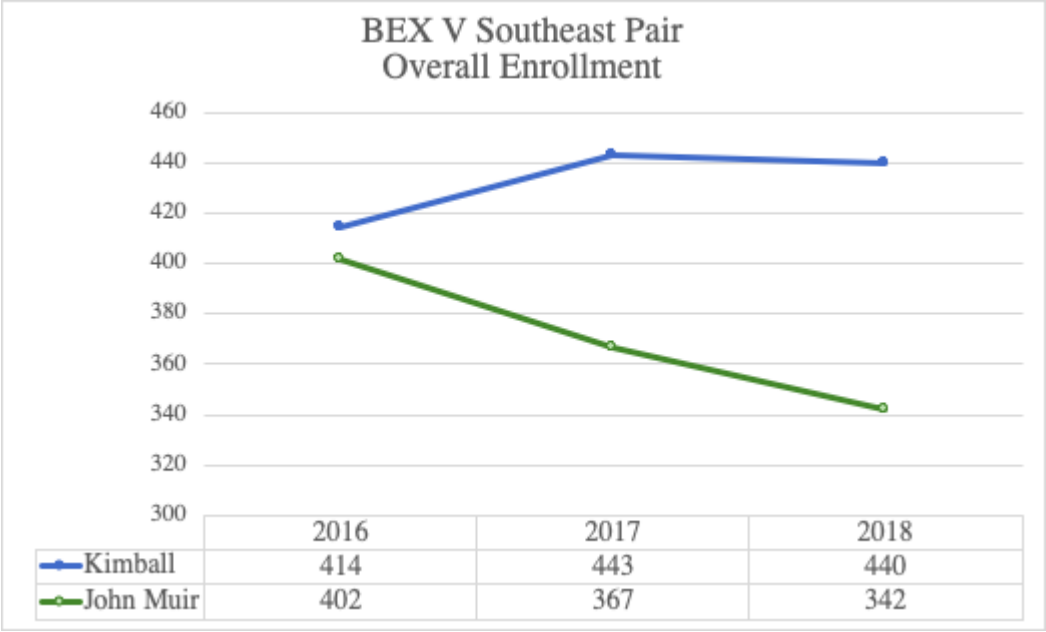
5.4 BEX V in SE Seattle: Kimball and John Muir

Background In February of 2019, Seattle voters passed BEX V funding and provided $1.4 billion (Juneau, 2018) toward capital improvements. This was the first BEX levy subject to equity scoring (Gross, 2018). Under previous scoring measures, Kimball Elementary and other Southeast Seattle sites were not under consideration for improvements. Kimball Elementary School will receive a full replacement of their building under BEX V. The Kimball Elementary School attendance area borders the John Muir Elementary School attendance area. John Muir Elementary will not receive a replacement building from BEX V funding, however, it will receive a non-major addition. In 2020, Kimball will undergo an anticipated enrollment boundary change in response to another bordering school, Maple Elementary, which is over capacity.

The Southeast Seattle pair uses data from the year the BEX V levy was passed in the 2015-2016 school year to the most recent available date, in the 2017-2018 school year. These will be referred to as 2016-2018 in in alignment with Seattle Public Schools' school year descriptions.

Findings From 2013 and 2016, Kimball Elementary and John Muir Elementary School were closely matched in overall student population. Over this time, they demonstrated no more than a 33 students enrollment difference in any given school year. In the 2016-2017 school year, Kimball enrolled 414 students and John Muir enrolled 402. At this point, the population began to shift at both schools. This shift is demonstrated in Figure 15.

Figure 15



Between 2016-2018, Kimball Elementary's enrollment grew by 26 students. Black (33) and White (22) students were most represented. This is demonstrated in Table 8.

Table 8

In 2016, Kimball students represented ___% of the enrolled population:		**In 2018, Kimball students represented___% of the enrolled population:**	**% change**
Asian	31%	24%	-7%

Black	19%	23%	+4%
Hispanic	13%	13%	
Native	0%	0%	
Multiracial	14%	13%	-1%
Pacific Islander	>1%	>1%	
White	23%	27%	+4%

Between 2016 and 2018, there was an overall increase of three student residents to the Kimball Elementary attendance area. However, in 2017 there was a significant increase of White (20) residents, while predominantly Asian (14) and Black (11) students left the attendance area. This is captured in Table 9. This created a demographic shift between 2016-2018 that increased White student representation at Kimball Elementary.

Table 9

In 2016, student *residents* of the Kimball Elementary represented ___% of the overall resident population:		**In 2016, student *residents* of the Kimball Elementary represented___% of the overall resident population:**	**% change**
Asian	28%	22%	-6%
Black	22%	23%	+1%
Hispanic	12%	13%	+1%
Native	0%	0%	
Multiracial	14%	14%	

Pacific Islander	0%	0%	
White	24%	28%	+4%

From 2016 to 2018, John Muir Elementary's enrollment declined by 60 students. Demonstrated in Table 10, the highest rate of attrition was demonstrated in Black (26) and Hispanic (16) student populations. Despite drops in enrollment, Black and White populations became more represented as the total student population shrunk.

Table 10

In 2016, John Muir Elementary students represented ___% of the enrolled population:		**In 2018, John Muir students represented ___% of the enrolled population:**	**% change**
Asian	11%	10%	-1%
Black	49%	50%	+1%
Hispanic	11%	9%	-3%
Native	0%	>1%	
Multiracial	12%	11%	-1%
Pacific Islander	>1%	2%	+2%
White	16%	18%	+2%

Between 2016 and 2018, resident student population shrunk by 64 students in the John Muir Elementary attendance area. This was primarily comprised of Black (24) and Asian (18) student residents who left the attendance area. Native and Pacific Islander students both saw small increases in representation in the neighborhood. This is demonstrated in Table 11.

Table 11

In 2016, student *residents* of the John Muir Elementary district represented ___% of the overall resident population:		In 2016, student *residents* of the John Muir Elementary district represented ___% of the overall resident population:	% change
Asian	13%	11%	-2%
Black	49%	50%	+1%
Hispanic	9%	8%	-1%
Native	>1%	>1%	
Multiracial	10%	11%	+1%
Pacific Islander	>1%	1%	+1%
White	18%	18%	

5.5 Research Question Summary

1. What impact does a major school infrastructure project have on student enrollment at BEX-funded South Seattle elementary school sites?
    a. BEX-funded South Seattle elementary school sites increased in overall enrollment, but that growth was not proportional. The white student population grew, while students of color enrollment fell.
2. What impact does a new South Seattle elementary school have on student enrollment at a neighboring site?
    a. South Seattle elementary schools neighboring BEX-funded sites decreased in overall enrollment, but that growth was not proportional. The white student increased in overall representation, while the enrollment of students of color fell.

3. What implications can be drawn from the Southwest BEX IV replacement project at Arbor Heights to inform similar enrollment shifts emerging at the Southeast BEX V Kimball Elementary replacement project?
    a. The Southeast pair demonstrates a similar pattern to the Southwest site. With student enrollment growing at funded sites and shrinking at neighboring sites, white students are becoming increasingly represented and students of color decreasingly represented at all schools.

6. DISCUSSION

6.1 Diverse Student Data Builds the School, but Many Don't Attend

Although much is written on state-level change and prioritization of capital outlays, little research captures local contexts (Duncombe & Wang, 2009; Thompson, 1989). Even less is written on equity measures that specifically relate to funding prioritization in capacity planning and student placement. With this in mind, it is important to note Seattle Public Schools positionality in approaching these challenges. SPS may be at the forefront of this work, where risks must be taken to remedy historic inequities. Revealed in this case study, the population measured by Seattle Public Schools' equity tiers to "account for historic opportunity gaps" (Anderson, 2019) are not the same population that benefits from the new school. Examples of this movement are captured in Figure 16 and 17. At Arbor Heights Elementary and Kimball Elementary, there are fewer people of color and more white students that enter the new building than were measured to obtain equity measure scores.

Figure 16

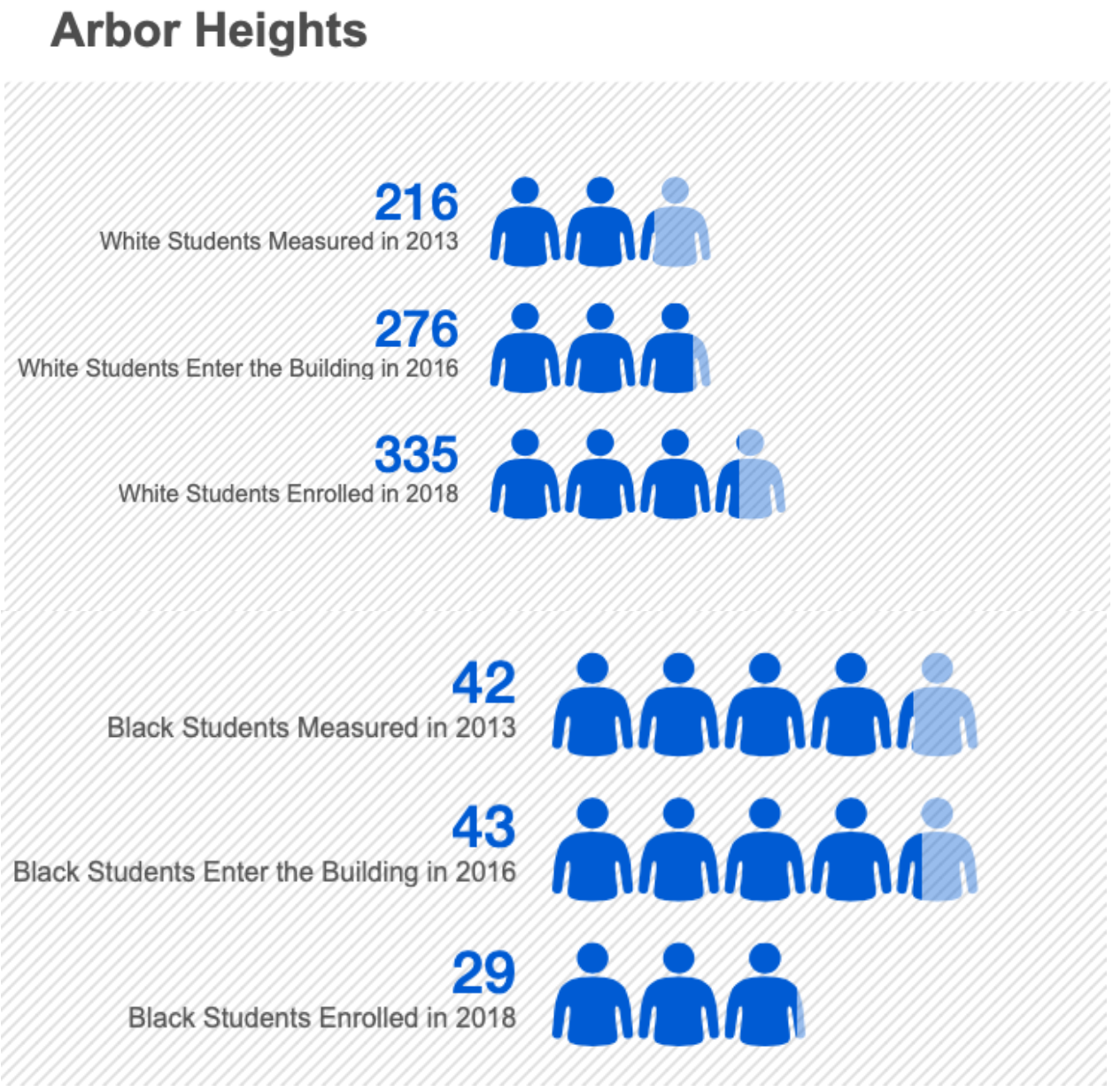
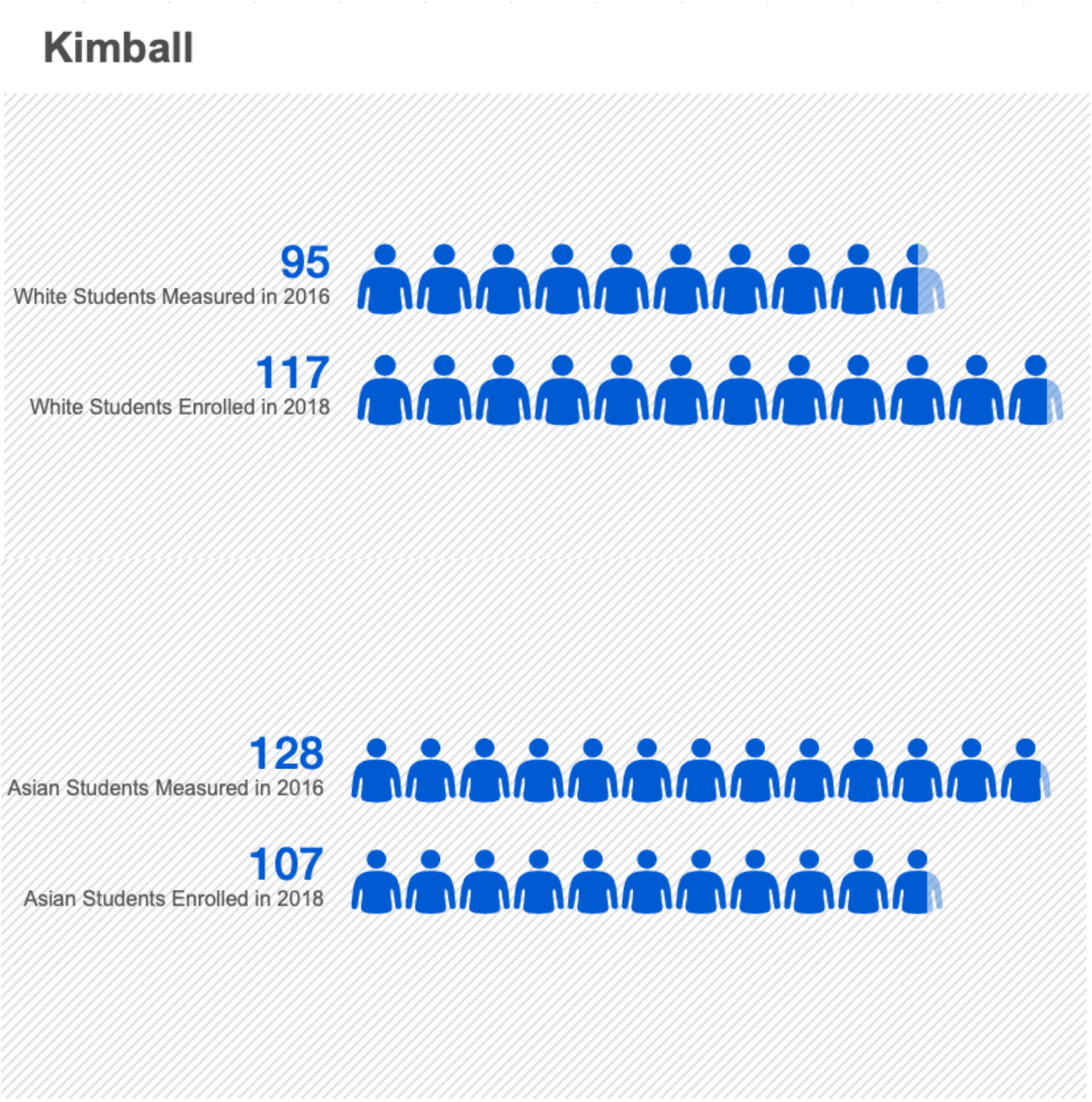

Arbor Heights
216
White Students Measured in 2013
276
White Students Enter the Building in 2016
335
White Students Enrolled in 2018
42
Black Students Measured in 2013
43
Black Students Enter the Building in 2016
29
Black Students Enrolled in 2018

Figure 17



South Seattle students deserve new schools, this is unquestionable. The challenge is in our measures of success. If a school is supported under an equity criteria in their ranking for funding, what proportion of those students should we reasonably assume will benefit from the new school? This is not a challenge that will be settled by a different equity measure for capital

funding prioritization, but in the way Seattle Public Schools' approaches neighborhood investment.

6.2 Assets to capital

Under the current process for equitized capital funding, only one asset, the school building, is invested as community capital. This investment process took place when Seattle Public Schools implemented their strategy to use an equity measure, which ultimately prioritized the improvement of South Seattle school infrastructure. Emery et.al (2006) describes built capital as predictably ineffective if it lacks accompaniment by other intentional investments. Communities are more likely to embrace built capital when other community assets are aligned to support that infrastructure's purpose. Emery et.al (2006) suggests a process of "Discover, Dream, Design, Deliver, Debrief " (p.3) to create a generative planning cycle towards communities harnessing their assets. Previously in Figure 6, the "discover" phase was used to examine existing capitals presented by the current BEX funding process. Below in Figure 18, the "dream" phase is used to consider how assets differ in their invested capital forms.

Figure 18

*What **community capitals could be available** to Southeast Seattle families through the allocation of Seattle Public Schools capital outlays?*

	Natural	**Cultural**	**Human**	**Social**	**Political**	**Financial**	**Built**
Asset: BEX Funded Capital Project	School as a significantly improved component of landscape	Space designed for population assessed for equity measure	Investment in student education	Perceived value of school to families Growing number of families	Equity measure reallocates funding locally	Funding allocated for construction	School building
↓	↓	↓	↓	↓	↓	↓	↓
[Dream] Capital	School location maintains significance in community landscape	Space designed to maintain population assessed for equity measure	Investment in community pool of knowledge and skills	Family valued by school Proportional growth of families	Equity measure contributes towards creation of high quality learning opportunities	Funding allocated for community process in construction	School building

Note. Adapted from Emery, Fay, & Flora's (2006) steps to strategize and monitor using the *Community Capitals Framework*.

These dream capitals are inspired by Bourdieu's (1990) cycles of oppression, meant to disrupt violence in educational spaces by centering outcomes for nondominant community members. They are central to equitable distribution (Stone, 2012) in their attention to outcomes that connect to a student's deep learning experiences, in a multitude of ways (Nasir et.al, 2006). Under this dream model, natural spaces, typically considered outdoor features of the landscape, capture the wide significance of place (Beaulieu, 2014 p.2). Cultural capital is reflected in a

desire to design for a population and use that design to maintain that population in a given neighborhood. Student achievement, often seen as an individualistic measure of human capital, is transformed to consider the skills and contributions of the collective. Social capital privileges the linkages between people and organizations (Beaulieu, 2014), placing value on the people that interact in those spaces, rather than the spaces themselves. This encompasses the value of proportional growth, in contrast to growth which burdens and displaces community members. Political and financial capital are offered to South Seattle community members in their attendance at planning meetings to establish and prioritize values throughout the construction process. Finally, the school building remains unchanged in its final form, but is transformed through the processing of dreaming. At this juncture, the school building's successful community uptake is more likely as other capitals are additive in the school building's value.

6.3 Neighboring Gentrification

Challenges in transforming assets to capital are intertwined with larger societal forces. Each asset is tangled with socioeconomic challenges that create barriers to a rich set of community capitals. Most apparent in this case study is the increase in white students, regardless of overall school population growth or decline. Most troubling is the gentrification of neighboring schools, who reap no benefits from a BEX funded structure they do not attend. Gentrification systematically erodes the stock of cultural capital within a given community, as families and businesses are displaced. Seattle is a divided city; where the most racially diverse populations live in the South and the most homogenous, predominantly white populations, live North (Balk, 2020). However, these lines are fluid and gentrification is a creepin concern,

highlighted in this case study by a new wave of white residents. In the last ten years, the white population across Seattle increased by 16% (Balk, 2020).

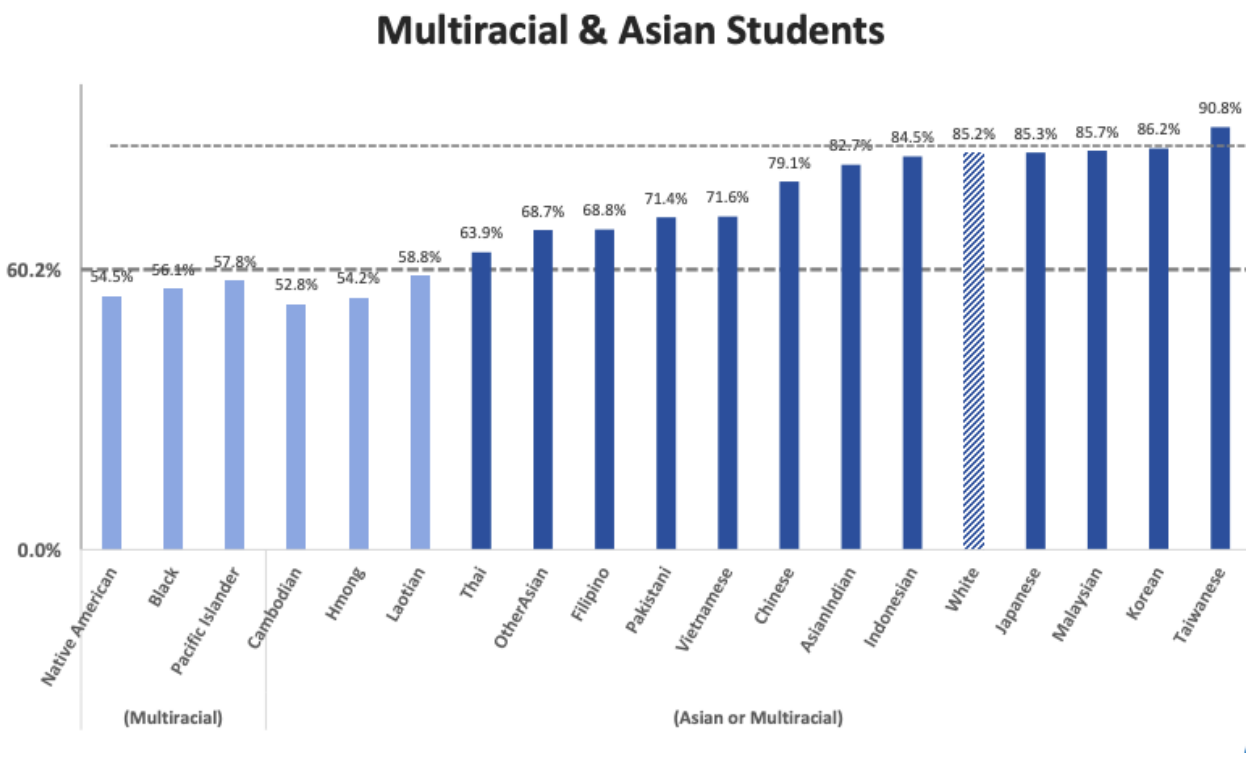
In this study, as capital funded schools grew in overall population, neighboring schools declined in overall population. For some populations, the data suggests that a portion of students may have left one school for another. At Arbor Heights Elementary and Roxhill Elementary, it is reasonable to assume that a portion of Asian and Hispanic students may have left Roxhill to attend Arbor Heights.[10] The data suggests that a portion of local students of color could have attended school in the new Arbor Heights building. In contrast, Black student populations dropped at both schools, regardless of overall population gain or loss. It is unclear where those students go.

The same is true at Kimball Elementary and John Muir Elementary, where a portion of Black students may have left John Muir to attend Kimball. Although the data reveals promise, in some students of color moving to attend improved school facilities, questions remain around specific displaced populations. Regardless of overall population gains and losses, at both schools, Asian student population drops at both schools. Below in Figure 19, is a disaggregated representation of Multiracial and Asian subgroup performance on the Smarter Balanced English/Language Arts (ELA) Assessment within Seattle Public Schools. This graph clearly demonstrates the need for an even more granular investigation of displaced families, as the broad racial categories fail to capture the nuances of student need.

[10] It is unclear if these moves were physical movements or requests honored by Enrollment Planning to move school sites.

Figure 19

Historical Achievement by Race/Ethnicity (ELA Proficiency, SBA 2016 to 2018)



Note. Figure from Dr. Dr. Eric M. Anderson, Director of Research & Evaluation at Seattle Public Schools, March 2019 Presentation *School Equity Tiers*.

Gentrification remains an ever present challenge to nondominant families in Seattle. Neighboring schools demonstrated those impacts in the increasing proportion of white students replaced by a decreasing proportion of Black, Asian, and Hispanic students at all sites. Spillover effects from schools that neighbor funded sites should be investigated for the potential burden they place on community members. If these are related phenomena, then additional equity measures should be in place to ease impacts on nearby communities.

6.4 Where did they go?

In this study, I explored potential impacts on the closest out of district elementary school to Arbor Heights and Roxhill. This was to monitor any localized displacement effects. Areas within King County, but outside of Seattle city limits have outpaced Seattle in diverse population growth since 2010 (Balk, 2020). Shorewood Elementary in the Highline School District demonstrated a four percent growth in white students and two growth in Asian students over the same 2013-2018 BEX IV funding and building period. This is demonstrated in Figure 20. Shorewood's population change did not account for significant displacement of Black students from Arbor Heights and Roxhill. This suggests that Black students leaving the area, may have relocated farther from the funded school zone.

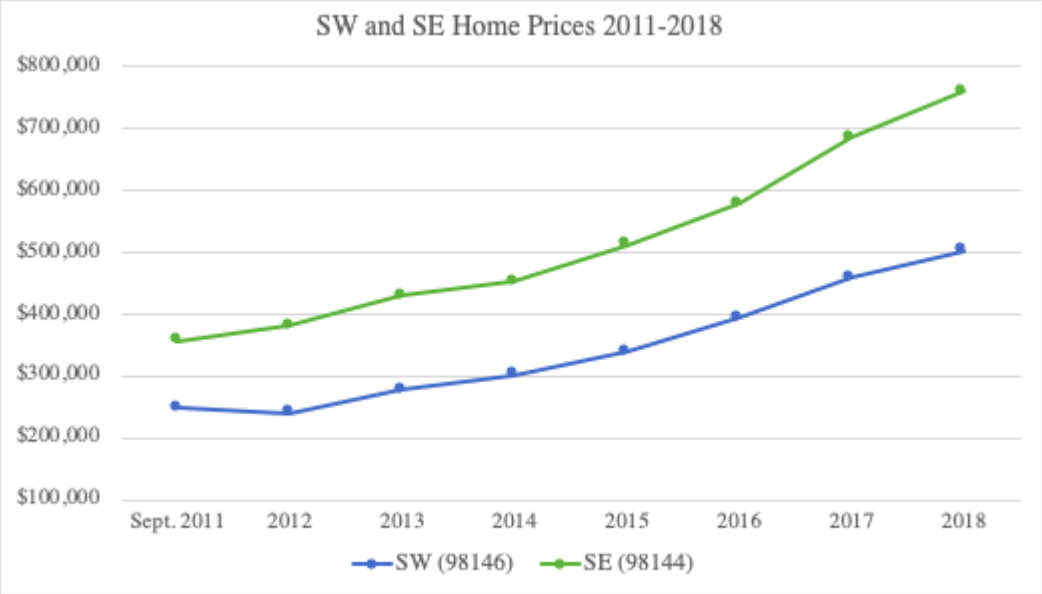
Figure 20

Shorewood Elementary, Highline District

In the 2013-2014 school year, Shorewood students represented ___% of the enrolled population:		**In the 2017-2018 school year, Shorewood students represented ___% of the enrolled population:**	**% change**
Asian	18%	20%	+2%
Black	9%	8%	-1%
Hispanic	23%	29%	
Native	1%	1%	
Multiracial	14%	8%	-6%
Pacific Islander	3%	1%	
White	32%	36%	+4%

In the wider picture of King County, racialized displacement is relatively common. Recent population surveys concluded that diverse populations are growing much more rapidly in the suburbs, in comparison to Seattle (Balk, 2020). Smaller cities, like Tukwila, have witnessed complete shifts. Where three black families were represented across the city in 1967 (Kelleher, 2013), they were among 50% residents of color in 2017 (Beekman, 2019). Increased housing prices is a driving force in families of color decision to leave Seattle (Beekman, 2019). Changes in the price of a single-family home for Southwest and Southeast neighborhoods are captured in Figure 21.

Figure 21



Note. Data was retrieved and adapted from Zillow on *98146 and 98144 Home Prices & Values*. Each pair of schools shared a zip code, maps of the area can be found in Appendix F. The original location of Roxhill Elementary is used for this analysis.

If rising housing prices are associated with new school buildings (Martorell et.al, 2016, p.14), displacement could be exacerbated by a measure intended to equitize. These are essential

considerations in the way social, cultural, and human capital are retained in relation to financial and built capital.

6.3 Funding inequity

In this case study, the least surprising finding was that the passage of a new school levy leads to higher attendance. In many ways, this is within the policy goals of SPS Capital Planning, as they make the new building cost-effective in holding current and future student populations. Similarly, neighboring schools drop in population, with the assumption that some students move to the local funded site. Explored in previous sections, students might shift schools in response to wider effects of gentrification and displacement.

The number of students attending a school influences how many teachers, support staff, and administrators are provided to serve them. A dropping population leads to fewer adults in the building. Caring adults are social, human, and cultural capital in a school system where connections are the "glue" (Emery, et.al, 2006, p.6; Beaulieu, 2014, p.3) that influences a family's experience with education. As individual schools across SPS are given some autonomy in choosing where their funding goes, schools with dropping populations must focus their efforts on keeping children in the building. However, low population schools are not privy to the wealth of materials or programming that might be used to support a continuous school experience. The basis for funding is embedded in the Weighted Staffing Standards model. This determines the amount of funding provided to a school based on current teacher experience, with dollars supplemented for students with additional needs. Based on current figures, on average, Arbor Heights teachers have 3.2 more years of experience than teachers at Roxhill and Kimball teachers have 4.7 more years of experience than teachers at John Muir (OSPI, 2018). This

means that both BEX neighboring sites will receive less funding for school programming, through this measure, than neighboring schools. This is a funding challenge. With more experienced teachers and increasing enrollment, funded sites will not need to make the same funding choices. For instance, at low enrollment the roles of Elementary Assistant Secretary, Librarian, and Assistant Principal move to a half-time role. Nurses are moved to .2FTE and the roles of Certified Core Staff and House Administrator are eliminated entirely (Seattle Public Schools, 2018). The decision to keep these positions is weighed over hiring more teachers to lower class sizes are measured against maintaining nurses, librarians, and core operational staff. It is also an equity challenge. The Learning Policy Institute found that "teaching experience is positively associated with student achievement" and this achievement increases as teachers gain more experience. Teachers with more experience will choose to work at stable and growing schools, that stability allows for positive professional growth and strengthening of relationships (Kini & Podolsky, 2016). Schools with decreasing populations will fail to attract these career educators.

Choices in what to fund exacerbate inequities in local areas, continuing the cycle of oppression for populations who choose to stay in local schools. Capital projects are well-intentioned, discreet funding sources that support student learning in a tangible way. Their impacts are felt widely, with spillover effects touching other schools in the community and their ability to support their own enrolled population.

7. IMPLICATIONS

7.1 Overview

Schools are hard to define beyond their OSPI school code.[11] They are brick and mortar establishments, but the learning opportunities that occur inside them travel far beyond those boundaries. Because of the physical barriers and nonphysical horizons presented by schools, it is hard to know how any family might react when a building moves or the walls are rearranged. Trying to answer the question "what is a school?" creates a data challenge that feels insurmountable. In attempting this case study, schools were consistently pushing against the boundaries I set around them to attempt consistency and draw implications. Seattle Public Schools were almost fluid in their changing landscapes. In this study alone, I cited over five name or building changes and dozens of boundary changes in the small group of schools studied. In approaching this work, I believe this fluidity presents a data opportunity. There are very few meaningful ways to compare across schools. Though race and enrollment data are enlightening, they are hardly enough to capture the full picture of community benefits and burdens that stem from localized change. This section serves as a review of strategies other educational systems have attempted to efficiently approach and measure equity outcomes through different forms of measurement and data representation.

7.2 Financial, Social, and Political Capital in Boston Public Schools

Massachusetts schools are semi-autonomous in choosing how their state and local funding is allocated. Individual school spending can be easily accessed through a statewide visual data tool called RADAR. RADAR demonstrates proportional spending at each site and

[11] OSPI school codes can be found at https://eds.ospi.k12.wa.us/WAI/SchoolCodeLookup/Search

encourages districts to use the information to benchmark their own spending. The report includes information around spending, staffing, and per pupil expenditure over five years (Office of Planning and Research). It encourages financial capital across schools, by creating a flexible accountability system which offers examples for how to align unique community needs with funding. Incorporating this tool into local spending contexts and noting where levy funding was injected could offer a visual window into its short and long term effects.

At the city level, Boston measures its funding in a Weighted Student Funding (WSF) system by per poverty decile funding. This ensures that schools are not broadly categorized, when each additional poverty measure represents deep differences in family life (BPS, 2019). The *Opportunity Index* also weights factors that are widely known to lead to lower attendance and test scores, including academic attainment of household adults and enrollment in state-administered programs for low-income families. These scores are publicly available online and reported yearly (BPS, 2020). The transparent availability of this information creates social capital, as individuals can see how public funding is directly connected to their community's collective growth. The *Opportunity Index* ensures that if populations shift in a given district, dollars of support will remain with the student. Redesigning funding, either with new conceptions of supplements under a Weighted Staffing System or as a primary weight in student-centered funding system like WSF, could approach the challenges of unproportional funding at schools with declining populations.

Creating a prioritization of student funding through weights would offer a pathway for discreet SPS departments. Elevating the current model at a wider scale, put forward by Anderson (2019) in Appendix A, would allow other departments to prioritize high needs students in their own equity measures. For instance, the Enrollment Planning could use the weights to prioritize

student placement during the open enrollment period. These placements would be required to be race neutral, based on the ruling of *Parents Involved in Community Schools v. Seattle School District No. 1* (LII, 2007). However, most are, using "any racial group or sub group with a proficiency gap," language, immigration status, and housing stability as indicators. Selecting evidence-based weights offers political capital to nondominant communities who may not have systematized and prioritized access across the entire SPS system.

7.3 Cultural and Human Capital in New York City Community Schools

New York City launched the Community Schools initiative in 2014 (New York City Community Schools). They have quickly become a source of pride, intergenerational growth, and cultural capital. At this time, there are more than 250 Community Schools (Johnston, 2020). Community Schools are usually based in low-income neighborhoods, supported by public-private partnerships, and offer services to a large community of youth and adults. Their goal is to approach the many systemic factors that undermine strong academic outcomes including housing, health, and poverty (Johnston, 2020). An evaluation of the program found that Community Schools positively influenced attendance, on time grade progression, and decreased disciplinary incidents. Recently, the Los Angeles school district agreed to transform thirty sites into community schools, as a key feature of contract negotiations with their teacher's union. Their demonstrated benefits are similar to the well studied Chicago Parent Child Centers (Reynolds, 2000). By centrally locating services at the school for multiple community groups offers increased access and deferred costs. A dentist that is embedded in a school allows a child to attend an appointment without a parent sacrificing hours worked. On-site childcare allows parents to provide the same level of care for themselves. Data suggests that schools could create better outcomes for communities when they offer child and adult-focused spaces (Filardo et.al,

2018, p.4). Seattle's surge of technology, which has historically failed to benefit South Seattle (Beason, 2019), could find a home in buildings that are under enrolled, increasing their viability to the community. Placing a range of services in schools that do not receive capital funding may create human capital in supporting multigenerational skill building and offset the displacement that accompanies it.

7.4 Building Data-Informed Community Teams

Research-practice partnerships are regularly formed between schools and researchers as "mutualistic collaborations... intentionally organized to investigate problems of practice and solutions for improving district outcomes" (Coburn, Penuel, & Geil, 2013, p.2). Data-informed decision making is a longstanding pillar in collaborative design among teachers, staff, administrators, and researchers in school spaces. Data teams establish goals for the process, create a climate that supports the collection and analysis process, and network to bring different parts of the school together to make change (Schildkamp, Poortman, Ebbeler, & Pieters, 2019). Usually these goals are at the classroom level, but may simultaneously approach a school wide initiative. Although there are only a few instances of the inclusion of families on a data-informed decision making teams, there is a large research base for participatory design in school communities. Examples include crafting parent-teacher designed parent education programs (Wood & McAteer, 2017), student-district negotiated classroom spaces (Kallio, 2018), or youth-adult partnerships in school turnarounds (Kirshner & Jefferson, 2015). In Seattle, an example of collaboration comes from academic parent-teacher teams at Van Asselt Elementary, South Shore PK-8, and Thurgood Marshall Elementary which are used to comprehensively support the academic lives of students (Ryan, 2019; South Shore PTSA, 2019). Creating data-informed decision making teams, which include communities, could offer an opportunity to engage

multiple voices. This is another built asset which could support the growth of other capitals towards a robust system. Teams would determine what questions are asked, what data is collected, the methods of engaging different groups, and how the data might be analyzed and available to the public. This might better inform the question “whom is the new school for?” In the project of public education, data teams could center voices, fill data gaps, and extend our understanding of the burdens and benefits of funding schools.

8. CONCLUSION

BEX levy funding increased overall enrollment at sites with major school infrastructure projects, while neighboring schools decreased in their overall enrollment. Regardless of overall gains and losses, Black, Asian, and Hispanic students represented the highest rates of attrition across sites. At the same time, white student populations increased at all schools. Nondominant South Seattle families deserve new schools, but how many of those families get to attend them is questionable. At this point, there is too little data to investigate the benefits and burdens of using capital outlays as a mechanism to equitize access to learning opportunities in nondominant communities in South Seattle. Strengthening community capitals in partnership with building new schools could lead to sustaining and centering learning outcomes. This can be achieved through thoughtful mechanisms to engage community voice in the data collection process.

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10. APPENDICES

Appendix A

METHODOLOGY: Capital Planning School Equity Tiers Measure (Anderson, 2019)

Goal of methodology to meet key objectives:

• Accounts holistically for the effects of race, poverty, language and culture on historical opportunity gaps
• Accounts for factors not addressed through other funding
• Distributes tiers proportionally across school levels
• Tiering results sufficiently stable across years
• Does not overly penalize successful gap-closing schools

Method uses data for 6 student groups:

1. Underserved Students of Color = Students in any racial group or racial subgroup with 25 point proficiency gap or greater compared to highest achieving Federal 7 group over last 3 years
2. Low Income Students of Color = Non-white students who qualify for free/reduced meals
3. Low Income Students = All students who qualify for free/reduced meals
4. English Language Learners = Students currently served by ELL program & recently exited
5. Immigrant Students = students not born in USA
6. Homeless Students

Three-step method to Identify Equity Tiers:

• Step 1: Each measure converted to a Decile (1-10) based on the district wide distribution
• Step 2: Deciles are averaged to create an Equity Index (1.0 – 10.0) for each school
• Step 3: Each school's Equity Index converted to Equity Tiers (1-4) using cutpoints (std. devs.)

Equity Index to Equity Tier (1-4) Conversion Table:

Equity Tier	Equity Index	Basis of Cutpoints
1	8.5 or higher	Approx. **1.5** standard deviations above average
2	7.5 to 8.4	Approx. **1.0** standard deviations above average
3	6.5 to 7.4	Approx. **0.5** standard deviations above average
4	6.4 or lower	n/a

Note. Methodology and table from Dr. Dr. Eric M. Anderson, Director of Research & Evaluation at Seattle Public Schools, March 2019 Presentation *School Equity Tiers*.

Appendix B

SY 2019/2020: Title I Schools in the Seattle Public School System (Seattle Public Schools, 2019)	
Aki Kurose Middle School	Lowell Elementary School
Bailey Gatzert Elementary School	Madrona K-5 School
Beacon Hill International School	Maple Elementary School
Broadview-Thomson K-8 School	Martin Luther King Jr. Elementary School
Concord International School	Northgate Elementary School
David T. Denny International Middle School	Olympic Hills Elementary School
Dearborn Park International School	Rainier View Elementary School
Dunlap Elementary School	Rising Star Elementary School
Emerson Elementary School	Roxhill Elementary School
Graham Hill Elementary School	Sand Point Elementary
Hawthorne Elementary School - Seattle	Sanislo Elementary School
Highland Park Elementary School	Seattle World School
John Muir Elementary School	South Lake High School
John Rogers Elementary School	South Shore PK-8 School
Kimball Elementary School	West Seattle Elementary School
Leschi Elementary School	Wing Luke Elementary School
Licton Springs K-8	

Appendix C

(Gross, 2018)

BEX V Project Scoring with Comparison of Two Equity Factor Methods

				Capital Factors (67% Weight)					OVERALL SCORE with Equity Factor (33% Weight)					
									First Version- Equity TIERS			Second Version- Equity INDEX		
	%			16.75%	16.75%	16.75%	16.75%	33%			33%			
Facility	School Type	Region	Scope of Work	Educational Adequacy (Avg. of 3 factors)	Building Conditions (avg. of 4 factors)	Health, Safety Security (avg. of 5 factors)	Right Size Capacity (proj. enroll./ est. right size capacity in 2021/22)	School Equity Tier (transformed to 5-point scale)	OVERALL SCORE (Weighted)	Rank	School Equity Index (transformed to 5-point scale)	OVERALL SCORE (Weighted)	Rank	
Northgate ES	ES	NW	Modernization	3.03	4.05	2.64	5	3.75	3.71	1	3.91	3.77	1	
Mercer International ES	MS	SE	Replacement	31	3.99	2.6	5	2.5	3.29	5	3.58	3.65	2	
John Rogers ES	ES	NE	Replacement	3.53	3.92	2.9	5	1.25	2.99	11	2.91	3.54	3	
Viewlands ES	ES	NW	Replacement	4.43	2.51	2.4	5	2.5	2.23	8	3.34	3.52	4	
John Muir ES	ES	C	CR Addition	2.73	2.37	3.1	5	2.5	2.04	9	3.72	3.45	5	
Roxhill Building/Denny Service	ES	WS	Replacement	3.4	3.69	2.8		3.75	3.44	2	3.74	3.44	6	
West Seattle ES	ES	WS	CR Addition	2.57	2.08	2.75	5	3.75	3.32	3	4.03	3.42	7	
Kimball ES	ES	SE	Replacement	4.1	3.1	3.2	3	1.25	2.67	16	3.09	3.29	8	
Ingraham (Addition Underway)	HS	NW	Modernization	2.87	3.72	3.05	3	2.5	2.95	13	3.5	3.28	9	
Rainier Beach	HS	SE	Replacement	2.7	3.09	2.93	1	5	3.29	4	4.47	3.12	10	
Sacajawea ES	ES	NE	Replacement	3.43	3.31	3.8	3	1.25	2.68	15	2.56	3.12	11	
Aki Kurose MS	MS	SE	Modernization	2.57	3.72	2.4	1	5	3.29	6	4.36	3.08	12	
Montlake ES	ES	C	Addition/Mod.	4.03	3.8	4.3	5	1.25	3.29	7	0.63	3.08	13	
Wedgwood ES	ES	NE	Replacement	3.52	3.49	3.35	5	1.25	2.99	10	1.13	2.95	14	
Washingtn MS	MS	C	Replacement	2.77	3.94	2.45	1	2.5	2.54	21	3.69	2.93	15	
Olympic View ES	ES	NW	CR Addition	2.6	1.78	2.44	5	1.25	2.4	24	2.76	2.9	16	
Alki ES	ES	WS	Replacement	3.43	4.1	4.05	3	1.25	2.86	14	1.33	2.89	17	
Lafayette ES	ES	WS	Modernization	3.6	3.4	2.75	3	1.25	2.55	19	2	2.8	18	
Whitman MS	MS	NW	Replacement	2.77	3.85	3.25	2	1.25	2.4	23	2.42	2.79	19	
North Beach ES	ES	NW	Replacement	3.5	3.88	2.75	5	1.25	2.95	12	0.71	2.77	20	
John Hay ES	ES	QA/M	CR Addition	2.83	1.94	2.85	5	1.25	2.53	22	1.94	2.76	21	
Nathan Hale	HS	NE	CR Addition	1.43	1.69	2.1	4	2.5	2.38	25	3.58	2.74	22	
Garfield	HS	C	CR Addition	1.27	2.56	2.06	3	2.5	2.32	26	3.44	2.64	23	
West Woodland ES	ES	NW	CR Addition	2.87	2.14	3.4	5	1.25	2.66	17	1	2.58	24	
Salmon Bay K-8 at Monroe	K-8	NW	Modernization	2.83	2.14	3.15	3	1.25	2.62	18	1.13	2.57	25	
McGilvra ES	ES	C	Addition/Modernize	3.83	3.68	3.2	2	1.25	2.55	20	0.85	2.41	26	
Madison MS	MS	WA	CR Addition	1.43	1.73	2.2	3	1.25	1.82	27	2.64	2.28	27	
Ballard	HS	NW	CR Addition	1.17	1.64	1.96	3	1.25	1.72	28	2.17	2.02	28	
Roosevelt	HS	NE	CR Addition	1.1	1.78	2.05	1	1.25	1.41	29	2	1.66	29	

Appendix D

Structured Query Language (SQL)

Prepared by a Seattle Public School Enrollment Team Member

"EthnicMakeupatRoxhillvsArborHeights"

```
SELECT e.SchoolYear, e.ETHGRP, SR.[School Name], COUNT(e.ID)
FROM EP.dbo.vw_ptbl_Enroll e
LEFT JOIN EP.dbo.School_Ref SR ON SR.School = e.SCH
WHERE e.MONTH = 10 AND e.P223Y = 1 AND e.SCH IN (267,203)
GROUP BY e.SchoolYear, e.ETHGRP, SR.[School Name]

SELECT * --e.ETHGRP, COUNT(ID)
FROM EP.dbo.vw_ptbl_Enroll e, EP_Spatial.dbo.sps_attendance_area_ES_2020_2021 geog
WHERE e.MONTH = 10 AND e.P223Y = 1 AND
geog.GeomArea.STContains(e.GeomPoint)=1
AND e.COHORT_GR IN (0,1,2,3,4,5)
AND geog.ES_SCH IN (203,267)
--GROUP BY e.ETHGRP
--WITH ROLLUP
```

"EthnicMakeupatKimballvsJohnMuir"

```
SELECT e.SchoolYear, e.ETHGRP, SR.[School Name], COUNT(e.ID)
FROM EP.dbo.vw_ptbl_Enroll e
LEFT JOIN EP.dbo.School_Ref SR ON SR.School = e.SCH
WHERE e.MONTH = 10 AND e.P223Y = 1 AND e.SCH IN (288,256)
GROUP BY e.SchoolYear, e.ETHGRP, SR.[School Name]

SELECT * --e.ETHGRP, COUNT(ID)
FROM EP.dbo.vw_ptbl_Enroll e, EP_Spatial.dbo.sps_attendance_area_ES_2020_2021 geog
WHERE e.MONTH = 10 AND e.P223Y = 1 AND
geog.GeomArea.STContains(e.GeomPoint)=1
AND e.COHORT_GR IN (0,1,2,3,4,5)
AND geog.ES_SCH IN (288,256)
--GROUP BY e.ETHGRP
--WITH ROLLUP
```

Appendix E

Table E1: BEX IV Southwest Pair Enrollment by Race						
	2013	**2014**	**2015**	**2016**	**2017**	**2018**
Arbor Heights	364	371	408	459	521	548
Asian	23	19	27	29	35	34
Black	42	40	41	43	36	29
Hispanic	40	48	44	56	60	63
American Indian	4	3	2	2	1	2
Multiracial	38	44	44	51	71	83
Pacific Islander	1	2	2	2	1	2
White	216	215	248	276	317	335
Roxhill	377	372	305	299	270	259
Asian	54	47	37	35	32	24
Black	100	98	85	76	79	71
Hispanic	141	147	114	103	91	84
American Indian	4	4	1	2	1	3

Multiracial	25	24	23	29	24	31
Pacific Islander	3	4	7	6	3	5
White	50	47	38	48	40	41

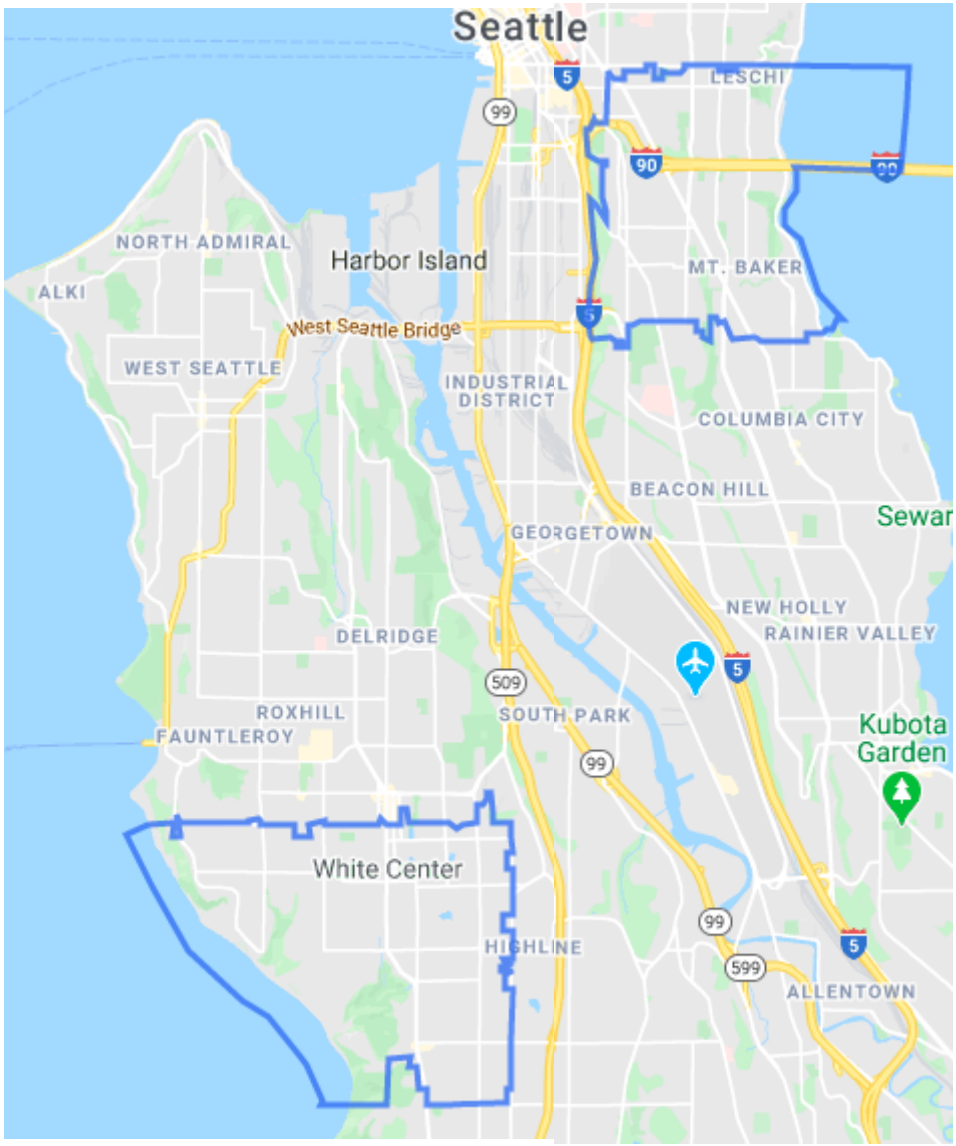
Note. There is one missing value in the 2014 dataset.

Table E2: BEX V Southeast Pair Enrollment by Race						
	2013	**2014**	**2015**	**2016**	**2017**	**2018**
Kimball	447	436	429	414	443	440
Asian	170	166	146	128	120	107
Black	108	96	95	77	86	100
Hispanic	48	43	45	55	60	57
Multiracial	30	41	46	58	54	58
Pacific Islander	1	7	1	1	1	1
White	90	83	96	95	122	117
John Muir	450	439	396	402	367	342
Asian	80	65	44	45	34	35
Black	192	193	189	196	187	170
Hispanic	44	42	41	46	33	30
American Indian	4	5	2		2	2
Multiracial	44	51	43	48	38	39

Pacific Islander	4	3	2	3	6	6
White	82	80	75	64	67	60

Appendix F

98146 and 98144 Home Prices & Values Zip Code Boundaries (Zillow)



Appendix G

Researcher Positionality Statement

It's important to note that my interest in South Seattle is not purely academic. I live as a white woman in Southeast Seattle. I am situated in a neighborhood that is predominantly people of color, who collectively speak over forty languages. I'm privileged to have the choice to live here. Many families in this area do not have access to local, affordable housing and will be displaced. As this case study captures, this community is changing, and I contribute to that incremental change. Choosing this home contributes to the broader picture of gentrification in the area. In remaining cognizant about my choices, I choose to be the best neighbor I can be by investigating what topics might inform educational justice in my community. This is not enough to atone for my contribution towards sweeping gentrification, but it is the first step towards being an engaged community member.