Harnessing Data in Pursuit of Equity-Minded Redesign: Utilizing Equity Indicators to Interrogate Policy, Practice, and Social Constructs in preK-12 Education

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Harnessing Data in Pursuit of Equity-Minded Redesign: Utilizing Equity Indicators to Interrogate Policy, Practice, and Social Constructs in preK-12 Education

Doctor of Education Leadership (Ed.L.D.)
Capstone

Submitted by

Rebecca Grainger

To the Harvard Graduate School of Education
In partial fulfillment of the requirements for the degree of
Doctor of Education Leadership

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Dedication

To my parents, Joanne and Brian.
Thank you for instilling in me a deep love of learning, a charge to pass it on, and a sense of humor to make the journey lighter.

Mom, thank you for teaching me to take my time, to see beauty in everything, and for being a continual teacher.

Dad, thank you for teaching me to push myself harder than I knew possible, and then to take one more step forward.

To you both, I am forever thankful.

To my husband and friend Corey.
You make everything brighter. I am thankful, in every moment, to be graced with your love.

I would not have had access to such an experience without the perseverance and sacrifice of those with melanin blessed skin who carved the path. I will pay forward that which you have afforded me by carving the path wider and deeper for those who follow.

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To Jal, Paul, and Mary – thank you for continually pushing my thinking to be deeper and my words to be clearer. Your guidance, support, and friendships are invaluable.

To Monica, who I can always call to laugh, cry, or curse in any order.
Some how you always make it sunny no matter the weather.

To Katie, for always pouring me a glass of champagne so I never forget to celebrate.
I dream bigger because you are in my life.

To my sisters Katherine, Jessica, and Sarah – I stand taller because
I know you have my back. I've got yours too.

To Candice, you have helped me shift the way I fill my skin. I am thankful for your coaching, your friendship, and your partnership in embracing complexity.

To Jess, for your brilliant mind, your open willingness to share,
and the passion in which you lead the work.

Thank you to the Somerville Public Schools community for welcoming me
in with open arms and minds. Your willingness to question greatly pushed my thinking,
an act I consider an immeasurable gift.

To the Harvard community, thank you to all who were gracious enough to share a bit of themselves in the service of providing space for others to learn.
I leave so full and yet still hungry for more.

Cohort 8, I am honored to have traveled with 24 people who deep in their gut hope to leave the world a better place. You continually inspire me.
I'm cheering you all on!

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Abstract

Education serving as a lever for increased access to opportunity, in theory, is implicit within the design of the U.S. education system. However, disparities in achievement across demographic groups continue to be apparent as measured by traditional means of accountability such as standardized tests, graduation rates, and enrollment in Advanced Placement courses. These results raise question as to whether or not the education system indeed serves all equitably. One means of holding this charge to account is through the development of a system of data presentation with the explicit purpose of measuring for equity.

Somerville Public Schools (SPS) is a small urban district serving a diverse community of learners. In partnership with innovative educators, Superintendent Mary Skipper is leading SPS in the examination of their policies and practices to redesign the system to serve equitably across demographic groups. After passing a district wide Equity Policy bolstered by the formation of equity focused School Committee Goals, the next step in the district's evolution is the formation of a data collection system to examine current practices, provide evidence of movement, and guide informed decision-making through an intentional equity lens.

This capstone explores the idea of using indicators designed to explicitly measure equity within Somerville Public Schools, such as those put forth in the National Academies of Sciences, Engineering and Medicine 2019 report, Monitoring Educational Equity, to serve as a starting point from which to examine policies and practices that result in disparate achievement levels and inequitable access to opportunity across demographic groups. With deliberate focus on race and ethnicity, this capstone calls for data and the collection systems in which data is housed to drive interrogation of our current system of education. This occurs through the examination of the effects of policies and practice, and identifies and challenges social constructs on which such policies and practices are built and continue to perpetuate inequities. With intentional equity lensed data collection, educational organizations are more prepared to adapt practices and pursue purposeful, equity-minded redesign.

The capitalization of the constructed racial categories of Black and White within this text is an intentional choice. Racial and ethnic groups that are more consistently found to begin with capital letters, such as Asian and Latinx, are also capitalized with intentionality. Terms such as Brown and people of Color so too are capitalized. The terms we use to mark race and ethnicity have grown to imperfectly signify the individuals and communities they label. These terms have come to represent people. The capitalization is a sign of respect for the people the terms symbolize not for the labels in and of themselves. Nor does the capitalization serve as a representation of the permanence of such designations.

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Introduction

One of the most densely populated cities in the United States, Somerville, Massachusetts is home to over 81,000 residents in a 4.2-mile radius. Geographically, it lies northwest and across the Charles River in relation to Boston. Bordering Cambridge to the south, and Medford to the north, making Harvard, MIT, and Tufts within a stone's throw. The convenient location, growing access to dependable public transportation, and continued residential development, seen through quickly rising new builds alongside the refurbishment and splitting of existing homes, complemented by the unique vibe of the area makes Somerville increasingly attractive. Resulting in fast rising real estate prices and a shifting landscape dotted by hip restaurants and breweries, outdoor green spaces, beautiful playgrounds, community gardens, and street festivals. Somerville is in the midst of a strong wave of gentrification, with the new population of residents identifying primarily as White and of greater levels of affluence.

The rising gentrification and shifting demographics is a continual point of tension in planning for the future of Somerville. There is an expressed desire by city leaders and decision makers to maintain a diverse population of residents. This desire is often in conflict with the increased resources and opportunities for growth that gentrification and the accompanying financial injections bring into the ecosystem of the city.

It's accurate that by many measures Somerville would be considered a progressive city, championing liberal ideals. With immediacy to surrounding Universities, and a willingness and excitement to partner, Somerville has become a draw for those desiring to push innovative ideas. In rooms filled with decision makers there is often talk of equity and change efforts to support movement towards it. However, those leading the partnerships and those in positions of power predominately identify as White. Therefore, when decisions are being made in the service of equity, decisions of consequence to residents of Color, the voices of those most affected are frequently absent from the conversation.

There also is felt tension between "old" Somerville and "new" Somerville. "Old" Somerville describes residents, predominately White and of Irish and Italian heritage, whose families have lived in Somerville over multiple generations, most with some connection to a working class background. "New" captures recent implants, also predominately White with increasing levels of affluence and livelihoods tied to "white collar" business, biotech, and academia. "New" would characterize itself as more inclusive, as stories of racial tensions and exclusion are often connected to "old." But what remains to be seen is how the idea of inclusion is translated into action. Recent elections of School Committee and City Council, while bolstering candidates with more progressive ideas, resulted in little shift in the racial make-up of either ruling body. Therefore, at this point, inclusion does not yet mean the sharing of power across racially or ethnically diverse groups. It should also be noted, that when describing Somerville, both "old" and "new" describe populations identifying as White. A third descriptor "immigrants" enters the conversation usually in relation to services being provided, as do other groups of Color, but rarely as players in making city level decisions.

Only 12.5% of Somerville's population is under the age of 18, making Somerville behind only neighboring Cambridge as the lowest number of children per percentage of the total population in all of Massachusetts's cities. According to city-wide reported demographics, Somerville residents identify as approximately 70% White, 10% Hispanic or Latino, 10% Asian, 7% Black, 4% Other (City of Somerville with Cambridge Health Alliance, 2017). The racial and ethnic demographic breakdown of the city is nearly opposite that of the Somerville Public Schools, the single traditional public school system serving the city.

Somerville Public Schools serves a diverse population of around 5000 students. Approximately 30% of students come from homes where a heritage language other than English is the principal language spoken, Spanish and Portuguese being the most prevalent of the languages families report. Roughly 42% of SPS students identify as Latinx (of various racial groups) – as determined by students or families who check "Hispanic or Latino" when provided choices for ethnicity. Of students identifying as non-Latinx, 38% identify as White, 10% African American or Black, 6.5% Asian, 4% Multi-Race, and less than 1% Native American. (Massachusetts Department of Elementary and Secondary Education, 2019).

Overall patterns in measures of achievement and discipline across demographic lines in Somerville Public Schools (SPS) mirror those of the state. Like many school districts in the United States, in aggregate, students who identify as non-Latinx, White in SPS show a pattern of demonstrating higher levels of academic achievement, as measured by state level standardized tests, than their Brown and Black peers. This correlation is also observed between socioeconomic levels, with students from lower socioeconomic households receiving lower scores on standardized tests than their more affluent peers. In SPS, racial and

ethnic identities closely align with socioeconomic level. However, when removing overlying factors, such as socioeconomic measures and special education status, differences in achievement levels in SPS through conventional measures such as standardized tests, continue to be apparent across lines of race and ethnicity. This disaggregation of data made apparent that the current system of education in Somerville Public Schools does not serve the entire community of diverse students in an equitable way. Specifically, systemic design structures continue to host barriers that provide less opportunity and access to Black and Brown students. In light of this finding, under the guidance (and urgency) of Superintendent Mary Skipper, SPS moved to develop a policy that explicitly articulates the need for increased equity in regards to race and ethnicity.

Mary Skipper joined SPS as Superintendent in July of 2015 after nearly 18 years, as teacher, high school Headmaster, and Assistant Superintendent in neighboring Boston Public Schools. Her approach to the work of education is firmly rooted in creatively pushing at the boundaries to achieve more equitable ends. At just over 5' she is a force, her presence felt when she enters a room. She continually challenges current constructs and acts as a warm demander in pushing others to do the same. Skipper identifies as White, and in a district where over 90% of the educators and administrators also identify as White, her pushes for equity are usually well received and result in efforts to shift current practices.

Dr. Jessica Boston Davis, Somerville Public Schools' first Director for Equity and Excellence, served as the lead developer for the Equity Policy, working in close collaboration with the Somerville School Committee and members of the District Cabinet. She did so throughout a ten-month residency during the last year of her doctoral work, into her inaugural year as director. After nearly a year of development, feedback, and revision the draft was voted into district policy in November 2019, acting as a foundation for building a

collective vision around the meaning of equity in SPS and to offer guidance in refining and

redesigning a school system that serves with increased intentionality around equity.

From the Equity Policy:

> SPS defines equity as providing the opportunities, support, environment, high
>
> expectations, and resources that every student needs to achieve educational success,
>
> to feel valued, and contribute to a thriving community. This is different than
>
> equality, which means providing each individual student with the exact same
>
> conditions or resources regardless of need. (Somerville Public Schools, 2019)

The policy has already begun to have effect, being heavily referenced during the formation

of the 2019-20 School Committee Goals, which cover increasing the diversity of the

educator workforce, to adjusting enrollment practices, equitable allocation of resources, and

alignment of academic and social-emotional benchmarks. Each of the four goals is

individually ambitious. Together they demonstrate an intentional reshaping of the district

through an equity lens.

In regards to implementation, the policy calls for a "system-wide racial/ethnic equity

plan with clear accountability and metrics" (Somerville Public Schools, 2019). Through a

data lens, the call for accountability and metrics has the potential to be supported by existing

data collection and presentation platforms within the district. One platform, Student

Insights, has a high degree of adaptability and was intentionally constructed to be educator-

facing. Within the design a high amount of attention was paid to user-friendliness. Making

Student Insights unique in relation to other data platforms in the district. Additionally, while

questions of equity have been an undercurrent throughout its design, with increased

intentionality Student Insights has the potential to be deeply aligned in its capability to

support the intent put forth through the Equity Policy. Serving as a platform to provide data

explicitly in the service of highlighting issues of inequity, sparking difficult conversations backed in evidence, and driving equity minded decision-making and action.

During my time in Somerville Public Schools I was tasked with leading the design and execution in the identification of key indicators used to continue movement toward educational equity in SPS. This shift of moving from keeping equity in mind to an intentional and explicit presentation of data through an equity lens was a significant portion of my charge. In part, this strategic project continued the work and refinement of Student Insights. The idea was not to create a new system of data gathering but rather refining the existing system, one that had already begun to be a driver in SPS decision-making, to be explicitly equity focused. The continued development was not to provide the district more data per se but to help shift the system of examination of policy and practices within the district to affect subsequent decision-making and action. Given that residency is a fairly short period of time, this work contributes to the long-term development of the equity and data work within the district.

This text serves as a reflection of my time spent in Somerville Public Schools. Upon initial glance, it would appear to be a project centered on the utilization of data in service of refining how we measure for equity. However, often the indicators we use to determine whether students are achieving at equitable levels act instead as baselines from which to begin interrogating how well the system serves and provides access to equitable opportunity. Data has the capability to serve as a text from which to question. Questioning the policies and practices that form our system of education leads to questioning the influence of the social constructs in which our system is built upon. When engaging in the work of redesigning a system to be equitable we are working within a system designed to produce and maintain inequities. Therefore to achieve a system that serves all students equitably we

must also identify and deconstruct the constructs that bolster inequitable policies and practices.

The following pages begin by sharing the knowledge foundational to the theory of action that informed my steps while in Somerville Public Schools. They outline three containers of work – first, seeking means to present data publically, second, challenging social constructs by rethinking data collection in regards to race and ethnicity, and third, examining policies and practice that result in inequitable enrollment in Advanced Placement courses. These containers provide space to examine design, progress, and effectiveness in relation to authority, leadership, and identity. My hope is that the results of my reflection support efforts in the field of education in thinking more intentionally about how data can be used as a text by which to engage in system examination, and how our questioning of held constructs works to achieve long-term systemic change in developing a more adaptive system.

..
Review of Knowledge for Action

Massachusetts is ranked among the highest when comparing traditional means of achievement data across the United States. According to the results of the National Assessment of Educational Progress (NAEP), Massachusetts is ranked first in the nation. This standing does not extend across all demographic groups of students. The 2017 Massachusetts education report, *No. 1 for Some: Opportunity and Achievement in Massachusetts*, highlights disparities in achievement across racial groups. Students of Color, namely those who identify as Black and Latinx, students from low-income households, and English Language Learners have substantially lower numbers of students reaching proficient/advanced across grade level and content area categories (Massachusetts Education Equity Partnership, 2018). These disparities hold steady in comparison to their White peers across multiple measures - Massachusetts Comprehensive Assessment System (MCAS), 4-year graduation rates, preparedness for post secondary education, and enrollment in AP level courses. Additionally, students of Color are more likely to receive exclusionary discipline, such as out-of-school suspension – Latinx students are twice as likely as their White counterparts, Black students three times as likely.

Education serving as a lever for increased access to opportunity, in theory, is implicit within the design of the US education system. If we hold this statement as accurate, one interpretation of the results shared in the previous paragraph, is that the discrepancies between demographic groups provide evidence that the current design and enactment of education within the United States serves students of varying demographic groups in differing ways. Ways that are not equitable across groups and subsequently produce differing levels of displayed achievement. Societal factors that fall outside of services traditionally

provided within the education context heighten these inequities. However, if the intent of the education system is to serve students equitably there arises a need to account for whether the system is indeed actualizing this purpose.

One means of doing so is a system of measurement with the explicit purpose of measuring for equity. A system such as this has yet to be fully realized on a national scale. The 2019 National Academies of Sciences, Engineering, and Medicine Report, *Monitoring Educational Equity*, suggests an architecture for the advancement of such a system of measurement. In achieving this, the writers advocate for two types of indicators:

> To ensure that the pursuit of equity encompasses both the goals to which the nation aspires for its children and the mechanisms to attain those goals, two types of equity indicators are needed: (1) indicators that measure disparities in students' academic achievement and attainment outcomes; and (2) indicators that measure equitable access to resources and opportunities, including the structural aspects of school systems that may affect opportunity and exacerbate existing disparities in family and community contexts and contribute to unequal outcomes for students. (p. Sum-2)

Indicators, combine numerical data "with purpose, meaning, and context" to "describe the status of a specific condition or phenomenon" to study change in the measured conditions over time (Planty & Carlson, 2010, pp. 3-4). Singular measures in isolation are rarely able to capture the full complexity of a given situation. An ideal measurement system has the capability of measuring distinct factors and giving insight into how those factors in combination work together. A collection of indicators, measured over time, have the potential to demonstrate complexity, highlight patterns of difference across demographic groups (National Academies of Sciences, Engineering, and Medicine, 2019) and provide opportunity to raise awareness and focus attention.

The education sector in the United States has embraced the concept of data as a measure to evaluate levels of academic achievement. These measures are often in forms most easily gathered, such as the results of standardized tests, graduation rates, and assessed reading levels. This collection of numerical representations, grouping individual students to capture a full picture often comes to represent measures of *truth* and propagate preconceptions. Numbers become holders distinguishing which demographic groups are excelling and those deemed falling behind.

The use of standardized testing in pursuit of comparative data is not a new phenomenon. In the early 1900's standardized tests became a common tool of measurement (Au, 2015). In more recent history, momentum began under the Reagan administration with *A Nation at Risk: The Imperative for Education Reform.* The report heavily influenced decisions made by subsequent administrations in regards to standards development and the alignment between standards and testing. Actions that provided foundation for the No Child Left Behind legislation under the Bush administration, which advocated for federal funding being bound to test results. State and federal action in the 90's and the Race to the Top under the Obama administration, pushed for increased nationwide standardized tests with heightened attention on results linked to teacher accountability. The rise of dependency on test scores to determine levels of achievement depicted divides between demographic groups. These numerical representations provided a tangible construct in which to attach language - "achievement gap." It should be noted however, the act of disaggregation of demographic data was instituted as an equity strategy, as differences that are seen and measured are more likely to be addressed.

Under such policy shifts, tests have become progressively more high stakes as they are increasingly linked to incentives, validation, and condemnation. As the data acquired

becomes increasingly more public facing, districts, schools, educators, and students are exposed to higher levels of scrutiny. The mounting pressure results in the content of the tests heavily influencing what is taught in classrooms (Au, 2015). Such beliefs and practices become especially significant for schools whose student populations struggle with such tests, often schools and classroom with high populations of students of Color.

The feedback loop between test and achievement becomes a powerful force in how students are perceived. As struggling schools work to educate students as means to pass the test, educators focus their attention by making comparisons between demographic groups. Measured academic performance between demographic groups, namely race, ethnicity, and socioeconomic status, in turn contributes to the underestimating of the ability levels of students belonging to stigmatized demographic categories. Often resulting in deeming students underperforming prior to demonstration and limiting opportunities afforded because of false assumptions about group ability.

The collecting of academic measurements has also helped view performance discrepancies between groups not as a gap in ability but rather in access to equitable opportunity - pushing for explicit policies and practices that translate to equitable distribution of services and resources. The belief that tests are objective, neutral means of measurement, offering test takers opportunity to individually demonstrate the product of their hard work and ability is rooted deeply in the idea of meritocracy (Au, 2015). This assumption allows patterns of underperformance to be linked to demographic groups with the onus of the results placed on test takers rather than the given test or its designers. Additionally, the assumption of neutrality is flawed, as can be illustrated in the example of the SAT. In examination of questions, on average White students answer questions correctly more frequently than Black and Latinx test-takers. In fact, in a study by Kidder and Rosner

(Au, 2015), Black and Latinx test-takers did not outperform White peers on any of the verbal or math questions. This hints at a flaw in design, one that can be linked to the development and testing of new questions:

> Each individual SAT question ETS chooses is required to parallel outcomes of the test overall. So, if high-scoring test-takers – who are more likely to be white – tend to answer the question correctly in [experimental] pretesting, it's a worthy SAT question; if not, its thrown out. Race and ethnicity are not considered explicitly, but racially disparate scores drive question selection, which in turn reproduces racially disparate test results in an internally reinforcing cycle. (Rosner in Au, 2015)

Data provide a basis for examining current systems and results. However, it would be naïve, and dangerously over simplistic, to believe that numerical data alone capture the complex nature of embedded inequities. Therefore we must consider how we as designers influence that which we seek to gather. This is not the building of an argument against a system of measurement, in fact the opposite. Rather a call for awareness in that which we build our measurement upon is designed within the same system of inequities we work to combat.

It is also important to note that historically data has been used to stigmatize and delegitimize groups of people. For example, the Eugenics movement of the early 1900's used the presentation of data to prove the distinction and the inferiority of certain races. The data and conclusions were disguised under the labeling of scientific fact, and while disproven and debunked, the beliefs that arose from these studies continue to influence systems of belief within a variety of fields (Watkins, 2001). These beliefs have influence on the way we see the world. Shaping biases and assumptions and often unbeknownst, guiding our actions.

These belief systems seep into the systems we design and the technology that helps those systems run. Ruha Benjamin, Associate Professor of African American Studies at Princeton University, studies the intersection of race and technology. She argues that racism, while often without conscious intent, is built into the very design of technologies (Benjamin, 2019). This warrants attention as we design and refine systems of data collection within education systems. While the data may belong to individual students, the data we gather, the questions we ask, and the presentation of the data through designed technologies is all intertwined with our ingrained systems of belief.

Technology is often assumed to be neutral. But technology, as is other design, is interwoven with intention. Intention linked to value, be it desire to do good or ill intent, is inconsequential as either can coexist with decisions that result in harm. "If machines are programmed to carry out tasks, both they and their designers are guided by some purpose, that is to say, intention. And in the face of discriminatory effects, if those with the power to design differently choose business as usual, then they are perpetuating a racist system…" (Benjamin, 2019, p. 60).

Without intentional recognition and continual questioning of our own interpretations and motives we begin to see the data as a presentation of truth of the current status rather than a tool by which to examine the education system and its design. "The issue is not simply that innovation and inequity can go hand in hand but that a view of technology as value-free means that we are less likely to question… assuming in the process that our hands are clean" (Benjamin, 2019, p. 69). In other words, the continuing examination of *our own hands* within the design and their effect on how data is collected, examined, and presented must be woven into the design of data collection platforms. This requires a shift from the examination of the individual student as the holder of their own data to the examination of

the system as provider and thus equal, if not greater, carrier of the results. So too it requires the examination of the choices made in the data we value and collect and the algorithms through which collected data is presented.

Race as an Ideology, Social, and Power Construct

The previous discussions included in this RKA have been through the lens of comparative data. Predominately as measured through the groupings of race. For all of this to continue to take hold - the discrepancies in displayed performance between groups, the measurement systems showing these differences, the need for measurements to ensure the resources and opportunities are being afforded in an equitable manner – is dependent on race being taken as truth and accepted as a driving factor.

However, as illustrated by Karen and Barbara Fields in *Racecraft: The Soul of Inequity in American Life (2014)*:

> Race is not an idea but an ideology (p. 121).
>
> Ideology is best understood as the descriptive vocabulary of day-to-day existence through which people make rough sense of the social reality that they live and create from day to day….Ideologies are real, but it does not follow that they are scientifically accurate, or that they provide analysis of social relations that would make sense to anyone who does not take ritual part in those social relations (p. 134).

Race is a built construct created in service of maintaining power hierarchies. These displays and organizations of power are enacted in classrooms and in the structure of our education system. They also determine the means by which we measure demographic data, and structure comparison through the lens of equity.

This is not a call to immediately disband our notions of race and ethnicity. Doing so would result in the weakening of the ability to measure for inequities. But it garners attention to note that the system of data sorting in pursuit of a more equitable distribution of resources and opportunities is, as currently designed, dependent on constructs of race and subsequently distribution of power. Additionally, it should be held close that "[race] came into existence at a discernable historical moment for rationally understandable historical reasons and is subject to change for similar reasons" (Fields & Fields, 2014, p. 121).

The creation of constructs is further illustrated through the numerical propagation of held truths that result from the creation and proliferation of invented categories. Such a phenomenon is described by Porter (1995):

> …statistical categories form the basis for individual and collective identity. …the formation of social classes…are inseparable from the instruments of social statistics that contribute to their articulation (p. 42). *And thus*, [p]ublic statistics are able to describe social reality partly because they help to define it (p. 43). *And so*, a plausible measure backed by sufficient institutional support can nevertheless become real (p. 44).

The highlighting of differences is particularly powerful when examining the disparities produced by the practices and policies adopted and enacted within a system. This is especially pertinent in examining and tackling systemic barriers (often hidden) and the distribution of power and resources that inequitably manifest within the US education system. Thus calling for a data management platform robust enough to hold the complexities of the system, with a level of sophistication able to illuminate the intricacy of pervasive inequities, while questioning the constructs in which it was built upon. This helps to create an overarching equity lens with the capability of representing isolated factors, while

giving insight into how multiple factors work in combination with greater effect (Oakes, 1986). This is bolstered by intentionally chosen indicators, grounded in equity. "The value of an indicator system is that it brings attention to existing conditions, allows one to identify problems, provides a way to explore potential causes of those problems, and points toward actions to alleviate the problems… Enacting change can be challenging, but it is nearly impossible if there is no information about existing problems"(National Academies of Sciences, Engineering, and Medicine, 2019, p. 1-5).

Problem-Oriented Governance Framework

Constructs are dependent on the system working as currently created. Redesign calls for different approaches and means of entering into the work. The problem-oriented governance framework organizes the work around ensuing problems and growing organizational capacity to tackle problems as they arise (Mayne, de Jong, Fernandez-Monge, 2019). This approach requires that the organization must build the capabilities - reflective-improvement capability, collaborative capability, and data-analytic capability - to adapt to the problem at hand. Therefore organizations must develop the capacity within themselves to adapt as new problems arise as well as to partner across organizations for those large-scale problems existing at a level of complexity in which collaboration is required.

In describing, Mayne and his colleagues suggest:

> Imperative to problem-oriented governance is therefore forms of collective re-imagining of public problems and the re-invention of collective efforts to address them. In essence, it is radically committed to prioritizing the problem-solving challenge over the comfort and convenience of preserving existing organizational practices and institutional arrangements. Learning about problems, and how they

evolve over time, is at the heart of this approach. This involves challenging

assumptions, developing new hypotheses, and gathering evidence to guide thinking

and action. (p. 2)

This system of working aligns with designing for a more equitable system because it

asks us to step away from the constraints of the system to focus instead on reshaping the

organization to tackle the problem. In thinking about our approach to equity work, so often

we try to problem-solve within the confines of the system, the very system that is

propagating the inequitable results we are combating. Additionally, we assume our own

means of interpretation are accurate to aiding in disbanding the problem, however, we were

grown within the system and our perspectives are thus shaded by the oppression we have

learned to participate in and to endure.

In collecting data through an intentional lens of equity, questioning our decisions,

design, and intent to challenge current constructs, and reshaping the system by solving with

the problem as the lever for change, we more intentionally tackle the binds of systemic

oppression and its effect on the education system. Additionally we recognize that the

problems we seek to tackle within the education system are larger than what the educational

arena can provide. And thus the need for partnership and cross sector collaborations

organically arise.

Indicators grounded intentionally within equity aligned across schools, departments,

and potentially sectors help to ground the conversation in shared measurements for

comparison and offer an additional point of data beyond anecdotal understandings and

assumptions. While anecdotes may be important for building empathy and grounding

understandings, they also hold biases that inform our perspectives. Within the problem-

oriented governance framework, data-analytic capability goes further than decision-making and action on data alone:

> *Data-analytic capability* refers to the ability of public-sector organizations to collect, process, and analyze different types of information to improve accountability, enhance motivation, and adapt their theories of change based on an improved understanding of external context, internal conditions, and performance. (Mayne et al., 2019, p. 8)

As new problems arise as the organization undergoes exploration and questioning, the structures by which problems are tackled also shift. In solving for "wicked problems" the organization is redesigned in the process. Resulting in an evolution of the currently existing system to one that is better equipped to question, serve, and design in an equitable way.

Theory of Action

During my time in Somerville, my focus was most intently on the means in which data can become the text by which to interrogate current system design through an intentional lens of equity.

We know that current measurement systems have helped establish discrepancies in levels of achievement between demographic groups, namely race, ethnicity, and socioeconomic levels. These discrepancies have been labeled as the "achievement gap." Push to view such discrepancies thorough a different lens call for examination of opportunities afforded, citing the gap being in access and services provided. With this adjusted view, there arises a call to establish indicators with an explicit focus on measuring for equity of opportunity to learn. Together these systems of measurement provide important foundation

by which to compare how different demographic groups are served and subsequently perform within our current system of education.

However, our current system of education is designed within the constructs of surrounding systems that have helped to bolster and reinforce the very inequities we strive to eliminate. Therefore as we seek measurement systems to identify inequities, and thus refine and design with increased equity in mind, there exists the need to concurrently examine the policies, practices, and held constructs that shape the system we are measuring within.

The following theory of action guided my efforts during my time in Somerville Public Schools.

If I can work with key stakeholders to

- identify and make public key indicators by which to measure current levels of equity of service within Somerville Public Schools; and

- use the identified indicators as baselines from which to examine current practices and policies that result in students' differing access to opportunity, with an intentional focus on race and ethnicity; and

- use the findings of those examinations to interrogate the currently accepted constructs upon which the policies and practices are built; and

- act as an intentional thought partner to build capacity to actively engage in continual questioning and the purposeful consideration of a variety of perspectives, experiences, and knowledge (building coalition and shared ownership)

Then data within Somerville Public Schools can serve as foundation by which to question current design and engage in informed redesign to a) shift current policies and practices to increase students' access to opportunity (short-term movement), and b) to shift accepted

constructs through which inequities persist and are built upon to influence larger systematic redesign and elimination of inequity (long-term movement).

These movements increase the capacity of Somerville Public Schools, as a system, to adapt and support continued redesign as knowledge is obtained and belief patterns evolve, as well as working to build foundation for future coalition building and collaboration.

…

Strategic Project

Description …

Much of my first month in Somerville was spent engaging in one on one conversation with members of the District Cabinet, School Committee, principals, members of the District Instructional Leadership Team, former students, community groups, and city and surrounding sector organizations. Data collection and its use to guide decision-making came up in nearly every one on one, as did expressed interest in increasing equity and ways to engage in creating a more equitable system. While many members of the district were collecting and organizing data within their own contextual silos, there were not clearly articulated paths across the district in how to organize and engage deeply with data in the service of equity. This aligned to a need expressed by Superintendent Skipper to create an equity data dashboard.

Somerville Public Schools has multiple platforms to house collected data and promote data usage to drive decision-making. Levels of effectiveness in doing so vary across the district, due in part to skill level of users, the agility of the tools users are asked to navigate, and the level of added value perceived by those engaging with the system. Aspen, one of these key platforms, houses a variety of data, from student and staff demographics to teacher recommendations to guide student course choice. I ran into few people who deeply understood and could easy navigate the platform. This unwieldiness, be it actual or perceived, resulted in limited use of the tool to navigate data on a regular basis, as well as the need to reach out to specialists when more than superficial data sources were needed. From my experience, when I, or others reached out to the specialists for help in accessing data or

navigating the system, the help and guidance was always received. However, the need for assistance slowed the process.

The hurdle, of engaging with data, was not foreign to members of the district. The idea of creating a platform to allow educators to more easily engage with data was well under development prior to my joining the district. In an effort to streamline and simplify access to data for educators, Student Insights, an open source web based data dashboard, was created. The process of designing the platform began in 2014 in a partnership between teachers at the K-8 Healey School, district level data and curriculum administrators, and Code for America with the financial support of Microsoft and the Boston Foundation (tBf). The Student Insights tool was designed to consolidate data collected from various sources, such as Aspen, and present it in a way more easily accessible to educators. Since, it has grown to encourage collaborative problem-solving grounded in data to best serve students, particularly in engaging in intervention work such as student study teams and recently in the design of third grade reading interventions.

When I entered the district the grant cycle for the second iteration of funding the development of the Student Insights dashboard through the Boston Foundation (tBf) was nearing its end. The partnership had gone well and there was possibility of obtaining a new grant to provide additional support for continued development. The refining and expansion of the Student Insights tool to more intentionally support equity work aligned with tBf's current investment lens as well as the direction the district was shifting. Superintendent Skipper clearly messaged repeatedly in her start of the school year addresses the push to shift from equity as theory to *Equity in Action*. This message was especially pertinent at the leadership level as district leadership had engaged in learning around equity in order to prepare for deeper systemic shifts and it was clear Skipper pictured data playing a significant

role in accomplishing these shifts. Additionally, the inclusion of equity aligned data in the platform supported the call in the Equity Policy to create purposeful systems of measurement and accountability.

The grant writing team was comprised of the Chief Communications and Development Officer, the Director for Equity and Excellence, the K-8 Curriculum Coordinator and lead Student Insights developer, and myself. Our grant proposal, titled *Equity in Action,* laid out the development of a more robust, equity minded platform with the capability of delivering timely data in a digestible form with increased agility to adapt as district understandings of equity developed. Within our grant application we posed questions to push our thinking and practice:

- How do we capture current district-wide data, organized in a format that can be utilized by a wide array of users and for multiple purposes to serve as foundation to compel and steer difficult conversations grounded in data to drive strategic problem-solving, decision-making, and purposeful action?
- How do we take what we know (current data and predictors) and move beyond risk factors and surface level data to dig deeply into root causes of inequity? How do we identify and address inequities in our system – in timely, strategic, and sustainable ways?
- How do we continue to identify and close gaps by increasing access to opportunity? And simultaneously identify and support students who may be experiencing struggles, while also ensuring that students have access to advanced academic and enrichment opportunities?

Previous iterations of the grant focused on the closing of achievement gaps from a lens of building more robust student profiles, providing data and support for student study teams, and expanding the tool to reach more users. In the new grant I pushed for the addition of viewing through the lens of opportunity, including exploring areas such as equitable access to advanced academic and enrichment opportunities. As well as engaging in the exploration of additional indicators to push ourselves in how we might think more deeply about new ways of measuring movement towards systemic equity.

We received news that the grant was awarded, $250,000 over 2 years, during the fall of 2019.

Access to Opportunity

Exploring through the lens of access to opportunity led me to three key areas of focus – early education (pre-K), out-of-school time (OST) and Advanced Placement (AP) at Somerville High School.

I begin by forming partnerships with stakeholders in each of the three areas - the Director of Early Education, the Out of School Time Coordinator, and the Director of College and Career Readiness. During the initial conversation I shared our intention behind seeking the grant and the written proposal, and asked if we, the grant writing team, had captured a piece of their work that would be valuable to incorporate into the dashboard. With the tight deadline, in producing the grant proposal we had been unable to reach out to every department to receive feedback. In forming the partnership I felt it was important their voices and input was received to guide refinement. Each area had suggestions for data that would be important to capture as well as pushes for how we might go deeper. I entered the conversations as a learner, acknowledging each partner as an expert and working to better understand the intricacies of the areas they led. As a newcomer to SPS, engaging in this way helped me to better understand the context, the history of the work, the current direction of the team, and the inner workings of the district that influenced the execution of their work. While the majority of my time was spent listening, I clearly communicated that key to the work was identifying ways in which to engage with data in pursuit of equity. Therefore throughout I asked questions that pushed partners to think more deeply about their current practices. I had already spent time with each partner during my entry one on ones, so my pushes were regarded as the work of a thought partner rather than a

condemnation of practice. For example I marked assumptions shared and pushed for ways to measure for accuracy. This identified areas for exploration and shifted our lens from the sharing of *truths* to the practice of questioning held beliefs.

Always central to the conversation was the use of data in the service of measuring for equity, however an additional driver was my understanding that the incorporation of any data into the system needed to be usable and seen as relevant to the team who would ultimately use the data to drive decision-making. Without this view, the data had the potential to go unused. Additionally, teams finding value in the process would support continued development in my absence.

While I engaged in multiple conversations with the Early Education team, the work they were most heavily involved in did not have clear connections to housing data within platform as currently designed. For the remainder of this paper I will focus on out-of-school time and Advanced Placement.

One. Out-of-School Time

Somerville's Children's Cabinet was formed in partnership with the By All Means (BAM) initiative run by the Education Redesign Lab out of the Harvard Graduate School of Education. Formation of a Children's Cabinet is a core design element of the BAM work, creating "high-level mechanism…to coordinate services for children across city and non-governmental organizations" (Sacks & Boyle, 2018, p. 73). The adoption of equitable access to out-of-school time programming has been a key initiative since the group's formation. The development of a more robust delivery system for out-of-school time programming was bolstered by the work of a previous Ed.L.D. resident. At the conclusion of residency he accepted a position to serve as Chief of Staff to the Superintendent and the Out of School

Time Coordinator position was formed upon the recommendation of his work. Thus, the importance of out-of-school time programming continues to have voice within the Superintendent's office and at the city level.

Each year data concerning the demographics of the five core programs closely affiliated with the school district are compiled to observe progress towards providing access to students most in need. This practice aligned with the call in our *Equity in Action* grant to increase participation in out-of-school time opportunities for students of Color and students from low-income households, as both of these demographic groups were identified as underrepresented in comparison to district level enrollment in previous data collection cycles. Notably in order to increase participation, current, accurate data needed to be available as comparison. And identifying current data would allow for deeper exploration into the identification of factors that were limiting the ability of students to access out-of-school time opportunities, a desired result written into the grant. Clear data would act as text by which to engage in conversations about future avenues to explore, and support decision-making efforts to increase access to more students.

The first step was reaching out to the five programs to gather the data they currently collected. Upon receiving the data, which was easily shared, it was clear individual programs collected participant information at differing levels. All could provide lists of the students involved in their programs, however all did not have the depth of demographic data we were seeking. Thus, much time was spent matching provided student names with district and state student identification numbers in order to aggregate corresponding demographic information. The district Data Coordinator, helped me navigate Aspen to connect names to student ID numbers, making the process easier, but without a streamlined system, such an endeavor would need to be repeated during future data collection. Idiosyncrasies such as

misspellings, hyphenated last names, and nicknames slowed the process. The endeavor made clear that a streamlined process for collecting such data would be helpful as there were multiple hurdles in aligning student demographic data. Additionally, no one specifically owned this process, therefore while the collection of such data had become routine, it was not systematized making the process inefficient and time consuming. In conversation with others who had tackled the data collection in previous years, the idea of streamlining was a shared conclusion.

While the initial query was in relation to participant demographics, the topic of equity and more specifically examining the system for inequities sparked many ideas of paths to pursue. Held assumptions regarding the current distribution of resources, quality of programming, and the demographics of student groups being served were brought into the conversation. Various programmatic opportunities outside of the five of focus entered as suggestions of future avenues to explore – such as athletics, extracurricular clubs, and city and private offerings. The gathering of the data provided space for people to question the current execution and design of opportunities students were afforded access to. I share this to show that the process of organizing data sparked questioning and interest.

In addition to questions, clear, was the desire and need for a more organized process of collection and public presentation. We had opportunity to build a collection system that could serve as an example for future processes of collection and the incorporation of the data into a shared platform.

In regards to out-of-school time programing, the complexity of gathering and presenting data involved collaboration across departments and organizations. In seeking coalition I reached out the Student Insights data coordinator on the district side, and the Out of School Time Coordinator on the city side. Conversations across departments helped to

hone what we were trying to accomplish. However, I acted as the primary conduit between the programs, the district data coordinator and the city coordinator – speaking to each group separately but never as a combined coalition together in the same space. While all were willing to participate, prior means of collaboration was not developed and strong working relationships had not formed. This made it difficult for the work to sustain without someone owning the charge in my absence.

Incorporating the data into the Student Insights dashboard took some creativity as the data lived in different data collection systems, however, using knowledge from previous creative endeavors the Student Insights designers were able to help the various collection platforms "speak" to each other. The end product resulted in the incorporation of out-of-school program rosters, and therefore the students who participated in each program, becoming a part of the Student Insights platform. By adding the out-of-school time participation data in Student Insights, not only could race, ethnicity, and socioeconomic information be aggregated by program, but it was possible to observe student participants' school affiliation, test scores, and school attendance among other collected data. In addition, educators within SPS could see the out-of-school programs that their students were, or were not, participating in. This incorporation laid foundation for more purposeful interaction between in school and out-of-school collaboration. However, while the addition of this data laid foundation for possibility, its incorporation did not alone build systematic processes by which to engage with the presented data or the means by which users could utilize the data. Therefore, as of now, few educators are actively accessing the incorporated data.

Two. Race and Ethnicity

Digging into the out-of-school time data helped me develop a deeper understanding of the inner workings of data collection and storage within the district and learn to better

navigate the varying platforms. The work of equity frequently stems from the aggregate data used to identify disparities between demographic groups, often with a focus on race and ethnicity. To engage in comparison between the OST data and the district data as a whole, I aggregated the race and ethnicity data for all of SPS. Aggregating data by race and ethnicity led me to the exploration of demographic categorization.

The Massachusetts Department of Early and Secondary Education (DESE) requires school districts to report the race and ethnicity of students and staff. The racial and ethnic categories reported to the state are in alignment with federal categories. Therefore, the data collection of the district is heavily influenced by the mandatory data reported to DESE.

The categorization of race and ethnicity are comprised of two sets of inquiries. Participants are asked to answer both. The first asks how participants' identify in regards to ethnicity, *Are you Latino or Hispanic?* The second asks for race, providing participants the choice of five racial categories - Asian, American Indian or Native Alaskan, Black or African American, Hawaiian or Pacific Islander, and White. On some forms participants are also offered the choice of "Some Other Race."

In Somerville Public Schools, the descriptions of racial categories mirror the 1997 guidelines established by the U.S. Office of Management and Budget (United States Census Bureau, 2018). The descriptions of the racial category are listed below in the same order as they appear on the U.S. Census Bureau website:

> **White** - A person having origins in any of the original peoples of Europe, the Middle East, or North Africa
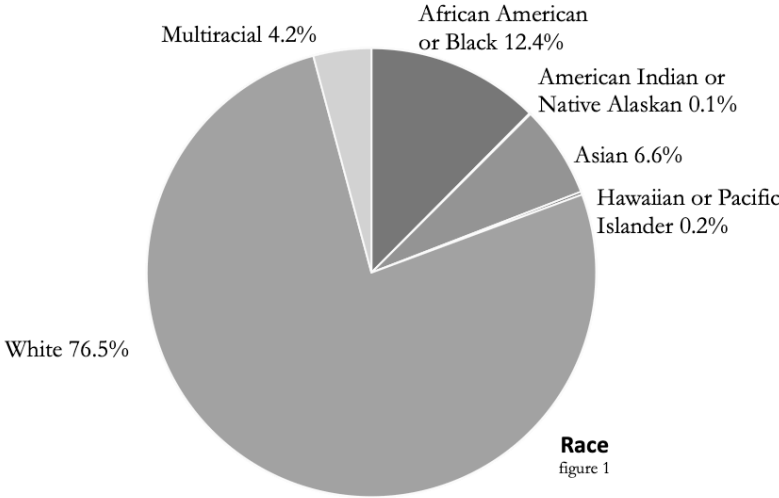>
> **Black or African American** - A person having origins in any of the Black racial groups of Africa
>
> **American Indian or Alaska Native** - A person having origins in any of the original peoples of North and South America (including Central America), and who maintains a tribal affiliation or community attachment.

Asian - A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

Native Hawaiian or Other Pacific Islander - A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

To lend illustration to the provided choices, I layered the two sets of data, ethnicity and race. Layering offers an added level of complexity as it demonstrates when given the above options, how students who identify as Hispanic or Latino in regards to ethnicity choose to identify in regards to the provided the racial categories. The graphs below provide visual representation of the layering of race and ethnicity for students, district-wide, in Somerville Public Schools.

Multiracial 4.2%
African American or Black 12.4%
American Indian or Native Alaskan 0.1%
Asian 6.6%
Hawaiian or Pacific Islander 0.2%
White 76.5%

Race
figure 1

Ethnicity
figure 2

Hispanic or Latino 42%

Not Hispanic or Latino 58%

African American or Black 7.1%

Multiracial 1.7%

American Indian or Native Alaskan 0.2%

Asian 0.01%

White 90.6%

Hawaiian or Pacific Islander 0.03%

Hispanic or Latino
figure 3

Multiracial 6%

African American or Black 16.3%

Asian 11.3%

Hawaiian or Pacific Islander 0.2%

White 66.3%

American Indian or Native Alaskan 0%

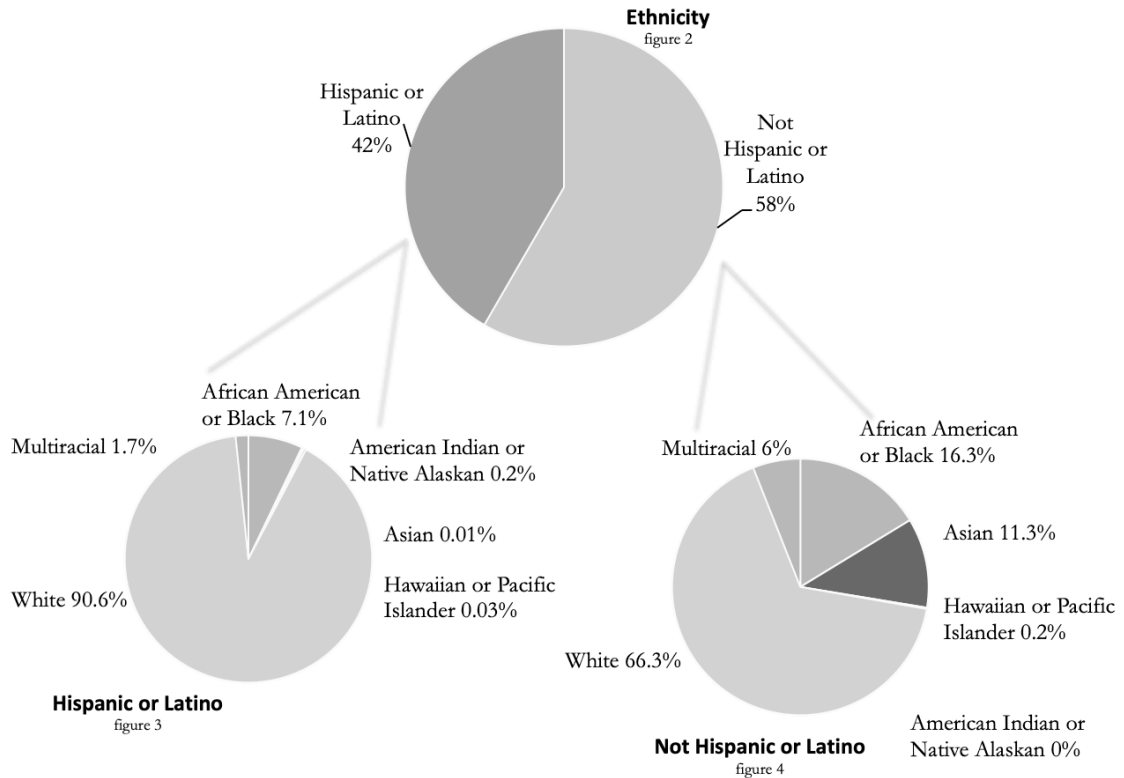**Not Hispanic or Latino**
figure 4

Figure 3 above shows of students who identify as Hispanic or Latino, 42 percent of the student population in SPS, 90.6 percent chose White as the race they most identify with out of the five provided racial categories.

Viewing the data above raised questions as to whether offered categories provide individuals with adequate choice. And whether our means of collection provided an accurate representation of the diverse student population. For example, when considering students who recently emigrated from Brazil we were left hypothesizing as to the category they might choose. And this is only one example of a group possibly left invisible by current collection methods.

Immediately recognizing the importance of pursuing this avenue, Superintendent Skipper asked me to share the data with the District Cabinet, the district level leadership team. With interest peaked, Mary informally shared the findings with the School Committee

during a working meeting. The morning after, a School Committee member swung by my desk to express her excitement and support for the exploration of race and ethnicity in the district. And in an impromptu moment during a subsequent School Committee meeting, she referenced the exploration and invited me to speak publically about the beginning findings.

Mary asked that I also present the data to the Human Capital working group, a team of district leaders formed to increase diversity in SPS's workforce. I refined and deepened the presentation based on reactions and questions that arose during the District Cabinet meeting. For example, there was discomfort expressed around potential shifting of the racial categories as the current structure aligns with the categories the district is legally mandated to report to the state. The alignment with the state led some to feel the current categories were appropriate and accurate. In light of this I added historical data to show the evolution of racial data collection from the first census in 1790, as well as recent recommendations from the Office of Management and Budget in regards to the 2020 Census, such as a call for the dissolving of separate questions on race and ethnicity and the addition of categories such as Middle Eastern and North African. Historical census data also showed early categorization was to distinguish between free people and slaves. Interestingly, the only racial category that has remained constant since 1790 is "White" (Pratt, Hixon, & Jones, 2015). During the second meeting I also shared my experiences growing up completing the race portion of the student information forms as an offering of illustration to how such categorization affects those who do not easily fit into designated boxes.

I find it important to pause for a moment to clarify my intentions behind pushing for a shift in how demographic data is collected in regards to race and ethnicity in Somerville Public Schools. The end goal was not in seeking the *right* categorization, but rather as a means to explore the conception of categorization and to foster questioning of racial

constructs as an immovable *truth*. This push provided space for the creation of an intermediate, labeled henceforth as a prototype, offering additional choices for representing diverse identities and providing a temporary means of intentional increased inclusion. The act of exploration, served to provide space for questioning currently held constructs, and lent tangible foundation for conversations grappling with the complex, fuzzy nature, and fluidity of identity. The prototype (draft provided in Appendix A), helped people hold complexity while also exposing and preparing for potential change. However, a revised form, was not the end goal in itself.

Racial categorization plays an important role in capturing discrepancies in access to service and opportunity between demographic groups. Without a system of measurement and recording such categorization, under the current design of our education system, it would be difficult if not impossible to determine and label inequities. In turn making it all but impossible to question and address found inequities in the service of redesigning the means by which we engage in the act of education in the United States. This is not to imply that such categorizations will always be needed, in fact, I hope fully that we evolve beyond embracing the act of categorization, at least in current form, as such distinctions establish and perpetuate inequities. However, moving from our current system to no system is irresponsible at best and can easily be aligned with call for colorblindness, a classification that works to maintain current power dynamics by failing to see and address them.

Also held within this tension, is the role in which racial categorizations have developed into means by which people find community, shared experience and empathy, and pride. Finding *group* is often the support system that holds our students of Color through faced obstacles during the act of schooling.

I hoped the work of redesigning the system of categorization would shed light on the complexity of identity and provide a catalyst for sparking conversations to push thinking and action.

After sharing with district level leaders, and having the buy in to move forward, I sought input from a variety of stakeholders within SPS. One of the first voices I sought out were those of students. My hope was that students would offer a fresh perspective and serve as early stage thought partners and potentially designers and agents of implementation. With the help of the Social Studies department chair at the high school and a partnering teacher, I engaged with a group of eighteen eleventh grade students. The idea of questioning racial categories was not something many students had previous opportunity to engage deeply with. While they shared their thinking and offered suggestions it was difficult for them to vastly reimagine the design in the limited time we had together.

The value a prototype could serve to ground the discussion became apparent during initial conversations as often the sharing of a shifted gathering system was difficult for people to imagine absent an example. Throughout I greatly appreciated the partnership of two women of Color who helped push my thinking and provided space for me to process. One in particular pushed me to consider the role colorism and the complexity identity plays within communities. Grounded in shared personal identities, insights, and a variety of forward thinking texts, I built a prototype. The prototype served as fodder for continued reimaging. I shared rough versions, with notes, questions, and suggestions from previous conversations to demonstrate the developing nature of the document, striving to model the means of working within an adaptive system.

Based on feedback, the prototype has continued to be refined. Concurrent to the refinement, I continue to guide the work in considering logistically what a redesign in data

gathering would entail, from the adult side with Human Resources and the student side with Enrollment, while simultaneously preparing for what this would mean in regards to the incorporation of an adjusted system into the data collection platforms.

Three. Access to Advanced Placement

Increasing access to Advanced Placement courses for students of Color and students from low-income backgrounds was a key addition I pushed for in the *Equity in Action* grant.

By the time I entered into this portion of the work I had the opportunity to learn from digging into other data sources. It was also an area in which I was familiar. During my decade in the classroom I had the opportunity to teach freshman Biology (honors and general), Advanced Placement Biology, and Molecular Genetics. These experiences afforded me knowledge of the different opportunities various courses provide as well as the planning and advocacy needed for students to intentionally reach an AP level course. The demographics of advanced level courses in a district are reflective of the practices and beliefs held by the system they exist within. Students who reach AP level courses had someone along the way that believed they were bright and hardworking enough to be there.

The Director of College and Career Services was already collecting data on Advanced Placement enrollment and testing trends. At the conclusion of our first meeting she shared five concurrent years of data on AP enrollment, the number of tests taken, and the scores broken down by content area and student demographics – race, ethnicity, gender, and socioeconomic levels. From the beginning it was a natural partnership. We both questioned openly, were able to follow each other's tangents, and embraced the rabbit holes we found ourselves falling down as they often led to productive ends. We shared the belief that questioning the system was not an act of condemnation but a means to observe the

results of the policies and practices currently in place. We whole-heartedly expected to find positive and negative attributes of the system and appreciated occasion to learn from both.

The already organized data from past years allowed us to enter almost immediately into informed questioning. With recognition of multiple paths and limited time to do so we refined our exploration to a guiding question, *What is the path to entering an Advanced Placement course?*

Five years ago, Somerville High School shifted from strict entry requirements, such as teacher recommendations, prerequisites, and required grades to enter Advanced Placement courses, to open enrollment. In the five-year span, the number of students enrolled in AP courses has increased for all demographic groups except students identifying as Asian. The number of tests taken and the pass rates have also increased for nearly every demographic group. Even with the increases, the demographics of students in AP courses does not yet mirror the population of the student body as a whole, with students who identify as White and Asian and not Hispanic or Latino having higher representation in AP classes than their peers who identify as Latinx or Black. This is especially pertinent as approximately 60 percent of the student population at Somerville High School identifies as Latinx or Black.

Seeing these discrepancies, its natural to ask, what is being done to eliminate or at least reduce these inequities of service, and there were times in the process of exploring that we instinctively shifted into brainstorming solutions. But we refocused ourselves - the goal of our exploration was not to solve each problem we encountered but to follow the path seeking to better understand the larger landscape and built a body of evidence to support decision-making towards systemic shifts. Our charge was to understand the process, and

build a collection of data that could be collected each year to observe patterns and provide means of comparison to observe effect when actions are taken.

Like the data collection around race and ethnicity the end goal was not solely to increase the number of students from underrepresented groups in Advanced Placement courses. Rather, it was about questioning a system that was producing such a result. The discrepancies in the numbers were a symptom of a series of practices that occurred long before students enrolled in AP courses.

At the time of this capstone we are still putting together the data we have sought out. However, we plan to share the data and thinking with key stakeholders to build a coalition of actors able to move the data towards informed action.

Evidence to Date...

School systems are slow moving beasts. They have been designed to be robust and continue movement in the same direction in which they have been put in motion. Therefore working to shift the way we engage in problem solving and redesign through a lens of equity using data as a starting text and as a means by which to interrogate our current design will be done through incremental, long-term moves. With this in mind, the evidence shared in the following section represents the beginning stages of the work. The following evidence is organized through the lens of the guiding theory of action.

theory of action. one. identify and make public key indicators by which to measure current levels of equity of service within Somerville Public Schools

With the partnership of the K-8 Curriculum Coordinator and the Student Insights development team, we were able to incorporate the student participation data gathered from the out-of-school programs into the Student Insights platform. This illustrates the ability to incorporate new types of data through creative means into the platform and provides example of how users, with adequate understanding and direction might contribute to the sources of data housed within the platform.

The addition of the OST data provides opportunity to track real time participation of students accessing out-of-school time opportunities in a more routine fashion with less energy expended on the gathering portion of the work. Part of the public sharing of data is the ability to do so with lower levels of effort to encourage sustained participation. The process achieved here provides example of a potential avenue.

The incorporation of the OST data is beginning to be spread by word of mouth, an important means of communication in the SPS community. An out-of-school time provider mentioned he heard about the work we were engaging in from the Out of School Time Coordinator. He was excited about the potential of additional programs being incorporated into the dashboard. Additionally, another group reached out and shared their roster in hopes of incorporation. Need, excitement, and willingness to participate are important pieces if this work is to continue.

While this work is still building momentum, such incorporation has the potential to communicate data with out-of-school time providers, family liaisons, and educators to increase understandings in regards to opportunities for students and families to access out-of-school programming. And it broadens the horizon of thinking in regards to types of indicators, here student participation in OST programming, and data that can be housed in a shared dashboard.

theory of action. two. use the identified indicators as baselines from which to examine current practices and policies that result in students' differing access to opportunity, with an intentional focus on race and ethnicity

The data collection in regards to enrollment in Advanced Placement courses at Somerville High School aligns with the recommended indicator in the National Academies of Sciences, Engineering, and Medicine report, "Disparities in Access to and Enrollment in Rigorous Coursework - Availability and enrollment in rigorous course work and Availability and enrollment in advanced placement… programs" (2019, p. Sum-10). This indicator serves as the baseline from which to begin system interrogation – what are the current

demographics of enrollment in Advanced Placement courses and how are they in comparison to the demographics of the high school and district. Our process of questioning, exploration, and collection demonstrate means by which to engage in the interrogation of policies and practices that contribute to larger system design.

The data collection around the exploration of *What is the process for enrolling in Advanced Placement courses?* is still in progress. At this time none of the data collected has been officially housed in an organized means of presentation within the district's data platform. However, the robust collection will serve as example of the building of an arsenal of data, designed to continue collection year to year, to inform and guide evidence-based system level redesign.

theory of action. three. use the findings of those examinations to interrogate the currently accepted constructs upon which the policies and practices are built

The building of a prototype works to shift how the district collects demographic data but more so has created a space in which to interrogate enacted constructs. The language of the prototype shares the intention of the district's shift in data collection – marking this form as an intermediate. The full document can be found in the appendix at the end of this text.

> We have found that traditional choices of race and ethnicity may not fully represent our entire community. In working to be intentional about becoming a more inclusive community that welcomes and recognizes diversity of identity we have moved towards more nuanced options. This shift is not meant to achieve the "right" categories but rather an evolving effort to better capture population data to push policy, practice, and diversity of thought. We welcome all feedback.

Perhaps most powerful, and truly the driving intent behind such a shift are the conversations and greater attention to nuance that have arisen. The conversations that have been sparked are beginning to shift means of engagement. For example, members of the

district level leadership team have sought me out to discuss their own identity. A district level leader and key player in the implementation was kind enough to share that my own personal story inspired her to think more deeply about the categorization of race and ethnicity. In subsequent meetings she shared her own story, a personal side I had not seen in previous group interactions. People have thought differently about how race and ethnicity is used in their own work, paying greater attention to nuance and complexity. This attention to detail has shifted the language used to describe populations of students, many are paying attention to the effect of their language, but also have an increased level of willingness to question and be vulnerable about how they are engaging.

The reimagining of the ways in which SPS engages in the collection of demographic data around race, ethnicity, and origin is still developing. Its continued forward progress is bolstered by shared interest across multiple decision-making parties showing evidence of movement towards implementation. Buy in by the Superintendent, the Director of Human Resources (adult side of the data collection) and the Enrollment Office Director (student side of the data collection) is secured. Thus, the current work includes building a clear understanding of logistically what it would entail within our current data collection systems to implement a shifted process. These conversations are underway, including with the Director of Technology who helps to run data collection, storage, and communication between the district's data platforms. Conversations are also expanding to a wider audience seeking to grow awareness and to build a coalition of thinkers and supporters of a refined and evolving system of data collection.

What has not yet fully developed is the deep understanding around such a shift, that a form such as the prototype is not about achieving the "right" categories but rather a conduit to capture our evolving understanding of identify and its effect on provided

educational services and access to opportunities. Therefore, the need persists to build the capacity to continue education around the idea of identity at the classroom and adult levels.

Compliance and conforming is a practice that people of Color regularly engage in within the constructs of the current design. And while these forms are not a part of direct instruction, students are very aware of whether the system they are being educated within truly *sees* them. These boxes being a reminder that often the answer is no. Therefore, while there is evidence of the development of a refined collection system, and beginning shifts in mindsets, what remains to be seen is if this can begin a sustained ripple effect to challenge the construct of race and ethnicity in other district spaces.

theory of action. four. act as an intentional thought partner to build capacity to actively engage in continual questioning and the purposeful consideration of a variety of perspectives, experiences, and knowledge (building coalition and shared ownership)

The Director of College and Career shared that what she found most valuable in the process of our working together was having someone to partner with in thinking deeply. The space to deeply dig in, while she considered an important part of her role, was a luxury because of the many ways her attention was pulled.

The Out of School Time Coordinator stated multiple times that the work accomplished in a few months in regards to the sharing of data through the Student Insights platform was more progress than had been achieved during the prior year. In a subsequent meeting scheduled when the OST Coordinator reached out to continue our thought partnership, he shared ideas, assumptions, and questions to drive future data collection and examination, showing that the access to the data in the streamlined manner was providing

space for thought and questioning of the currently constructed system. He also pushed on the relationship between culture and OST participation, questioning how programs encourage involvement and extend invitation to students and families. His thoughts were guided in part by his own cultural experiences as someone who identifies as a person of Color.

There were spaces where I intentionally acted as a thought partner, but I have begun to be a thought partner for other people in the district as well, especially for those in departments of one. I share this to say there is hunger for thought partnership in the district.

theory of action. five. Then data within Somerville Public Schools can serve as foundation by which to question current design and engage in informed redesign to a) shift current policies and practices to increase students' access to opportunity (short-term movement), and b) to shift accepted constructs through which inequities persist and are built upon to influence larger systematic redesign and elimination of inequity (long-term movement).

The building of a system that is able to be adaptive around problems takes time to develop. While sparks of foundational pieces that support his type of design are apparent within Somerville, truly engaging in this means of working has yet to be achieved with intentionality. Illustration of such sparks and recommendations for future endeavors will be discussed in subsequent sections.

Analysis ⋯

My draw to question systems of categorization arises in part from my own experiences with such forms. Throughout my education, when asked to fill out the race section I would stare at the choices with a knot in my stomach. Identifying as biracial, my mother identifying as Black and my father identifying as White, I did have options. *Black or African American* and *White* were provided checkboxes, however, during my time in the classroom the possibility of choosing more than one category was not yet an explicitly stated option. – The allowance of marking multiple categories was not instituted until 2000 at the national level. And Colorado, where I grew up, lagged a decade behind, providing option for marking multiple categories beginning in the 2010-11 school year. Children choosing multiple boxes were, and often continue to be, grouped into a singular classification, "two or more races." – As a child, when confronted with pressure to choose, my parents advocated I disregard the directions and mark both. My teachers advised darkening multiple boxes would invalidate my test results. When given the choice of only one, no teacher ever pushed me to select White, they always pushed for marking Black, a choice easier to reconcile within the current constructs. As a child I viewed this as choosing a parent more so than participating within a system pocked by oppressive ideologies. Regardless of level of understanding I experienced the pressure to conform into a system in which I did not fit. A practice we continue to ask students to engage in.

The limited authority I entered Somerville Public Schools with was delegated by Superintendent Skipper. My title, Superintendent Fellow, gave me direct connection to Superintendent Skipper, however it also held a level of ambiguity that required clarification.

Upon joining SPS, Skipper sent out an email introducing me to the district. Following the email, I sent a series of my own emails to key leaders within the district and surrounding sectors to lend invitation to one on one conversation. In the email, in defining my role, I connected myself to the two previous Ed.L.D. residents. As a reminder, both residents remained in the district at the conclusion of residency occupying senior level cabinet roles. So while I did not enter the district with high levels of formal decision-making authority, my title and proximity to Superintendent Skipper, as well as the positioning afforded to me by the residents who came before, granted me an entry level of ambiguous authority which provided an entry into many conversations. My positioning, however, was complicated by my designated role as a learner, a role I often embodied as a silent observer in meetings with Skipper, and was I repeatedly referred to as an intern, a title often associated with a learner that enters a space with little experience. This positioning and alternate titling must be held in the context of joining an organization whose members predominately identify as White as a female of Color. To establish myself within the organization it was important to establish my credibility and ability to productively contribute.

Green and Molenkamp define authority as "the right to do work" (2005). Authorization "involves one person or group giving over or delegating some of their own formal authority so that another might do certain work on their behalf" (p. 5). Authority given must also be accepted and taken up accordingly. Additionally, to be effective, authority granted must be accompanied by the tools by which to exercise it. The sources I am choosing to reference in regards to authority and leadership are influenced by the work of Ronald Heifetz. I mention Heifetz here to lend credit to his contributions, however I focus on the thinking shared by other various authors who more intricately take into account the

complex role of identity and the intersection of race and gender in their analyses of authority and leadership.

Two cultural drivers in Somerville Public Schools greatly influenced the direction and execution of my strategic project. First is the clear authority of Superintendent Skipper. She has the authority designated by her title, but more so she has built a coalition of bright actors that have the ability to execute at a high level but do so through authority delegated by Skipper. It feels pertinent here to include leadership as it relates to authority. "Authority is about position, while leadership is a process of motivating, inspiring, and mobilizing change in groups. Authority refers to a position either formal or informal with the power to make decisions that can be binding on others" (Obholzer as cited in McRae & Short, 2010, p. 94) whereas leadership is "a special form of social interaction; a reciprocal, transactional, and transformational process in which individuals are permitted to influence and motivate others to promote the attaining of group and individual goals" (Forsyth as cited in McRae & Short, 2010, p. 95). In SPS, district level leaders demonstrate a high level of respect for Skipper's thinking and opinion, often seeking out both guidance and permission before moving forward. They willingly follow her process of delegation, she is clearly an authority figure in the district, but she also has inspired those around her to follow her as a leader. As both the top authority and leader in the district, Skipper plays a role in the majority of the movement in the district. Therefore garnering her support is imperative for initiatives to take a strong hold.

The second cultural driver is the means by which information and direction is communicated - for the most part through verbal lines of communication. This means in order for information to be acquired you need to be in the *right* conversations or connected to people in those rooms so that the information is conveyed. This is not to say that

direction is not also communicated in writing, two clear examples of this are the Equity Policy and the School Committee Goals, public facing documents that mark the importance of the district's drive towards equity. But the majority of direction is given verbally as Skipper, a natural and talented orator, is most comfortable and clearly in her element when verbally establishing and directing shared charge. It is through this medium that Skipper is most influential. She has a keen ability to draw others in to inspire and promote action.

This meant, in order to deeply understand the inner workings of the district, I needed to do so primarily through conversation. To understand the current pulse and impact of history within the district I had to be in the *right* conversations, with the *right* people, asking the *right* questions. What was shared often stemmed from remembered histories and assumptions, meaning that multiple conversations were needed to offer full perspective and spark potential connections to guide forward progress. Knowing more about the organization by listening allowed me to make connections and form the basis for moving forward. I engaged in this endeavor through the means by which I feel most effective and comfortable - one on one conversation, growing knowledge and relationships in the process. I had little to no decision-making power within the district, however, I was granted authority by Skipper to engage in the work of my strategic project. Through relationship building, willingness to listen and learn from others, and the offering of well-informed thoughts I was able to establish a level of influence which aided in moving the work forward.

Somerville Public Schools is a relatively small district, which requires people in leadership positions take on a variety of responsibilities. District-level departments are small, most often comprised of one to a few individuals, leaving people to have nearly complete ownership over the projects they work on. When engaging in creative work or redesign, if thought partnership is warranted or wanted, it has to be intentionally sought out.

It was important that I did not act as a department of one. If I engaged in identifying indicators in isolation, without partnership of those deeply entrenched within the policies and practices being questioned there was large possibility that the indicators would have limited or no effect on shifting practices. Additionally, in order to move forward, in both engaging with relevant data and the incorporation into the data platform I needed others to have buy in and willingness to partner. I also needed to build appropriate levels of trust and respect for my thinking because I was asking people to interrogate the system and engage in questioning current policies and practices that were shaping the system and in many instances resulting in an inequitable service and distribution of resources. This charge was bolstered by Skipper's push to move equity into action.

Early established relationships also helped to further my charge. Dr. Boston Davis acted as a key ally in helping to elevate my voice and garner my inclusion in pertinent projects during my entry into the district. For example, though Skipper verbally noted I should be included in the *Equity in Action* grant work, Boston Davis made sure to include me on emails and in meetings, and attributed credit to my contributions. This quality was consistently embodied and exemplified by Boston Davis but was not unique to her. I readily observed throughout my time in the district, as people built on the ideas and work of others they made sure to assign credit where it was due. This built a level of trust and encouraged the sharing of and seeking out alternative ideas. It was this cultural aspect that I worked to complement and build upon. An important part of my work was listening and engaging as a thought partner. This required me to fight the urge to be polished and instead worked to engage in the space where I feel most inspired and productive, but also vulnerable, that of public messy thinking. To set this container for myself and to invite others in I shifted some of my patterns of introducing ideas. For example, when I would share thoughts that were

not clearly defined in my head I would begin with "I'll share my current thinking but I might disagree with myself in the future" or "this is not fully thought through, but I would love a thought partner to push my thinking" or "this is not the right word for what I'm thinking, but I'd like to use it for now to hold the space so I can get the thought out." This rephrasing gave me permission to think "messily" and welcomed others to practice the same. This encouraged a level of vulnerability in those I partnered with as sharing was not only encouraged but received with appreciation and excitement.

I didn't have the authority to directly drive decision-making, but I did have the power to create containers for people to think. And through the thoughts and questions I contributed to the shared container it encouraged others to question current design, policy, practices, and constructs. This means of engaging worked to shift patterns of thought both in the ideas we were exploring together and in the subsequent work they then returned to. It was the act of dropping a stone in water to encourage the spread of the ripples.

There was a book I read as a child, *Because a Little Bug went Ka-CHOO!* (Stone, 1975*).* It begins "You may not believe it, but here's how it happened. One fine summer morning… a little bug sneezed." The colorful, goofy pages illustrate the chain of events that result from the initial sneeze. It's fantastical, and in reading it as an adult, I was reminded the end mosaic was a bit chaotic, but it also lends reminder that it takes a series of small movements to achieve larger shifts. A *sneeze* serving as catalyst.

In biological reactions a catalyst serves to lower the activation energy so a reaction that would take a great deal of energy to proceed under normal conditions can more easily move to completion, the outputs of the reaction unchanged by the presence of a catalyst. What's limiting in using "catalyst" in this analogy is while I wanted to lower the activation

energy, I also wanted my presence to alter the outcomes - my contributed questions and thinking acting as both catalyst and added reactants.

Parker describes transformational leadership as providing "a basis for linking the ideas of leadership as the management of meaning and leadership as a process of social change and emancipation" (2005). My hope, was my interactions might model means of engaging. For example, shifting language from, he is Black, to he identifies as Black. I modeled this language and heard others subsequently use it. It is a subtle shift of tongue, but it alters the frame from designation by the system to defined by the individual. Of course the system of categorization lends influence, but it opens the door for reimaging and redefining, serving as a small transference of power.

Transformational leadership is further described as the "process of evolving interrelationship in which leaders influence followers and are influenced in turn to modify their behavior as they meet responsiveness or resistance" (Burn as cited in Parker, 2005, p. 26) and "as both a microlevel influence process between individuals and as a macrolevel process of mobilizing power to change social systems and reform institutions" (Yuki as cited in Parker, 2005, p. 26). Without clear positional authority, I often worked to lead from within the group, helping to define the path but never dictating it. While I believe that social change is promoted and sustained by unified movement, I know my identity impacts the means by which I lead, quietly and through influence. Additionally, by working by means of partnering, as I influenced others, so too was I influenced in return. Continual learning shifted the path and outcome of my strategic project.

When my strategic project became defined, my initial thinking was to use indicators as a means to make connection between sectors and across organizations. In this light I sought out numerous conversations with potential partners on the city side as well as

community organizations. The conversations shed light on the intricacies of services provided to families and children in the district but they did not result in a clear means of moving forward. I believe this occurred in part because of the tension that exists between what I will call acting in the service of now and acting in the service of future. Most of the designation of work assigned asks people to act in the service of now, meaning that which is being produced effects how the system provides services to people in the relatively short term and within the current constructs accepted by the system. There exists urgency in fixing the problems immediately in front of us. There is little, if any, time designated to examining the current constructs we are working within and then providing space to challenge in service of redesign for the future. Thinking in service of the future is considered a luxury, afforded and attended to when no crisis is occurring. This is not to say that people are not planning for the future, but that they are primarily doing so within the currently defined structures and accepted constructs.

Let me provide an example to illustrate this point. When meeting with an organization focusing on food insecurities, they shared an elegant plan they had spent a year developing to guide forward movement across a variety of areas to challenge the current practices and policies that limited people's access to healthy food. There was not a natural place to partner in regards to data collection, however their means of collecting data very much informed how we later engaged in the design of a portion of data collection in an enrollment study. This might seem like a tangential example, but what it illustrates is that the organizations were not yet in a ripe point to partner, but through conversations the thinking of one organization influenced the thinking of another. This leads to portions of a shared foundation and when the right catalyst arises, the places of shared foundation provide easier

access to partnering. It's engaging in a long-term game both in the influence of design and in the relationships built.

This occurred during multiple conversations, there were sparks of inspiration and shared direction, but not necessarily the needed readiness for partnering. This in part is attributed to my evolving ability to articulate a shared purpose. During each conversation my understanding of the intricacies of the different departments and organizations grew. My ideas and the formation of their application developed, but because I entered conversations with nascent ideas that had not yet formed as a cohesive charge I was not necessarily offering a clear partnership to join. This was in part because I entered hoping to find thoughts partners to aid in shaping the direction of the work. However, and quite obviously, everyone had a full load of work to garner attention, therefore if a partnership was to form it needed to in part address a defined task or need. This realization helped to shift my attention to seeking areas where vibrations around using data to guide redesign were already occurring. Areas where I could join current movement as a thought partner, catalyst, and extra set of helpful hands. This type of joining addressed the needs of the partner. In regards to the strategic project, the work we engaged in provided example for future partnerships. The idea behind my work was not to shift specific areas but rather to use data to help build a more adaptive organization.

The Problem-Oriented Governance framework was first introduced during the Review of Knowledge for Action (RKA) portion of the text. The framework stresses the need to develop three core capabilities – reflective-improvement capability, collaborative capability, and data-analytic capability – in order to move towards an adaptive system that is able to shift in response to nominated problems. The duration of residency is short in relation to a system shifting practices and culture to become more adaptive but I was hoping

to achieve sparks to show proof of movement towards the formation of a more adaptive organization.

A goal of my strategic project was to identify key indicators of measurement in relation to equity. I entered the work believing there were clear indicators in which to identify and measure which in turn would build foundation for the design of a more equitable system. In hindsight I believe this view was overly simplistic.

> *Data-analytic capability* refers to the ability of public-sector organizations to collect, process, and analyze different types of information to improve accountability, enhance motivation, and adapt their theories of change based on an improved understanding of external context, internal conditions, and performance. (Mayne et al., 2019, p. 8)

Somerville has a high level of data collected. However, the data is not organized in a manner to offer a system level view to lend support in tackling systemic inequities.

The NASEM report, Monitoring Educational Equity, provides a table of "Proposed Indicators for Educational Equity" (National Academies of Sciences, Engineering, and Medicine, 2019). These indicators provide direction to focus data collection, through the "Constructs to Measure." The identified indicators such as "disparities in academic readiness" in relation to kindergarten readiness or "disparities in engagement in schooling" in relation to K-12 learning felt appropriate as potential starting points for exploration. When I shared these indictors with colleagues they resonated. However, the means by which the indicators were embraced were very much with the intent of enactment, *what do we do about it,* rather than that of interrogation, *why is this happening.* This made me realize that in order to deeply engage in the work of interrogation we needed to use the indicators as baselines from which to begin interrogation rather than solely as endpoints.

Let me provide an illustration of this point. "disparities in access to and enrollment in rigorous coursework" is an indicator suggested by the NASEM report. The construct to measure this indicator is "availability and enrollment in advanced placement…programs." The enrollment of students in AP courses divided by demographic groups has been collected in the district over multiple years. Using this data we can clearly cite the discrepancies in the demographics of students participating in AP in comparison to the demographics of the school as a whole. While there were shared conjectures as to why these disparities continued, what was not as clearly identified were the explicit policies and practices that continued to propagate such differences. Using AP enrollment demographics as the starting point allowed us to enter the work questioning the factors that led to the symptom. The goal was not to have equitable representation in AP, but to establish a system that served equitably, and in the process, a symptom of the equitable service was equitable representation of varying demographic groups within AP courses.

It was difficult to stay within the role of interrogation, not trying to fix discovered problems along the way, especially when I was in classrooms and the problems observed were directly affecting the students in front of me. However, my charge, self assigned, was engaging in exploration to better design equity-based data collection as a means by which to inform systemic change – acting in the service of future verses in the service of now.

School systems are caught in a tension of seeking new means by which to practice the art of educating and that which they are mandated to do. This tension pushes systems to resist change, leaving them to maintain their current rhythms.

Reflective-improvement capability refers to an organization's ability to articulate a theory of change around a nominated public problem and its ability to measure performance,

learn, and adapt. It allows an organization to understand what is working and what is

not and adjust its course of action accordingly. (Mayne et al., 2019, p. 5)

The common problem that arose when logistically deciphering how we might redesign a

system of data gathering was the demographic information that had to be reported to the

state. A shifted system that did not align to the states recording system had the potential to

produce a nightmare of effort going into translating between the two.

An algorithm exists to capture the gathering of demographic information in the

current form, the ethnicity question first and the five racial categories second. The algorithm

codes for all of the possible combinations, and is provided to school districts through

partner data platforms, making it easier to gather data in the way requested by the state

department of education.

Returning to Ruha Benjamin's work on the intersection of race and technology – the

technology that supports the current system of data collection, encourages the continuation

of the current means of gathering race and ethnicity data as it makes the collection and

organization the standard routine. Increasing choices or designing in a means that does not

fit into the current algorithm increases the complexity of obtaining the information. The

addition of complexity requires additional time, thought, and potentially money designing a

new means of calculation. The desire to avoid the added task, in turn maintains the

established categorization. The simplicity of accepting and maintaining the current design

reinforces the idea that this is the "right" way in which to capture race and ethnicity data.

The development of the technology around these constructs work to maintain the status

quo. Lack of full understanding of the mechanisms driving design coupled with an inherent

trust in the system results in a default belief in the current system as a correct and accurate

means in which to collect information. In other words the current categories offered default to accepted truth.

Porter discusses the creation of categorization as being dependent on certain situations, in turn making the categorizations in themselves relatively weak. However,

… once put in place [the categories] can be impressively resilient. Legions of statistical employees collect and process numbers on the presumption that the categories are valid. Newspapers and public officials wanting to discuss the numerical characteristics of a population have very limited ability to rework the numbers into different ones. They thus become black boxes, scarcely vulnerable to challenge except in a limited way by insiders. Having become official, then, they become increasingly real. (Porter, 1995, p. 42)

Based on this notion the prototype holds two different sections for data gathering. The first section holds the same race and ethnicity categories as used prior, aligned to the specific categories requested by the Massachusetts DESE, leaving the district in position to maintain compliance. In doing so it also maintains the current system of data collection. The second a refined system specific to Somerville to gather a more nuanced set of data. By placing the two next to each other, it provides representation of the adapting system - demonstrating movement and giving illustration to change. However, leaving the current system intact also leaves an easy means of returning to the previous system of reporting.

The design of the system serves to maintain itself. Providing example of the system being *impressively resilient.* This is demonstrated in the algorithm but was also in roles. For some actors in the district, the distribution of responsibilities, often marked by a series of historical events, results in ownership of certain processes and subsequently gives rise to the establishment of gatekeepers that have become influential in determining the direction of

change. From my observations, the swaying of ownership, even if it makes sense for efficiency and increased effectiveness does not easily occur. This design did not feel intentional, nor does it seem to be in place to block progress, but regardless of intention the system continues to persist, resulting in the need for a granting of *permission* to engage. While not unique, this holds true in the data portion of the district because engaging with and shifting the platforms requires a technical set of skills.

In finishing my ten months in the district, while strides were made the time passed too quickly leaving me reflecting on the importance of sustained effort. I want to return for a moment to the urgency of now and the effect that it has on engaging in planning for the future. Most of my work was in examining the present to plan for the future. But in order to move forward I needed to partner closely with actors in the district whose work was entrenched in the present and because schedules were packed, finding a mutual time or opening was often a week out if not further. Making tasks that should be able to be accomplished fairly quickly take weeks. In retrospect I wish I had pushed with greater urgency. I felt the tension of the present as well; there were times when I pushed future work to engage in projects with pressing deadlines. But without balance preoccupation with immediacy stalls long-term change.

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Implications for Self

One. Solving complex problems takes a coalition of people coming together, bringing their knowledge, experiences, and ideas. While engaging with data in Somerville I often acted as the connection between the different facets of the work. This is highlighted in the capstone as the offered proof points are held in various silos. Therefore, to continue progress connection between these silos is vital. Throughout, I was purposeful about pushing thinking, but I was not as intentional about building a coalition of thinkers. I worked in the spaces of others but did not define a new space for the actors to come together, building relationship and shared mission. Building such a coalition was a missed opportunity for the potential generation of new ideas and shared visions but also for propagating a foundation for the continuation of the work. In holding the complexity without fully articulating it to others as a larger vision, there is strong possibility that while silos of the work will continue in my absence they will not come together in the joint vision that was beginning to solidify in my own thinking in regards to data utilization. I faltered in not asking the collective to intentionally hold the ambiguity of such a complex undertaking together.

Two. Using data to interrogate systems for equitable redesign requires long-term movement. I entered the work with big ideas in my head. In seeking fellow thought partners I believe I could have better communicated the purpose and intent of the work. I enjoy pulling all of the disparate ideas and struggles together and therefore sought out conversations with a variety of actors. However, in working with individual silos, I was engaging with people who had not participated in the previous conversations, conversations that were informing the connections I was making. Therefore, there were times when people could not fully

participate in the dissection, connection, and complexity because they were only a small section of it. Everyone does not need to know everything, however, it was hard for others to join me when they were unable to see the direction and purpose of the path. Clearly articulating complex problems and potential design shifts is tricky when in the midst of discovering the intricacies. The difficultly is further compounded when my own ruminations lead to continual fluctuations in my thinking. But developing a means to clearly articulate transitional, midstream thoughts and communicate a clear, although winding, path is vital for moving and leading complex work, such as designing for equity, forward.

Three. Throughout Ed.L.D. we are asked to share the story of self. I have become quite aware if you don't tell your story, someone else will. The telling of self has always been difficult for me. Not so much the sharing of personal experiences, but rather seeing place for the personal stories that help others to join you in the work. I lean towards facts, figures, and morality as a driving compass. However, the experiences that help shape how we enter the work are often the igniters of the passion that drove us to be there in the first place. The vulnerability of connecting actions to experiences helps others better understand how we enter the work, in turn people begin to see the connection to their own experiences and are more willing to join and contribute.

I am very appreciative of the administrator who shared the impact my experience as a student had on her interaction with the work. I appreciate how she then engaged in future conversations in sharing her own experiences with identity. Her actions, an illustration of how the personal fuels the collective, serves as a powerful reminder of the importance of including self in the work.

We all enter with our own sets of stories. These experiences color the lens through which we see and experience the world. Our lenses and experiences often overlap with others, but the individual combinations and shaped perceptions make us who we are. There is not one right way of doing things, but those that learn from the richness of a variety of experiences and actors, have a better chance of shifting towards a more inclusive trajectory. This means having the willingness to be vulnerable in sharing your own story and the grace to fully listen and learn from the stories of others. As I move forward in leadership I will be purposeful about the inclusion of voice. I have been mindful to do this for others, but I will be more intentional in also doing so for myself.

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Implications for Site

Under the leadership of Superintendent Skipper, Somerville Public Schools is shifting the structural and educational design of the district to be one that embraces equity as an integral part of everyday practice. The translation of this charge into action is seen through the passing of policy such as the Equity Policy and the Equity in Hiring Policy, in the formation of the Director for Equity and Excellence position, and in the development of School Committee goals that continue movement of the equity work into direct actions. While Superintendent Skipper serves as a high profile proponent for the work, many members of the district leadership continue to scrutinize their own departments and schools to advance more equitable practices. Educators are challenging the notion of what it means to educate students within our current climate, one often rife with tensions around race, gender, sexuality, and identity, to more deeply develop thinkers ready to challenge the current constructs of the system.

With gratitude front of mind, I offer the following insights with deep appreciation for the willingness of the community of Somerville Public Schools to welcome me in as a thought partner.

One. Continue to shift the design of demographic data collection for adults and students.

In order to truly engage in equity work, all members of a community must be seen. Somerville Public Schools serves a diverse community of learners. The current means of capturing demographic data in regards to race and ethnicity fails to capture this richness.

Redesigning the manner by which race and ethnicity data is collected provides a more accurate representation of the SPS community – staff and students. Increased accuracy

provides foundation for more nuanced identification of discrepancies in service across groups, and for the creation of a more informed approach in the distribution of resources and opportunity, an endeavor that supports movement towards a more equitable system.

Beyond providing more accurate data, the redesign of the system creates an avenue through which people can begin to be more fully represented. Engaging in the redesign communicates that a piece of equity work in the district is embracing the complexity of identity. When people are asked for how they identify and are then not represented on the forms, it communicates a clear message in how the district currently, sees, or fails to see them.

As the School Committee goal around Human Capital seeks to increase the diversity of the staff and educators in the district, shifted data collection creates a platform for a more accurate representation of adults chosen identity around race and ethnicity. The shift signals that SPS is a district that seeks to engage with race and ethnicity in more inclusive ways – a potentially strong message in welcoming educators of Color to the district.

If the redesign results solely in a new system of categorization the movement fails to be a true catalyst for change. The redesign as currently represented by the prototype only serves as an intermediate step. Checking boxes in an effort to categorize race and ethnicity fails to fully capture the identity of the individuals they serve to represent. The very process of categorization creates false monoliths and perpetuates flawed belief systems that all members of a group possess a propensity to act in the same way.

Two. Use the redesign as an opportunity for learning.

Somerville is in a unique place to harness the full energy of such a shift. With the current momentum towards designing with increased equity in mind, the redesigning of how

race and ethnicity data is gathered in the district lends a unique opportunity to provide space for education and constructive conversation around identity. Race, ethnicity, and identity are complex topics and ever evolving. In conversation with students from Somerville High School, this is a topic that many express interest in exploring.

Providing opportunity to interact with complex ideas within the classroom prepares students to question current constructs and engage in the process of making shifts. This fosters an opportunity for adults to learn alongside students. As all begin to grapple with the intricacies of our current situation, opportunity is created for student and adult voices to be heard and to embark in questioning and designing, side by side, at the same table.

Three. Use indicators as baseline measurements from which to interrogate the system.

The NASEM Monitoring Educational Equity report offers guidance in potential indicators to use in measuring for equity. Many of these indicators have already been embraced within different pockets of SPS. Therefore, many of the topics are already being explored and data is in the process of being collected. This provides a great foundation from which to build as the idea of gathering and utilizing data to make decisions is fairly established in Somerville.

However, these large level indicators do not alone get at the root of why certain patterns, specifically those aligned to race and ethnicity, continue to surface year after year. Therefore, I recommend using the indicators as the baseline, a starting point to inspire further interrogation of the system. An example of this is the path to Advanced Placement work described earlier. The initial indicator was examining the enrollment of AP courses by demographic groups, namely race and ethnicity. Once the enrollment data communicated the demographics of AP courses were not representative of the larger population of the

district, it became our starting point for examining current policies and practices that have contribute to enrollment numbers.

The process of continually asking why and exploring expressed assumptions helped us better understand the larger picture and the many factors that contribute to certain demographic groups having greater access to AP courses. An interrogation that seeks to shift practices in serving students in a more equitable way must possess an intentional equity lens. This lens requires the recognition that enacted policies and practices were developed within systems that reinforce oppressive constructs. Therefore the examination of these systems and the resulting structures require deep questioning that often leads to the need for seeking a better understanding behind the history that bolstered particular policies and practices. These means of interrogation then serve as foundation for decision-making around redesigning.

Using data as a text for system interrogation isn't about having specific data but about having data in and of itself to interrogate. It is the act of interrogation that raises opportunity to question the means by which our system of education is designed and encourages continued questioning. The act of questioning provides a shifted view of the system, one that seeks root causes and challenges held social constructs. This in turn informs the decisions made that effect students' experiences in school.

Four. Harness the power of catalysts.

One of the roles that I played during my time in the district was as a thought partner. This role provided opportunity to learn an unknown system through the eyes of people already established within. It also provided a way for members of the Somerville community, already deeply entrenched, to question the constructs they were designing within. Having a

specific role within the district to aid in examination and questioning and to serve as a catalyst is deeply important for sparking inspiration and change.

There are people who are natural questioners and can do so from an open lens, one not of condemnation but of wanting to discover how things work. And then striving to do better. These are the people to recruit to act as thought partners and catalysts. Let them explore the system. Empower them to dig deep, to act as roaming partners, and then serve as catalysts for setting up the conditions for shifting current practices. It's possible that one person is not naturally inclined to do all of these things. Figure out where natural tendencies lie, and design teams with different sets of talents, to add well thought out effort and energy to be sources of inspirations and fresh air within the district.

As Somerville is a comparatively small district, many of the actors within the district office are "departments" of one. Therefore, a single person holds down the inner workings of their assigned specialty. While this has the ability to move work fast as there are fewer people to align, this also limits the creativity and push that comes with collaboration. The consequence is unintentional siloing. There were times while in the district that I was seeking solutions in isolation. The isolation is not that you are completely alone, reaching out to others is a welcome and a frequent activity. But the partnering is not a deep collaboration, rather it is pockets of overlap without shared ownership of the work. It provides for camaraderie but does not harness shared struggle that inspires collective genius through creative abrasion, agility, and resolution (Hill, Brandeau, Truelove, & Lineback, 2014). The creation of a role whose intentional purpose is to serve as a thought partner will inspire creativity while lending support and offering productive push.

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Implications for Sector

Nothing handed down from the past could keep race alive if we did not constantly reinvent and   re-ritualize it to fit our own terrain. If race lives on today, it can only do so because we continue to create and re-create it in our social life, continue to verify it, and thus continue to need a social vocabulary that will allow us to make sense, not of what our ancestors did then, but of what we ourselves choose to do now.

- Slavery, Race, and Ideology in the United States of America
(Fields & Fields, 2014, pp. 147-8)

To observe disparities between groups we record demographic information based on race and ethnicity. These measurements record progress toward prescribed goals, differences in academic achievement, and discrepancies in allotted resources and access to opportunities. In striving to create a more equitable system we work within the confines of systems whose structures were established through years of enacted practices and policies shaped by flawed patterns of belief. These structures continue to be propagated by constructs that perpetuate unequal distribution of power.

As we gather demographic data in pursuit of information to guide decision-making, we unintentionally continue the propagation of oppressive constructs. This propagation solidifies a hierarchy of expectations around achievement. One in which assigned achievement measurements are aligned with preconceived notions of performance based on expectations assigned to racial monoliths. And, through faulty design premises student performances on standardized tests are reinforced by tests refined to reproduce the same results.

The complexity of race and ethnicity is compounded when interwoven with other societal factors such as distribution of wealth and allocation of resources. These weighty factors, help to determine "success" within our societal structures, while propagating the same power dynamics under which race was first imagined.

Ideologies become codified and cultivate lived realities. I have found I am able to hold the knowledge of the created constructs and see their effect. In practice, it is easy to slip between the awareness of the construct and falling into actions that perpetuate its existence. Additionally, within the construct of race there is the need to simultaneously hold the oppressive structures that come with *having race* alongside the pride that comes with shared identity.

I do not believe we are at the point of disbanding racial groups. Our systems of categorization are so deeply interwoven that their disappearance would also remove our ability to identify systemic inequities linked to race and ethnicity. Without the ability to measure, we also remove the ability to identify inequities and enact change. The removed of categories would leave many without the means of the support systems that help people cope with the structure of the current system. In all honesty, I'm not sure how to shift this trajectory. I have ideas. Many do. But as important as the production of ideas is the space in which to explore and question. Part of productive questioning is seeking to understand the historical context that built the design we seek to reimagine.

However, by measuring within these systems we continue to perpetuate the hierarchy they were established to create. Therefore, I recommend beginning the process of evolving out of our current constructs. One way to begin the redesign is by reimagining boundaries. Asking people to share how they identify and providing data systems that are able to hold the complexity of the responses. Realizing that people are answering within the constructs of a system that is heavily weighted with the connotations of race being an excepted reality. So the redesigned systems of recording demographic information must be built with a level of malleability that allows for continued adaptation.

This continual adaptation asks us to hold the weight of balancing multiple *truths*. I suggest that we prepare students to hold multiple truths as well.

In *The Lost Education of Horace Tate* (2018), Vanessa Siddle Walker, illustrates the fight for educational justice by Black educators in the South prior to *Brown v. Board of Education.* In educating Black youth during battles for desegregation, through education, educators were striving to help students' "believe in a world they could not yet see in real life" (p. 153). I see this is as a lesson for a way to move forward. Through education, we support students in endeavoring within current structures while preparing them to imagine new ways forward. We expose students to created constructs and the policies and practices that are reinforced by belief patterns. We provide access to knowledge and history so that we, in collaboration with the generations currently in our classrooms, can grapple with the complexity of our current situation to engage in practices that foster a means to design our way out of the confines of demographic boxes.

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Conclusion

School districts are continually facing novel problems. As do they continue to battle problems that perpetuate across generations.

I had the pleasure of getting to know a brilliant young woman who recently graduated from Somerville High School. She eloquently shared the complexity of her journey of identity exploration. As she describes it, the opportunity to deeply engage in ideas of identity did not arise until her sophomore year when a teacher of Color engaged in a lesson outside of the traditional curriculum on microaggressions. The lesson shifted the lens through which she saw the world.

When I asked a group of high school students, if there were no choices of categories around racial and ethnic identity how would you choose to identify, a student wrote "I would be an other." Our current system perpetuates a lens in which people are trained to see and identify themselves as "other."

I include these examples to illustrate how our system of education fails to address the complexity of the students in which it serves. If done well, education provides access to opportunity. Under the current design of education in the United States, not all students are the recipients of a well-executed education. Inequities in access to service and opportunity plague our education system.

Redesigning systems that serve equitably will require more than a series of band aids, it will require system level reimaging. Decisions cannot be made haphazardly or based off how we assume the system to be. To deeply engage in conversation about change there must be a body of evidence from which to interrogate our current execution.

Much of this text is about the act of using data as a means by which to interrogate our current system of education. As shared previously, "[e]nacting change can be challenging, but it is nearly impossible if there is no information about existing problems" (National Academies of Sciences, Engineering, and Medicine, 2019). Equity lensed indicators can serve as baselines from which to deeply interrogate the policies and practices that make-up our system. Data can serve as text through which to engage in the questioning, but organizations must build capacity to adapt to the changing problems they face. And in preparing to adapt, organizations must build capacity to challenge the social constructs that our very systems are built upon.

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Appendix A: Draft Demographic Data Prototype, Spring 2020

The following questions ask for information in regards to race/ethnicity/origin. You will be asked these questions in two different formats. The first two questions on race and ethnicity help us to provide data as required by the Massachusetts Department of Elementary and Secondary Education. The second portion represents our developing understanding of how we gather data around identity as a district.

The following information is reported to the Massachusetts Department of Elementary and Secondary Education.

Please answer BOTH questions 1 and 2.

1. Are you Hispanic or Latino? (*Choose only one*)
    ☐ No, not Hispanic or Latino
    ☐ Yes, Hispanic or Latino (A person of Cuban, Mexican, Puerto Rican, South American, Central American, or other Spanish culture or origin, regardless of race)

2. What is your race? *(Choose one or more)*
    ☐ African American or Black
    ☐ Asian
    ☐ Caucasian or White
    ☐ Native American, American Indian, or Alaskan Native
    ☐ Native Hawaiian or other Pacific Islander

The following information is used by Somerville Public Schools.

We have found that traditional choices of race and ethnicity may not fully represent our entire community. In working to be intentional about becoming a more inclusive community that welcomes and recognizes diversity of identity we have moved towards more nuanced options. This shift is not meant to achieve the "right" categories but rather an evolving effort to better capture population data to push policy, practice, and diversity of thought. We welcome all feedback.

Please mark one or more boxes and print how you identify within the chosen group(s).

☐ Asian

Within this group, how do you identify? *Print, for example, Chinese, Chinese American, Filipino, Asian Indian, Vietnamese, Korean, Japanese, Cambodian, Hmong, etc.*

*(Write here)*_____

☐ Black or African American

Within this group, how do you identify? *Print, for example, African American, Haitian, Haitian American, Jamaican, Nigerian, Ethiopian, Somali, etc.*

(Write here) _____

☐ Hispanic, Latino, or Spanish origin

Within this group, how do you identify? *Print, for example, Mexican, Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican, Columbian, etc.*

(Write here) _____

☐ Indigenous peoples of the Americas, Native American, American Indian, or Alaska Native

Within this group, how do you identify? *Print, for example, the name of enrolled or principal tribe(s) Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc*

(Write here) _____

☐ Middle Eastern or North African

Within this group, how do you identify? *Print, for example, Lebanese, Lebanese American, Egyptian, Syrian, Iranian, Yemani, Moroccan, etc*

(Write here) _____

☐ Native Hawaiian or Other Pacific Islander

Within this group, how do you identify? *Print, for example, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese, etc.*

(Write here) _____

☐ South American

Within this group, how do you identify? *Print, for example, Brazilian, Guyanese, Surinamese, etc.*

(Write here) _____

☐ White

Within this group, how do you identify? *Print, for example, Irish, Irish American, German, English, Italian, etc.*

(Write here) _____

☐ Is there a part of your racial, ethnic, or origin identity not included in the provided choices? If so, please include additional information here.

(Write here) _____

We greatly learn from the members of our community and your thoughts will help to shape future versions of this form. Is there any other information or feedback you would like to share with us?