IMPROVING SENSE OF BELONGING AMONG FRESHMEN AT A LARGE, URBAN HIGH SCHOOL THROUGH SERVICE LEARNING

by

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Abstract

Low sense of belonging can cause a number of problems among students, including low engagement and attendance, each of which relate directly to achievement. This dissertation has five chapters. The first serves as a literature review of factors that impact sense of belonging, ending with a discussion of how school climate factors influence sense of belonging and should be the focus of a needs assessment. The second chapter is the needs assessment conducted at Thurgood Marshall High School, a large urban high school in Baltimore, on student sense of belonging. The third chapter is a review of interventions related to student sense of belonging. The fourth chapter includes the proposed intervention and research to study the impact of service learning on improving student sense of belonging. The paper concludes with a review of the results and implications for further study. This study compared the Psychological Sense of School Membership (PSSM) scores of students who participated in a student-driven, culturally responsive service learning project to those who did not. There was no meaningful difference between the two groups, but focus groups showed certain elements of the service learning project to be especially meaningful.

Keywords: sense of belonging, service learning, urban education

Primary Reader and Advisor: Eric Rice

Secondary Reader: Wendy Osefo
Dedication

This dissertation is dedicated to Megan Lawless for loving and supporting me when I most needed it; giving me stern, logical pep-talks when I was most frustrated; and eating whatever I baked when I needed to step away from my work. It is also dedicated to my parents for instilling the value of education in me from an early age, even when it did not seem like I was listening. Finally, it is dedicated to my dog Waffles for forcing me to take frequent walk breaks during long days of editing.
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I am so lucky to have been able to work in Baltimore for the last six and a half years, five of which at the school that is the subject of this study. It is through the lens of working in an underserved community and at a struggling school that I feel in love with this city. Baltimore is resilient, weird, heart-breaking, and beautiful and I could not imagine living anywhere else. I am grateful to the leadership of my former school for letting me utilize this data and conduct this research and for the personal growth I did while I was there. I am thankful to the dedicated teachers I worked with and who continue to work with Baltimore’s youth.

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Chapter One - Review of Research Literature

Research indicates that for African-American students, feeling positive sense of belonging is imperative for success in high school (Booker, 2006). There are a number of symptoms of low sense of belonging: low motivation (Goodenow & Grady, 1993), low achievement (Booker, 2004; Hughes, Im, & Allee, 2015), and poor attendance (Akiba, 2010). Baltimore City Public School System (BCPSS) students exhibit these symptoms, evidenced by the district’s data and culture and climate surveys (Baltimore City Public Schools, 2017). My school, Thurgood Marshall High School (pseudonym), experiences these issues at either the same or a higher rate than the rest of BCPSS (Baltimore City Public Schools, 2018). While policy efforts aim to improve achievement through a focus on test scores and targeted subject preparation, policymakers do not often consider sense of belonging as a factor for why students may be unsuccessful. Additionally many low-income, urban students face risk factors in the family, home, and community that can have a negative effect on their achievement and impact sense of belonging (Kourea, Cartledge, & Musti-Rao, 2007).

Booker (2004) defines sense of belonging as “how immediate contexts, specific activities, people, or events make students feel like they are part of the school community” (Booker, 2004, p. 132). When students have activities, programming, or people present at school that make them feel a part of their school community, they are more likely to be successful. A lack of this programming or poor relationships with teachers and peers may hurt student sense of belonging. By connecting sense of belonging, motivation, and achievement, real change can occur at the school level to ensure student success.
Theoretical Framework

Ryan and Deci’s (2000) self-determination theory (SDT) supports focusing on sense of belonging as a driver of student success rather than a symptom of it. Thinking about sense of belonging as important for student success in school is the basis of my model; therefore SDT will serve as my theoretical framework. According to SDT, there are three basic needs that must be met for students to effectively function psychologically and be motivated, both in and out of school: competence, relatedness, and autonomy (Ryan & Deci, 2000). Competence refers to students’ feeling that they can be successful and do the work. Autonomy is pedagogical; it requires teachers to give students the opportunity to explore complex answers to problems and find solutions on their own. Relatedness describes how connected students feel to a person or the community in which they learn (Ryan & Deci, 2000). Depending on exactly which needs are being met and which are not, students can develop different kinds of responses, which can in turn influence their motivation. The two types of orientations that can be expressed in those responses are causality orientations and goal orientations, and students can express different elements of both of these (Ryan & Deci, 2000).

Causality orientations refer to the way people act in an environment given the information they take in and based on the needs that are met at that time (Ryan & Deci, 2000). Students with an autonomous causality orientation make these orientations to their surroundings and respond to them autonomously without outside influence or help as a result of their three basic needs being met. Students with a controlled causality orientation do not feel the need for autonomy but do feel the need for relatedness and competence. In this orientation, students can still be motivated without autonomy due to the controlled nature of their environments. Finally, an impersonal causality orientation results from students acting without any of the three needs
being met (Ryan & Deci, 2000). If a student is autonomous they feel safe because their needs are being met. Students experiencing a controlled orientation may still feel safe due to the feelings of relatedness and competence, but they probably do not feel trusted or valued due to a lack of autonomy. Students experiencing impersonal orientations feel disconnected from their environment as a whole (Ryan & Deci, 2000).

Life goal orientations refer to either the intrinsic or extrinsic desire of a student to meet their long-term goals and aspirations (Ryan & Deci, 2000). Intrinsic goals students have can include affiliation with groups or group membership, generativity or the concern for one’s friends or peer groups, and personal development or the desire to improve as a person over time (Ryan & Deci, 2000). Extrinsic goals such as wealth, fame, power, and attractiveness appear more superficial on the surface (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). Extrinsic motivations have also been defined as “repression, reward, [and] intelligence” (Toktas & Bas, 2019, p. 473) meaning avoiding being mocked or looked down upon or celebrated for either external factors described in Vansteenkiste and colleagues’ (2004) work or intelligence. When aspirations or needs are not met, students are more likely to seek out extrinsic goals to feel better because they are easier to attain and are more recognizable (Ryan & Deci, 2000).

These orientations and the three basic needs of SDT relate strongly to Booker’s (2004) definition of sense of belonging. Whether or not a student feels a sense of belonging in school has been tied to their academic outcomes, the level of violence they experience in the future, and their future participation in vandalism of public property (Arhar & Kromrey, 1993). A strong sense of belonging in school, as well as a welcoming school climate, inversely influences the likelihood of a student experiencing violence in school (Loukas, 2007). Finally, sense of belonging can impact student motivation and thus achievement and is therefore important for.
eventual student success. A number of studies link sense of belonging to motivation. Goodenow and Grady (1993) found that students who exhibited a greater sense of belonging were more likely to exhibit motivation in class while Sanchez and colleagues (2005) found that student sense of belonging was a significant predictor of academic motivation.

Motivation, which is impacted by whether students’ needs are being met, drives achievement as well. One of the needs of SDT that needs to be met for students to exhibit motivation is relatedness, defined similarly to sense of belonging. According to Goodenow (1992), achievement is supported by student motivation and student sense of belonging. When students are supported in their psychological well-being through autonomous orientation and connections to the people around them, they feel more motivation and are more likely to achieve at a higher rate (Ryan & Deci, 2000). Since one of these needs students have to exhibit is relatedness, defined similarly to sense of belonging, SDT serves as an excellent framework for this study. A number of factors impact sense of belonging or relatedness, which is a driving force behind motivation and achievement. Since the long-term goal of most school-based interventions is student achievement, a focus on motivation through relatedness as described by SDT is a legitimate way to examine improving achievement. Figure 1 below shows the connection.

Figure 1. Theoretical framework. This theoretical framework connects the idea of sense of belonging or relatedness to eventual academic achievement through motivation.
**Sense of belonging and engagement.** Sense of belonging and engagement are also closely tied together. Through a number of studies summarized by Furlong, Whipple, Jean, Simentel, Soliz, and Punthuna (2003), engagement has been defined as “observable behaviors directly related to academic effort and achievement” (p. 8). These can include participation in school activities, time spent on homework, classroom behaviors, and interpersonal relationships (Furlong et al., 2003). Independently, any of these factors can be linked to a greater student sense of belonging in school (Furlong et al., 2003). As it relates to Figure 1, engagement is thought of as the main factor by which motivation eventually leads to achievement (Furrer & Skinner, 2003). This means that the engagement students feel with their school community as a result of improved sense of belonging or improved relatedness will impact motivation in school. The closeness students feel to other students and teachers, expressed as relatedness or sense of belonging, has an impact on student engagement as well (Furrer & Skinner, 2003). The relationship a student has with a teacher is an important factor in their engagement, regardless of the student’s actual success in that teacher’s class (Roorda, Jorgensen, & Koomen, 2019). As students become more motivated due to feeling a greater sense of belonging in school, they are more engaged in their learning and can exhibit improved academic performance as a result.

Christenson and Thurlow (2004) directly link a low sense of belonging to disengagement in school, stating that “[o]vert indicators of disengagement are generally accompanied by... a poor sense of belonging” (Christenson & Thurlow, 2004, p.37). Specifically, they link cognitive and psychological engagement, which they define as “processing academic information, thinking about how to learn, and self-monitoring progress” to student sense of belonging (Christenson & Thurlow, 2004, p. 37). When students do not feel that their values match up to those of their school, engagement and sense of belonging can suffer as well (Faircloth, 2009). Specifically,
when the school pushes values or rules, or forces an identity on students that they do not feel matches them, sense of belonging can suffer (Faircloth, 2009). This can be tied to a drop in engagement as well (Faircloth, 2009). For example, a school where the rules prohibit talking in the hall and do not take into account students’ need to socialize, or a uniform policy that is based on biological sex and does not take a student’s gender into account, may reduce student sense of belonging and therefore engagement.

Another way to consider engagement and sense of belonging is through Chase and colleagues’ (2014) work. They characterized sense of belonging as a facet of emotional engagement in school and tied it to achievement, focusing on students’ “affect towards school” (Chase, Hilliard, Geldhof, Warren, & Lerner, 2014, p.888) and the overall role engagement and sense of belonging played in it. This can manifest through close relationships with teachers and school personnel, which affect the way students view school and improves their school engagement through an increased sense of belonging (Dehuff, 2013).

Overall, the idea that students’ sense of belonging or relatedness impacts their eventual academic achievement exists as a result of improved motivation (Goodenow & Grady, 1993; Goodenow, 1992). This occurs largely through the engagement students feel with their school community when they feel a sense of belonging (Furrer & Skinner, 2003). Ryan and Deci (2000) describe relatedness, or sense of belonging, as an important part of increasing student motivation to help students be successful in their learning. Since sense of belonging is an element of SDT and SDT posits that fulfillment of certain factors will improve student motivation, improving sense of belonging can improve student motivation and thus lead to academic achievement (Ryan & Deci, 2000). The work that describes the impact of students feeling sense of belonging on their engagement or “affect towards school” (Chase et al., 2014, p.888) solidifies the idea that
improving student sense of belonging has a strong impact on student achievement. Throughout chapter one, I examine factors that impact student sense of belonging in order to better understand the causes of low sense of belonging.

**Factors that Influence Sense of Belonging**

A number of factors impact sense of belonging, including demographic factors, student factors, and school factors. Demographic factors include race and structures of oppression that comes with it (Bonney, Britto, Klostermann, Hornung, & Slap, 2000; Coleman et al., 1966; Murphy & Zirkel, 2015), socioeconomic status (Arhar & Kromrey, 1995), gender (Arhar & Kromrey, 1995), and family (Bonney et al., 2000; Epstein, 1992; Johnson, 2009). Student factors include health (Allen, Kern, Vella-Broderick, & Waters, 2016; Evans, 2014) and personal factors such as motivation (Libbey, 2004), individual characteristics or conditions (Anderman, 2002; Goodenow & Grady, 1993; Prince & Hadwin, 2013), and self-efficacy (Bandura, 1986). Finally, school factors include relationships with teachers (Kiefer, Ellerbrock, & Alley, 2014; Ware, 2006), curriculum and pedagogy (Eccles & Roeser, 2011; Francois, 2013; Ladson-Billings, 2014), school climate (Allen et al., 2016; Booker, 2004), safety (Cemalci, 2010; Lee, 2002; Waasdorp, Pas, O’Brennan, & Bradshaw, 2011), and discipline (Hagan & Foster, 2012).

**Demographic Factors**

**Race and structures of oppression.** The demographics of students both in the school and in the community surrounding it impact student sense of belonging. Race can impact not only whether students feel belonging, but also other factors, such as funding and the opportunities it presents in schools. Coleman and colleagues (1966) studied over 600,000 students across the country and found that African-American students were hyper-segregated more than any other racial group (Coleman et al., 1966). This is still true today, as 81.9% of
White students go to schools that are majority White while 35% of African-American students attend schools that are majority White (Hill, Jeffries, & Murray, 2017). This means that both African-American and White students go to schools where they are the majority and there is minimal mixing of racial groups in school. This may have an impact on the opportunities afforded to African-American students (Hill et al., 2017). Over 50 years ago, the Coleman Report also found that African-American students had fewer advanced or college preparatory courses available to them, less access to science labs or libraries, and less access to accredited schools (Coleman et al., 1966). Today, that is still the case. African-American and Latino students are more likely to attend schools with fewer advanced placement courses, fewer school counselors, fewer career counselors, and less experienced teachers than White students (Hill et al., 2017). When schools are segregated as they are in my setting of Baltimore City, low-income students who are often minorities and impacted by segregation do not get the chance to interact with middle-class students (Kirk & Goon, 1975). The largest impact of school segregation is the amount of resources African-American students receive as a result (Hill et al., 2017). A similar lack of resources that existed at the time of the Coleman Report continues today, and African-American students often do not have the opportunity to access better resources unless they are in school with White students (Hill et al., 2017). This impacts the education opportunities for African-American students as well as their views on school (Hill et al., 2017; Mickelson, 1990).

This lack of integration and interaction combined with unequal opportunities can lead students to experience a disconnect between what they know they need to be successful and the reality that school is supposed to be the place to make them successful. Mickelson (1990) calls this the “attitude-achievement paradox.” The abstract idea that education is important throughout the country becomes concrete through the actions of students and the result of those actions; this
means that when students work hard in school they are showing that education is important and can lead to success. If education cannot lead to success, as some African-American students are led to believe through their own lived experiences in segregated and underfunded schools, then school is unimportant and students will feel less inclined to be a part of the school community (Mickelson, 1990). Recent research has indicated that while African-American students do not entirely dismiss school as a means for future success, these students are aware of structural barriers that exist for them that may not exist for White students, which has a negative impact on their sense of belonging (Matthew, 2011). For many African-Americans students, people in their own family have never been treated equally despite educational status or achievement, which may impact their views on the importance of education, lead them to limit their expectations that school will lead to success, and reduce their sense of belonging within an educational institution (Matthew, 2011; Mickelson, 1990).

This idea is backed up by further research. American schools are highly segregated according to three metrics: socioeconomic status (SES), race, and linguistic status (Palardy, Rumberger, & Butler, 2015). Students at schools that are segregated by race and socioeconomic status perform worse in school and display more behavior considered disruptive than those at non-segregated schools (Palardy et al., 2015). Mickelson (1990) argues that this is potentially due to the idea that these students do not value schooling because they have seen, in a concrete way, that school has not helped individuals like them succeed. Research by Reardon (2016) indicates that desegregating schools by both race and socioeconomic status can lead to improved academic outcomes for lower SES or African-American students.

Unsurprisingly given these circumstances, African-American students showed the largest gap between the abstract understanding that education is supposedly important and actionable
concrete positive feelings in school (Mickelson, 1990). Mickelson explains the results, stating “the overall high discrepancy in scores among all the black respondents indicate substantively that the material realities experienced by black youths challenge the rhetoric of the American Dream” (Mickelson, 1990, p. 59). The American Dream as described by Mickelson (1990), that education is directly related to escaping poverty, is not the concrete reality for these students. Even if African-American students view the opportunities presented in school as positive and as offering them the potential to succeed beyond school, these students are aware of additional barriers they face either due to underfunding, segregation, or other factors (Matthew, 2011). This can hinder student sense of belonging or motivation within an education context (Matthew, 2011). Going to school with middle-class students, where there are likely to be better resources and where the students’ abstract and concrete views on education are more congruent, is one way to help align these factors for low-income or minority students, thus potentially increasing sense of belonging by adding to the legitimacy of school (Hill et al., 2017; Kirk & Goon, 1975). When poor facilities, low expectations, and students who share (due to historical and political circumstances) a concrete view that devalues education interact, these negative views on schooling can become reinforced and thus cause a low sense of belonging and distrust (Kirk & Goon, 1975).

Present day inequality is a factor in student sense of belonging, but historical elements may also impact the disconnect between abstract and concrete goals today. The historical legacy of slavery and the treatment of African-Americans as second-class citizens can affect student sense of belonging. Ogbu’s (1979) division of minority groups into autonomous, immigrant, and subordinate minorities explains how different groups have different experiences and need to be understood differently. Autonomous minorities who are strictly numerical minorities and
immigrant minorities who voluntarily immigrated to their current home countries are treated differently in Ogbu’s (1979) work from subordinate or castelike minorities, who have been treated as second-class citizens and were involuntarily brought to their home countries. Substandard schooling and unequal treatment may reinforce Kirk and Goon’s (1975) hypothesis about negative schooling experiences, impacting sense of belonging in school for African-Americans (Ogbu, 1979).

A rejection of schooling and development of coping strategies may come from African-Americans having historically received substandard funding for schooling and having had trouble finding employment despite high qualifications (Fordham & Ogbu, 1986, p. 179). A student’s perceived value of schooling and thus their sense of belonging in school may be negatively affected by what is effectively a job ceiling. In their seminal work, Fordham and Ogbu (1986) argue that the desire not to be seen as “acting White” by African-American students by being high-performing in school may lead to them not trying in school or not attempting to be as successful. This desire not to be successful and subsequent creation of survival strategies by African-American students can be seen through the lens of Mickelson (1990) and Fordham and Ogbu (1986) as the result of disparities in education. Additionally the historic distrust in this system of forced immigration that made African-Americans be treated as second-class citizens can create a disconnect between African-Americans and the public school system, which may negatively impact sense of belonging (Ogbu, 1979). This is especially pronounced when considered with the job ceiling and poor schooling that some African-Americans experience (Ogbu, 1979). Given that the broader education system remains unfair to some African-American students, they may see the American Dream as not for them or become frustrated in the face of additional barriers (Matthew, 2011; Mickelson, 1990).
Since its original publication, further research has led to a better understanding of the social conditions in which the desire to “act white” is likely to occur. Tyson, Darity, and Castellino (2005) argue that being seen as a “nerd” or “geek” in school is not an issue African-American students alone face and that the negative connotations of school success exist for both African-American and White students. They place the burden of how this becomes racialized on school structures, arguing that when schools communicate different expectations and values to different groups of students these viewpoints may take on a racial connotation. They include the argument that for low-income Whites, the idea that a student who is achieving highly is acting “rich” or “high and mighty” may have the same effects as acting “White” for African-American students (Tyson, Darity, & Castellino, 2005).

Mocombe (2011) attributes underperformance of African-American students not to the burden of acting White, as phrased by Fordham and Ogbu (1986), but to the American capitalist structure. Mocombe (2011) argues that American capitalism flourishes whether African-Americans comprise an equal percentage of upper and middle class workers or not and actually may do better when African-Americans are not equal to their White counterparts. Therefore, he argues, underachievement among African-American students is more related to class differences and class values than it is to race or cultural values (Mocombe, 2011). Mocombe closes his argument by hypothesizing that African-Americans perform poorly because their status as segregated in American society and their low status socioeconomically in American capitalist structures leads to them developing their own structure that is counter to the White dominant structure of upper-class that exists in our capitalist society (Mocombe, 2011). This element of segregation is an important part of low motivation for African-American students. This counter-
argument to Fordham and Ogbu (1986) is supported by the research discussed earlier by Palardy and colleagues (2015) and Reardon (2016).

Overall, the criticisms of Fordham and Ogbu (1986) are valid in that the “acting White” study relies on very specific circumstances in which African-American students feel the need to disidentify. These circumstances include specifically non-segregated contexts, whereas a number of the criticisms of their work identify segregation as a major barrier to sense of belonging and achievement for African-American students. Even in non-segregated schools, Tyson and colleagues’ (2005) argument that the expectations schools and society put on different racial groups of students have impacted the desire to “act White” seems to be a more complete view of why the issues of low sense of belonging and disidentification exist among some African-American students. When the idea of societal expectations from Tyson and colleagues (2005) is combined with Mocombe’s (2011) main argument that African-Americans are forced to buck those expectations to form their own that are explicitly counter to the dominant White society, a fuller picture can emerge that more accurately describes the experience of African-American students in school and why low sense of belonging may exist.

In addition to the views African-Americans have about themselves and school, the views other people have of African-Americans can impact belonging as well. Stigmas and stereotypes minority students might face societally can impact their sense of belonging in school. The longstanding history of a belief by White gatekeepers that African-American or Latinx students were not as intelligent as White students can be internalized and impact the sense of belonging of minority students in school (Murphy & Zirkel, 2015). Regardless of belief in self, the views others may have of these students may impact their feelings of whether they belong in educational institutions, specifically ones that qualify as prestigious or high performing. Students
who frequently experience microaggressions from people in school, even if the student knows that any negative beliefs are unfounded, can make them feel that they do not belong at school and are not welcome in the school community (Murphy & Zirkel, 2015). Even in schools like my setting, which is 98% African-American, a narrative about needing to train or fix the students to adapt to what is required of them in school can send the message that students are not fit for school as they are, which can negatively impact their sense of belonging (Murphy & Zirkel, 2015). As a result of a number of these factors, African-American students feel a lower sense of belonging in school than White students (Bonney et al., 2000).

**Socioeconomic status.** Schools are often reflections of the communities in which they function, and those schools operating in a high SES community have advantages that low SES schools do not. Those advantages can lead to students in high SES schools feeling high self-worth or “prestige,” which can positively impact student sense of belonging (Jury, Aelenei, Chen, Daron, & Elliot, 2019). These students feel that they are inherently valuable due to the investments they have seen made into their school, their education, and their community and therefore feel valued (Jury et al., 2019). This manifests in high sense of belonging in school.

While sense of belonging for students in high SES schools is generally higher even if it is impacted by race, belonging for students in low SES schools changes based on student racial demographics (Arhar & Kromrey, 1995). African-American students generally feel more belonging in low SES schools, potentially due to the prevalence of African-American students in low SES schools (Arhar & Kromrey, 1995). Low SES schools have a host of issues that can negatively impact sense of belonging such as disproportionate special education placements, less technology, fewer qualified teachers, and fewer extracurricular activities (Blanchett, 2009; Blomfield & Barer, 2011; Eccles & Roeser, 2011). Having high or middle-SES classmates
positively impacts students across all SES levels, including low-SES students (Chiu & Chow, 2015; Palardy et al., 2015; Reardon, 2016). This may still be attributed to the better resources higher and middle-SES students receive when compared to low-SES students (Chiu & Chow, 2015). Schools that serve lower SES students are often segregated in the same way many schools are segregated by race, which has a negative impact on student achievement and behavior (Palardy et al., 2015). Sense of belonging and academic competence, both elements of SDT, are negatively associated with coming from low SES homes (Hernández, Robins, Widaman, & Conger, 2016; Ryan & Deci, 2000). When the needs for relatedness and competence are not met, students are less likely to display motivation, which negatively impacts their achievement (Ryan & Deci, 2000). Low achievement can be cyclical in that students with low achievement continue to display a lower sense of belonging (Ryan & Deci, 2000).

Socioeconomic status is a key driver of achievement for students, which may impact their sense of belonging (Eagle, 1989; Finn, 1989; Hernandez et al., 2016; Ryan & Deci, 2000; Thomas & Stockton, 2003). Some studies argue that socioeconomic segregation is a more important factor than racial segregation in student achievement, and therefore a bigger factor in sense of belonging than racial segregation (Rumberger & Palardy, 2005). When low SES students are in primarily low SES schools, they perform worse regardless of the racial breakdown of the school, and their low achievement may impact their feeling of competence as described in SDT, negatively affecting their sense of belonging (Finn, 1989; Palardy et al., 2015; Reardon, 2016; Rumberger & Palardy, 2005; Ryan & Deci, 2000). Higher student poverty rates have been associated with lower performance on a variety of achievement tests both nationally and internationally (Thomas & Stockton, 2003). The National Assessment of Educational Progress (Darling-Hammond, 1999), Second International Mathematics Study (Payne & Biddle,
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1999), and district-level test scores (Caldas, 1999) are negatively correlated with student poverty. Lower-performing students are more likely to get frustrated, give up, or feel like they do not belong in school (Eskreis-Winkler, Shulman, Young, Tsukayama, Brunwasser, & Duckworth, 2016; Ryan & Deci, 2000).

When low SES students are successful in schools, these students are often tied to activities that promote sense of belonging (Marchetti, Wilson, & Dunham, 2016). In their study, Marchetti and colleagues (2016) found that low SES students who are successful in school, as determined by achieving a state benchmark on their ACT exam, were more likely to participate in extracurricular activities than those who did not reach the benchmark. Extracurricular activity participation is linked to higher sense of belonging in school, so it is possible to infer one of two results: either higher sense of belonging, as a result of extracurricular activities, was the cause of these higher scores or that being successful in school led to the students feeling more like they belonged (Booker, 2004; Centers for Disease Control, 2009; Knifsend & Graham, 2012). The authors of the study make the same inference, arguing that “the students participating in extracurricular activities could have developed a sense of belonging and connection to the school” (Marchetti et al., 2016, p. 14).

**Family factors.** Parental involvement in schools also plays a role in student sense of belonging. When there is low parental involvement in schools, students may feel a lower sense of belonging due to the feeling that their families are not welcome in school (Epstein, 1992; Johnson, 2009). Parental involvement in school may be more important to student sense of belonging than SES or school size, two factors generally considered very important in the context of student sense of belonging (Ma, 2003). When schools are smaller and promote meaningful parent involvement, students exhibit greater sense of belonging and indicate this is
due to having parents actively involved in their schooling (Meier, 1996). Schools can create parent involvement and have the same positive impacts associated with student sense of belonging as well. When schools promote special activities to get parents involved such as parent education days, student sense of belonging increases (Dimmitt & Wilkerson, 2012).

Parental involvement is not the only factor that relates to parents; parental educational attainment is correlated with student sense of belonging as well (Urciuoli, 2007). When parents have higher educational attainment they may view school in a more positive way, which may lead their children to also feel more positively about school (Bonney et al., 2000). The positive factor of parental educational attainment is present not only in elementary, middle, and high school but post-secondary school as well. Students with parents with higher educational attainment feel greater sense of belonging in all educational institutions, even college, and therefore are more successful at those settings (Dika, 2010).

**Gender.** Gender can impact student sense of belonging as well (Arhar & Kromrey, 1995). In elementary school, girls have a higher sense of belonging in school than boys while boys report more feeling of rejection from school than girls (Sari, 2012). As students get older, girls report less school connection and less peer connection than boys (Hanewald, 2013). This suggests that girls struggle to make new friends during transitions from middle school to high school, which can have an impact on their sense of belonging and the way they feel about school (Hanewald, 2013). This is especially important for girls, as they tend to be more interpersonally oriented than boys (Uwah, McMahon, & Farlow, 2008). Overall though, throughout schooling girls report higher sense of belonging and better quality of life in school than boys (Adelabu, 2007; Cheung, 2004; Cheung & Hui, 2003; Goodenow, 1992; Goodenow & Grady, 1993; Hagborg, 1994; Nichols, 2006).
As previously stated, academic success plays a role in student sense of belonging and girls generally have better grades than boys in school (Pomerantz, Altermatt, & Saxon, 2002; Ryan & Deci, 2000). Girls succeed at higher rates as measured by both standardized tests and classroom grades than boys throughout elementary, middle, and high school (Dwyer & Johnson, 1997; U.S. Department of Education, 2000). These successes in school can increase sense of belonging for students by increasing their feeling of competence, as discussed in SDT (Ryan & Deci, 2000). When students feel competent they are likely to be more motivated to be successful in school and therefore feel a greater sense of belonging as well (Ryan & Deci, 2000).

**Student Factors**

**Lead, trauma, health, and other environmental factors.** Health factors students may experience that impact sense of belonging include exposure to lead, trauma, and stress (Allen, Kern, Vella-Brodrick, & Waters, 2016). The amount of lead in the home impacts achievement at an early age, which is a factor in sense of belonging later on in life (Allen et al., 2016). Low-income students and African-American students are more likely to experience dangerous levels of lead in their homes, which compounds the racial disparities in sense of belonging discussed previously (Evans, 2004; Miranda, Dohyeong, Galeano, Paul, Hull, & Morgan, 2007). Blood-lead levels of students are directly correlated with lower performance in school on end of year tests (Miranda et al., 2007). If a student does not like school because he or she is always struggling academically, whether due to lead or not, research indicates that sense of belonging will be lower later on in life into high school, which could affect performance there as well (Allen et al., 2016; Finn, 1989). This is partially due to the reduced motivation students will feel when they do not display competence, as discussed by Ryan and Deci (2000).
In addition to lead poisoning being a problem for education, constant stress can affect learning and sense of belonging as well. When stressed, the body produces cortisol, a chemical meant to help the body respond to stress appropriately (Sladek, Doane, Luecken, & Eisenberg, 2016). Prolonged stress can lead the body to significantly reduce cortisol levels, which leads to the body not responding appropriately to stress (McGregor, Murphy, Albano, & Ceballos, 2016). Constant stress has been linked to low motivation and sense of belonging among students experiencing racism and among students with test anxiety (Allen et al., 2016; Pekrun, Goetz, Titz, & Perry, 2002; Reynolds, Sneva, & Beehler, 2010).

Students who experience trauma have to deal with stress far more frequently (Thompson Jr. & Massat, 2005). The stress a student experiences due to violence in the community, at home, or in school can affect sense of belonging. Students who experience trauma at home, in the community, and at school have significantly lower levels of academic achievement and higher rates of behavior problems in school as well (Thompson Jr. & Massat, 2005). These behavior problems may cause students to be disciplined and lose classroom instruction time. These punishments may lead to students liking school less and having a lowered sense of belonging as they get older (Finn, 1989). Constant neurobiological stress affects brain development in students, hurting the hippocampus which is essential for learning and memory (Carrion & Wong, 2012). Stress also negatively affects the pre-frontal cortex, which hurts attention in school and makes forming appropriate stimuli-response associations more difficult (Carrion & Wong, 2012). If students’ biological mechanisms for learning are harmed, their achievement will be harmed as well, which impacts their future sense of belonging (Allen et al., 2016; Finn, 1989).

**Personal characteristics or conditions.** The personal characteristics students exhibit play a role in their sense of belonging. These characteristics include motivation, optimism, or
psychological conditions like depression. Academic motivation is one personal characteristic that is tied to student sense of belonging. Academic motivation can be defined as “the extent to which students are motivated to learn and do well in school” (Libbey, 2004, p. 278). Academic motivation is impacted by a student’s self-efficacy. Bandura defines self-efficacy as “people’s judgment of their capabilities” (Bandura, 1986, p. 391). If a student feels like they belong in school, they are more likely to feel motivated and believe in their own ability to be successful (Andermann, 2002). Students with high self-efficacy are able to stay motivated longer, even in the face of challenges, whereas students with low self-efficacy are more likely to give up (Bandura, 1986). This can be due to high self-efficacy students’ belief that what they are doing not only has value but that the student is in a safe place where they belong and can fail productively, whereas a fear of failure is associated to anxiety and depression (Anderman, 2002).

According to SDT as well as Goodenow’s seminal study, sense of belonging or relatedness is one factor that influences motivation (Goodenow, 1992; Goodenow & Grady, 1993; Ryan & Deci, 2000). The relationship between motivation and sense of belonging may be reciprocal as well. Students who exist in a school or peer group full of motivated students may feel greater sense of belonging if they are motivated students as well, while students in peer groups or schools where the norm is not to be motivated may exhibit low motivation as a way of fitting in with their peers (Goodenow & Grady, 1993). The need for belonging for students is often a prerequisite to the search for knowledge and therefore the motivation to find knowledge (Maslow, 1962). If a student’s needs are met in an autonomous orientation, as described in SDT, students are more likely to exhibit motivation (Ryan & Deci, 2000). When students exhibit greater sense of belonging, they are likely to be more academically motivated, which has a positive impact on their achievement (Andermann, 2002; Ryan & Deci, 2000). Generally, when
students feel that the environment around them is set up for them to be successful they are more likely to be motivated to be successful academically (Goodenow & Grady, 1993).

Aside from academic motivation, psychological personality traits may play a role in student sense of belonging. Students who suffer from depression are likely to feel a lower sense of belonging in school (Anderman, 2002). Since students who have feelings that they do not belong often experience feelings of depression as well as grief, anxiety, jealousy, or loneliness, it makes sense that students suffering from depression would have lower sense of school belonging (Osterman, 2000). Depression is also tied to a fear of failure in school (Anderman, 2002). That increased pressure may explain why a student experiencing depression may feel like a school is a less welcoming place and more a place where they do not belong or feel comfortable (Anderman, 2002). Social rejection clearly plays a role in the perception of belonging for students. If students are rejected by their peers they will inevitably feel like the school is not a place they belong (Anderman, 2002). Students who use their peers as a reference for how they should act or act in the way they think will bring about the least rejection are likely to have lower sense of belonging (Mouratidis & Sideridis, 2009). Meanwhile, students who act in a way described by Mouratidis and Sideridis (2009) as prosocial, meaning the behavior is “intended to help or benefit another individual or group of individuals” are likely to have higher sense of belonging (Al-Yaaribi, Kavussanu, & Ring, 2018, p. 3). When students do not have their needs for belonging or relatedness met among their peers, they are likely to look for extrinsic aspirations which do not promote psychological well-being or school success (Vansteenkiste et al., 2004).

Conversely, students who exhibit optimism about their schooling and their potential for success are likely to feel like they belong at school (Prince & Hadwin, 2013). Those students are seemingly more trusting of schools as an institution and thus more likely to think of the school as
a positive place. It is unlikely that students who experience contextual factors such as segregation and poor previous schooling would feel optimistic about the role of schools in their lives (Mickelson, 1990). However, if that optimism does exist it can be a positive factor for their sense of belonging in school (Prince & Hadwin, 2013).

**School Factors**

Within the school, sense of belonging is impacted by a host of factors that can be controlled. Factors that schools can control that may help historically marginalized students include relationships between students and teachers, relationships between students and their peers, curriculum used in schools, safety, and school climate.

**Student-teacher relationships.** The relationships students have, both with teachers and their peers, are key to sense of belonging. Teachers can best form relationships with their students when they are culturally aware and prepared to accept their students for who they are (Ladson-Billings, 2014). These types of relationships, based on mutual trust and understanding, can grow student sense of belonging as well as student motivation (Kiefer, Ellerbrock, & Alley, 2014). While relatedness or feelings of belonging with teachers are very important, as students get older relatedness may decrease, which can negatively impact student sense of belonging (Furrer & Skinner, 2003). This may be because it is less “cool” to like one’s teacher as a student gets older, or it may be due to the harsher nature of school as students get older compared to a warmer view of school for students at a young age (Furrer & Skinner, 2003). These warmer, supportive relationships with teachers occur at different rates for different groups, but they promote belonging across both White and African-American students. African-American students have been found to have worse relationships with their teachers than White students (Hughes & Kwok, 2007).
One way to improve these poor relationships between African-American students and their teachers is to have more African-American teachers. Unfortunately, there has been a decrease in teachers of color in the United States (U.S. Department of Education, 2016; Ware, 2006). Historically, African-American teachers have supported the education of African-American students by emphasizing the importance of education and helping build a sense of belonging in the school (Ware, 2006). The importance of race in teacher-student relationships is even more prevalent given the hypersegregation of many urban schools. As of the 2011-2012 school year, 18% of teachers were African-American compared to 16% of elementary and secondary school students (U.S. Department of Education, 2016). While these figures seem to align, Hagan and Foster (2012) and Ware (2006) argue that the low proportion of African-American teachers can still have negative effects on students, as not having African-American teachers can severely impact the rate of exclusionary discipline African-American students face. When the supports of having teachers that look like them, have similar experiences to them, or have a greater understanding of societal hardships are not present for African-American students and the negative results such as increased exclusionary discipline become prevalent, sense of belonging can suffer (Blake, Smith, Marchbanks, Seibert, Wood, & Kim, 2016).

Student-teacher relationships may be even more important given recent developments in education. Due to the testing spike following No Child Left Behind, teachers have tried to exert more control over students to ensure they receive the instruction needed to pass the test, which negatively impacts engagement in students (Markowitz, 2018). This can also lead to relationships that are not focused on making the school a warm, welcoming place (Eccles & Roeser, 2011). When students have stressful relationships with their teachers engagement, relatedness, and sense of belonging decrease (Ladd, Birch, & Buhs, 1999). By getting to know
the students personally, modeling empathy and caring behavior, and being authentic, teachers can improve relationships with students and increase student sense of belonging (Kiefer et al., 2014). Improving sense of belonging through teacher factors is especially important in majority-minority schools, where one study found a third of teachers did not think considering student sense of belonging was their professional responsibility (Kiefer et al., 2014). When students have positive relationships with their teachers, they may be more likely to find value in the intrinsic desire to do well in school rather than needing external rewards or seeking out behaviors that can be harmful. This could then lead to improved relatedness and sense of belonging (Vansteenkiste et al., 2004).

Peer relationships. All relationships are important for sense of belonging, including peer relationships. Students who can trust their peers and feel close to them are likely to feel comfortable at school, whereas those who have negative interactions with their peers are likely to blame the location and feel that the school is not a welcoming place for them (Allen et al., 2016). When students have a group of friends with whom they feel comfortable and those friendships are based in school, school can become a place students feel like they belong (Juvonen, Espinoza, & Knifsend, 2012). When a student’s peer group is engaged in school, feels more of a connection to the school, and views school in a warmer way, that student is more likely to have these views as well (Juvonen et al., 2012). Since peers heavily influence a student’s beliefs about school, sense of identification, overall beliefs, and the participation in activities, a student’s peers can influence the student to have a positive sense of belonging and feelings of affiliation with school (Faircloth & Hamm, 2005; Finn & Voelkl, 1993). Conversely, when students lack close friends in school or feel that the relationships they have with their school peers are largely negative, school becomes a place students do not feel welcome (O’Brennan, Bradshaw, &
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Sawyer, 2009). Stressful relationships with peers, where students do not feel accepted or feel warmth in the school building, can lead to negative engagement, poor sense of belonging, and low relatedness (Ladd et al., 1999). Student engagement, a reflection of the relatedness to school a student may feel (as referenced in SDT), is partly a reflection of the peers with whom a student associates (Juvonen, et al., 2012; Ryan & Deci, 2000). When the peers a student associates with feel disengaged about school, that student is likely to feel a negative sense of belonging and be disengaged (Juvonen et al., 2012). Peers can negatively influence a student’s views of school identification, sense of belonging, and beliefs about schooling through a group mindset that school is either unimportant or not a place for the student or the group of students (Oyserman, Brickman, Bybee, & Celious, 2006). Additionally, students who have been previously rejected by a peer group that values school and has a high sense of belonging may seek out a group that does not, hurting their sense of belonging in school in the process (Juvonen et al., 2012). As students get older, socializing and social engagement are more important to them, so their sense of belonging and engagement in school becomes more related to their peers’ as they move through K-12 schooling, increasing the importance of positive peer relationships in schools (Juvonen et al., 2012).

**School climate.** School climate can include activities the school has for students and the methods of discipline used, which both play a large role in student sense of belonging (Allen et al., 2016). Participating in extracurricular activities impacts the relationships students form, which play a role in sense of belonging (Booker, 2004). When students participate in extracurricular activities they have the chance to form new peer groups, which can help improve sense of belonging through increasing peer relationships. It can also help strengthen teacher-student relationships, as students get to know teachers in a more informal way, and positively
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impact sense of belonging as well (Booker, 2004). Other factors related to specific academic clubs like debate or robotics include higher SAT scores, ACT scores, and GPA (Mezuk et al., 2011). When students achieve, their sense of belonging may increase as well (Finn, 1989). This suggests that focusing on academic clubs may not only increase sense of belonging but may lead to other benefits for students.

While these additional factors are great examples of why extracurricular clubs are important, students who participate in more extracurricular activities report higher sense of belonging than those who do not (Booker, 2004). A student in an activity may feel that he or she belongs at school because he or she is part of the school’s team, whereas a student without that connection and school-level “branding” (such as Eastern High School Debater or Northern High Lacrosse Player) may not feel that same connection. Specifically, when students play sports they report a greater sense of belonging than those students who do not (Fredericks & Eccles, 2006). This may be due to the culture around school sports, which tend to dominate schools across the country. The positive effect on sense of belonging is stronger when students participate in multiple extracurricular activities such as a sport and student government (Knifsend & Graham, 2012).

Specific disciplinary policies can make students feel a lowered sense of belonging in school and are partially defined by the context in which the school operates. Communities with higher rates of incarceration often see strict disciplinary practices seep into the school (Hagan & Foster, 2012). The school to prison pipeline is an idea loosely defined as schools being so similar to prisons for young, mostly African-American students that school prepares them for prison more than college through zero tolerance approaches and the prevalence of school police (Hagan & Foster, 2012). When this is the case in school, it muddles the idea that students are there to
succeed and learn. School becomes a less welcoming place and more a place that students feel
the need to get out of, which can hurt their sense of belonging (Hagan & Foster, 2012). African-
American students, especially males and low-income students, are more likely to be suspended,
expelled, or referred to law enforcement than other students (Anyon et al., 2014). They face
harsher discipline for similar behavior than more affluent or White students (Anyon et al., 2014).

Students who have been suspended are more likely to be held back exhibit lower sense of
belonging, and they drop out at higher rates than other students (Anyon et al., 2014). During
times of change for students, like the transition from elementary school to middle school or
middle school to high school, they are more likely to act out and be suspended, which can be
both symptom and cause of a decrease in student sense of belonging (Walter, Lambie, &
Ngazimbi, 2008). When schools reject students’ desires for belonging and relatedness through
suspensions, students are likely to seek out new peer groups for extrinsic acceptance
(Vansteenkiste et al., 2004). Peer groups with negative views of school and poor prosocial
behavior may have a negative impact on their psychological development, health, and school
performance (Vansteenkiste et al., 2004).

When school discipline is positive, the negative impacts of discipline on sense of
belonging are mitigated. Positive behavior interventions and supports (PBIS) is a school-wide
framework that aims to “improve school climate, reduce exclusionary discipline, and improve
overall student success” (Swain-Bradway, Pinkney, & Flannery, 2015, p. 245). This strategy of
discipline can positively impact student sense of belonging while offsetting the negative effects
that using harsh disciplinary strategies can often bring about, perhaps due to improved student
relationships as a result of PBIS (Cross, 2017). Students’ perceptions of their school and their
place in the school improve when schools use PBIS as well (Damon, 2018). This indicates that
not only is the use of PBIS important to improving student sense of belonging, but also that ensuring that students are familiar with the systems of PBIS and that they are present in place of harsher, negative disciplinary tactics is key to improving student sense of belonging.

**Safety in school.** In order for a student to feel belonging in his or her school community, he or she must feel safe (Cemalcilar, 2010). School safety can mean a number of things such as whether or not students experience bullying (Waasdorp et al., 2011), whether violence occurs in school even if a student is not directly involved in it (Cemalcilar, 2010), or whether a student is accepted (Lee, 2002). Bullying is defined as aggression that is proactive, intentional, and consistent between the perpetrator and the student who is victimized, and it can include physical or mental violence (Waasdorp et al., 2011). Social Disorganization Theory helps to explain why bullying may be more frequent in urban areas (Sampson & Groves, 1989). This theory hypothesizes that where there are more risk factors and a less organized and well-taken-care-of society, violence may follow (Sampson & Groves, 1989). According to this theory, more bullying may occur in schools in distressed or urban areas such as my setting. These schools may not only be at risk of more actual bullying taking place, but also of lower perceptions of safety by their students (Waasdorp et al., 2011). Students who are victims of bullying are less likely to report feeling safe and less likely to report feeling a sense of belonging in their school than those who have not been the victims of bullying (Waasdorp et al., 2011).

Even if a student is not directly harmed by violence, any violence in a school environment can negatively impact student sense of belonging (Cemalcilar, 2010). When students feel that their school is safe and that violence is not a problem, even if they have personally experienced violence, they are more likely to experience a greater sense of belonging (Cemalcilar, 2010). This can have a cyclical effect. The perception that violence is an issue in
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school may lead to students feeling disconnected from school or like they do not belong, in accordance with Social Disorganization Theory, which may lead to an increase in violence in school (Sampson & Groves, 1989). The nature of this relationship underscores the importance of safety within a school environment.

For Lesbian, Gay, Bisexual, or Transgender (LGBT) students, feeling accepted and not threatened for being LGBT can lead to an increased sense of belonging in school. Lee (2002) examined the role of being a part of the Gay-Straight Alliance (GSA) in making students feel safer and the impact of this feeling on sense of belonging and achievement. Students not only felt more accepted after being part of the GSA, but they felt safer, had a greater sense of belonging in school, and had improved academics (Lee, 2002). While the GSA is one club for one marginalized group, the overall idea that providing a space for acceptance and belonging to marginalized students has a positive impact on their sense of belonging and other school factors may be generalizable. This also supports the idea that participating in extracurricular activities can positively impact student sense of belonging (Booker, 2004). The students in the study explained that they had been the targets of bullying and felt unsafe before having a space in the GSA (Lee, 2002). Even though the GSA did not stop the bullying of these students school-wide, it did make them feel safer and more like they belonged to the school community as a whole.

Curriculum and instruction. The curriculum and teaching styles a school incorporates can impact student sense of belonging as well. When a school is intentional in creating a culturally responsive curriculum that celebrates students for their differences and encourages them to learn about each other while making sure teaching styles are culturally informed and appropriate, students feel that school truly is for them (Francois, 2013). Teachers help their students feel a sense of belonging best when they are culturally sustaining, meaning they
celebrate students’ cultures and those cultures’ contributions to society at large rather than looking at their differences through a deficit mindset (Paris & Alim, 2014). If teachers teach a curriculum where students are not celebrated for their cultural diversity or the subjects of the lessons do not relate to the students, then student sense of belonging may suffer (Sobel & Taylor, 2015). For example, in social studies or English classes in urban, majority minority schools the curriculum is often focused on White authors and White historical figures. By placing an emphasis on valuing the students’ own experiences and perspectives through the appropriate and meaningful selection of curricular materials, sense of belonging can grow (Sobel & Taylor, 2015).

In addition to curriculum, instructional methods impact sense of belonging. Instructional strategies like cooperative learning, where students are supported and work together in a positive atmosphere, can improve student sense of belonging in school (Johnson & Johnson, 1991). Additionally, reciprocal teaching, in which students teach or lead small groups of their peers through instructional activities, can improve sense of belonging by making students feel the classroom is more democratic and giving students more voice in their learning (Palincsar & Brown, 1984; Wilson-Medhurst, 2016). These democratic methods of teaching may lead students to develop an autonomous orientation, with all their needs as described in SDT being met, and can lead to greater overall success and sense of belonging for students (Ryan & Deci, 2000). Overall, the way teachers run their classrooms and teach specific subjects in class can play a major role in student sense of belonging. When students see themselves in the content and instructional strategies support their growth, autonomy, and self-efficacy, student sense of belonging can grow.
Conclusion – Factor Selection and Implications

Sense of belonging is important for students and impacts schools greatly. Among the factors that impact student sense of belonging, some are under the control of schools and others are not. While the impact that the race or socioeconomic status of students has on sense of belonging is not able to be controlled fully due to societal biases and funding issues, there are factors that schools can control. It is imperative that schools find a way to positively affect historically marginalized students and offset historical, racial trauma as best as possible. Demographic factors such as race, gender, previous parental experience with schooling, and SES, are not malleable and therefore should not be the focus of a needs assessment for any intervention I could design. While student factors offer the opportunity for change in some cases, my role as a teacher rather than a school counselor, social worker, or psychologist limits my impact on how students feel about themselves or their psychological well-being. School factors are the most actionable intervention for my role as a teacher and the director of student activities at Thurgood Marshall High School.

Of all the high school grades to focus on, freshmen make sense due to the overall importance of the transition from middle school to high school in a student’s academic future. The Southern Regional Education Board has called it “the most difficult transition point in education” (Ellerbrock & Kiefer, 2014, p. 3). Up to six percent of high school drop-outs occur at the beginning of 10th grade, and up to 40% of freshmen students fail freshmen year in low-income, urban schools like my setting (Ellerbrock & Kiefer, 2014). Researchers hypothesize that this is due to the mismatch between large high schools that are often focused on older students and the developmental needs of students coming from eighth grade (Ellerbrock & Kiefer, 2014). Interventions are needed to assure that students can be successful in ninth grade and eventually
in the completion of high school. This period is so important that many schools across the country have started to use the idea of freshmen academies to isolate freshmen and help them transition into high school (Clark & Hunley, 2007). A focus on freshmen sense of belonging may allow for the creation of a community of care within their classrooms, leading to a greater sense of belonging and future success in school. Even after freshmen year, these communities students create have the ability to keep students engaged, academically successful, and feeling like they belong (Ellerbrock & Kiefer, 2014). Therefore, I will focus on ninth grade students in my study.

The factors I chose for this study are directly related to my role as a teacher at Thurgood Marshall. In this role I had the ability to impact student sense of belonging through implementing some of the potential changes mentioned in this chapter. For example, changing my curriculum, working to have positive relationships with students, and using PBIS in my classroom all may have worked to improve student sense of belonging. If I worked at the district office or if I were implementing an intervention for the whole school, monitoring it would be incredibly difficult.

Evaluating curriculum and instruction at Thurgood Marshall would be a great way to get insight into what is going on in all classrooms across the school, but it was not feasible. The school had over fifty teachers and as a teacher with only one free period per day, I would not have been able to effectively evaluate all the instruction that occurs. Additionally, curricula can take many forms and often are updated, adapted, and changed based on the classroom personality and that relationship the teachers and students have (Stone, 2018). Therefore, analyzing curriculum and instruction in a vacuum through occasional observations would not have been an appropriate way to analyze problems that may exist at Thurgood Marshall. The safety students feel at school is a larger issue that can be impacted by where they live and how they travel to
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school as well as relationships students may have outside of school, so it is also very difficult to analyze.

Even though there were a number of school factors listed in this chapter, it was important to figure out whether students exhibited low sense of belonging at school before investigating why and evaluating potential interventions. Overall a welcoming school for the population of Thurgood Marshall High School that makes students feel like they belong does a few things. A welcoming school not only celebrates students culturally in a way that is authentic for African-American students but can also positively impact the community surrounding the school (Epstein, 1994; Ladson-Billings, 2014). School climate was the key focus for the needs assessments that follows because in my former role as director of student activities it was the factor upon which I had the most control. Improving school climate and ensuring that students’ emotional needs are met can positively impact student motivation (Goodenow & Grady, 1993), attendance (Akiba, 2010), and achievement (Goodenow, 1992) in a way that the other factors in this chapter cannot. Therefore, focusing on school climate as it relates to sense of belonging was the best fit for this needs assessment.

The next step in this research was to analyze my setting, Thurgood Marshall High School, for sense of low belonging related to school climate issues. By examining whether low sense of belonging at my school existed and what the causes of it were, I was able to determine the path towards an intervention to appropriately improve belonging within my scope. This required me to analyze belonging and examine whether any specific factors about school climate impacted that sense of belonging students may or may not have exhibited.
In this chapter, I report the results of a needs assessment related to student sense of belonging at my setting, Thurgood Marshall High School. Thurgood Marshall High School is a large, urban high school in Baltimore City with between 800-1000 students. Nearly all of these students qualified for free and reduced priced meals (FARMs) and nearly all were African-American as of 2016. A visitor to Thurgood Marshall might see students being slow to attend class in the mornings, often skipping first period entirely despite being in school on time. In class, a visitor might see a lack of skills or engagement among students at Thurgood Marshall. Generally, this would present in one of four ways: a student not able to do the work and withdrawing, a student finding the work difficult and trying hard but getting answers wrong, a student finding the work too easy and thus not putting forth effort, or a student finding the work too easy and putting forth effort but finishing early and then withdrawing. Lower performing students might be on their phones quietly in the back of the room, not attempting work, or actively disrupting the class by yelling out observations about an assignment. These issues in engagement, partially driven by a lack of skills, were a large problem at Thurgood Marshall and might contribute to low sense of belonging later on in high school or life (Prince & Hadwin, 2013).

At the time of this needs assessment the school lacked a comprehensive culture and climate plan. Only a few clubs existed at Thurgood Marshall, including student government, debate, robotics, and a very strong Junior Reserve Officer Training Corps (JROTC) program. The school also had a few career and technical education (CTE) tracks, including a media track and a little used emergency medical technician (EMT) program that only had two students in it.
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Most of the focus on extracurricular activities was on sports, in which many students participated.

Discipline at Thurgood Marshall was largely punitive, and students were often suspended for minor infractions such as disrespect, insubordination, or being out of uniform. These suspensions happened one of two ways: either they were given formally by the principal with a written suspension notice sent home or done informally through a parent conference letter. These letters stated that students were not to return without a parent, with conferences deliberately scheduled two or three days in the future. The school made no effort to participate in a restorative practices program despite district focus on such an idea and the principal’s main mission seemed to be to get the school under control.

There were few assemblies at the school, and students who behaved appropriately were rarely rewarded. For instance, honor roll students for the first quarter were never informed that they made the honor roll, save for a small poster near the entrance to the building for the first quarter. That poster stayed up all year and was not updated for the second, third, or fourth quarters. Few guest speakers were invited to the school, and aside from occasional town hall style meetings where the principal spoke about expectations for behavior, students did not meet in their grade levels.

In the last five years, Thurgood Marshall has experienced a number of changes that led to the negative trends described above. From the 2014-2015 school year to the 2018-2019 school year there had been four principals and large teacher turnover in the school. Roughly two-thirds of the teachers who had worked at the school in the 2014-2015 school year were no longer there as of the beginning of the 2018-2019 school year. This huge turnover has created a problem in
establishing a strong culture throughout the school with a comprehensive and meaningful set of rules, expectations, and consequences.

Another issue that prevented the establishment of a consistent culture and climate across Baltimore City Public School System (BCPSS) high schools was the district’s school choice system. In that system, students set to finish middle school choose five high schools in rank order. Then, a composite score based on their transcripts determines their eligibility to attend certain schools. The highest composite score students are eligible to attend one of the district’s three magnet high schools: Baltimore City College High School (City), Baltimore Polytechnic High School (Poly), and Western High School (Western). Two more schools, Paul Laurence Dunbar High School (Dunbar) and Mergenthaler Vocational High School (Mervo), also admit students via composite score. Remaining schools receive students based on student’s choice rankings, which may be influenced by anything from special programs at the school, to athletics, to location. Students who do not get in to any of their five ranked schools are placed in the school closest to their address on file. Thurgood Marshall experienced a number of students transferring in and out based on the school’s media track, JROTC program, or athletics. For example, at the end of the 2014-2015 school year, a number of students left after the football coach was fired, transferring to the school where he had been hired, only to transfer back to Thurgood Marshall following the football season. These factors make it incredibly difficult to establish an effective school-wide culture and climate, which has the potential to have a negative impact on student sense of belonging. The needs assessment to come takes this lack of continuity within the schools into account and evaluates student sense of belonging at Thurgood Marshall.
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Goals and Objectives

There were two purposes to this needs assessment: (1) to determine whether students at Thurgood Marshall High School experience low sense of belonging and, if they did experience low sense of belonging, (2) to determine what both students and staff perceived the causes to be. The two research questions are as follows:

(1) Did students at Thurgood Marshall experience a low sense of belonging?

(2) If students did experience a low sense of belonging, what did staff and students perceive as the causes?

Methodology

Research Design

A cross-section of quantitative and qualitative data allowed for a triangulated mixed-methods approach where the data lays the framework for an argument and interviews and discussions tell a story. To answer the first research question, this study used attendance data from Thurgood Marshall, a staff focus group, and the district school culture and climate survey. The staff focus group began with a conversation on sense of belonging at Thurgood Marshall, and then, staff suggested what could be done to increase sense of belonging. The second research question used the district culture and climate survey and the focus group to posit what may have caused low sense of belonging among the students at Thurgood Marshall, if low sense of belonging existed. This study is based on data from two school years, 2015-2016 and 2016-2017, due to availability of resources and data. The data collection, data analysis, and discussion sections of this chapter are organized by research question.
Participants

There were two sets of participants in this study. The first set were all students at Thurgood Marshall High School, who were participants in that I analyzed data for Thurgood Marshall High School. The other set were those staff who volunteered to be part of a focus group on student sense of belonging. Thurgood Marshall High School is a public high school in the Baltimore City Public Schools system, serving between 800 and 1000 students (Baltimore City Public Schools, 2016). Thurgood Marshall High School serves students from all over the city due to the city’s system of school choice for high schools. The school’s student body was 98% African-American, with small percentages of White, Hispanic, and Asian/Pacific Islander students (Baltimore City Public Schools, 2016). As a whole the district was 83% African-American, 8% White, 7% Hispanic, and 1% Asian/Pacific Islander, less than 1% of mixed race students and Native American students (Baltimore City Public Schools, 2016). The demographics at Thurgood Marshall High School were slightly different, as it served a higher percentage of African-American students and a lower percentage of all other students than the rest of Baltimore City Public Schools.

Almost 95% percent of students at Thurgood Marshall qualified for Free and Reduced-price Meals (Baltimore City Public Schools, 2017). Across the district, 83.7% of students qualified for Free and Reduced Priced Meals (FARMS), almost 12% fewer than Thurgood Marshall. This was indicative of the high poverty rate at the school. Thurgood Marshall High School’s population consisted of fewer than 1% English Language Learners (ELL), whereas Baltimore City Public Schools population of English Language Learners was 4.5% (Baltimore City Public Schools, 2016). Thurgood Marshall High School had a population of students with disabilities (SWD) of 26.3%, compared to the district measure of 15% (Baltimore City Public
Schools, 2016). Figure 2 shows this information.

![Figure 2](image)

*Figure 2.* Demographic information of Thurgood Marshall compared to BCPSS. This figure shows the demographic info of TMHS compared to the district as a whole.

Ten staff members volunteered to participate in the focus group during their lunch time during a professional development day when there were no students at school. Seven staff members were teachers, including five White teachers and two African-American teachers. Three of the teachers included were male and four were female. The attendance monitor, an African-American woman, was included in the focus group. Finally, two administrators, both African-American men, participated in the focus group.

**Measures**

The district gives a culture and climate survey to all students every year. These surveys are meant to evaluate schools and the results are made public. In order to determine whether students at Thurgood Marshall had a low sense of belonging, I used items from the district culture and climate survey. I compared attendance and survey from other, similar high schools in BCPSS to Thurgood Marshall. A staff focus group was also used to answer the first research
question. The second research question was answered qualitatively through the data collected in the staff focus group and quantitatively through the student responses to two statements on the district culture and climate survey: the statements “I feel like I belong at my school” and “I feel safe at school.” There is not a question on the survey that is reported out to the public that helps to analyze relationships, but there is a “respectful relationships” index assigned to each school based on responses about student-teacher and peer relationships at schools. The “respectful relationships index” is used for analysis as well. The district culture and climate survey is accessible on BCPSS’s website.

**Attendance.** Research indicates that attendance figures are a good measure of sense of belonging at school (Akiba, 2010; Appleton, Christenson, & Furlong, 2008), so I used that as part of this needs assessment. Additionally, I used my own observations of the school and coupled these with a discussion of factors that sometimes cause students to miss school as indicated by the school’s attendance monitor. According to the Centers for Disease Control and Prevention, school connectedness or sense of belonging is the strongest factor in predicting absenteeism among students (2010). Attendance data consisted of student attendance at Thurgood Marshall. I combined this with the focus group responses by the school’s attendance monitor, who spoke to students about attendance issues frequently, to determine potential connections between attendance and low sense of belonging. Attendance data was used to help determine the degree to which low belonging existed at Thurgood Marshall. Using the results reported on the Baltimore City Schools website I compared Thurgood Marshall to two other schools discussed below.

**Sense of belonging, safety, and relationships.** Students, parents, and teachers in Baltimore City participated in a survey asking them questions related to the climate of their
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Schools every year, which was administered during class time with paper and pencil. Teachers at Thurgood Marshall monitored student survey taking and often switched classes to avoid being in a class with students they had. Schools sent the survey to the main district office to have results analyzed and published. The data published online includes school-specific data and district-wide data. Surveys were given over the course of a week to ensure maximum student participation. Parents received the surveys via a letter sent home with their child. The district rewarded schools with high parental participation on these surveys, encouraging schools to seek high parent participation. Teachers took the survey online. The data is accessible over the internet, using Baltimore City Schools’ web page. By comparing Thurgood Marshall’s data compared to other schools and the district as a whole, I examined how students at Thurgood Marshall felt about elements of the school building, discipline, staff, and peers and analyzed how that reflected on students’ sense of safety, sense of belonging, self-efficacy, and relationships between peers and students and staff to the rest of the district. This was used to answer the first and second research questions, as this survey assisted in inferring factors of sense of belonging and some root causes.

Staff perceptions. I conducted a focus group with ten staff members and took notes in a notebook. The initial goal of the focus group was to determine if staff believed there was a problem of low sense of belonging at Thurgood Marshall High School. I asked this directly and the specific protocol and questions of the focus group are available in Appendix A. As the focus group conversation continued, my goal was to determine what the staff thought caused low sense of belonging at the school. The possibility for a Hawthorne Effect exists, as I was a colleague of the staff being interviewed at the time of the focus group, but I made a point to explain to staff that the interviews were confidential and anonymous. Overall, the focus group had ten members.
The focus group was used to answer the first and second research questions. Table 1 below shows the different measures used for the different research questions.

Table 1
Explanation of Measures

<table>
<thead>
<tr>
<th>Research Question</th>
<th>(1) Do students at Thurgood Marshall experience a low sense of belonging?</th>
<th>(2) If so, what did staff and students perceive as the causes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Used</td>
<td>• Attendance data</td>
<td>• District culture and climate survey</td>
</tr>
<tr>
<td></td>
<td>• District culture and climate survey</td>
<td>• Staff focus group</td>
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<td></td>
<td>• Staff focus group</td>
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</tbody>
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Data Collection

Research Question 1) Did students at Thurgood Marshall experience a low sense of belonging? Attendance data was collected through teacher-taken attendance. Teachers took attendance every period using an online grade book system called InfiniteCampus. I used attendance data from the 2016-2017 school year to examine the school’s attendance and chronic absence rate overall. According to BCPSS, students absent for more than 10% of school days are considered chronically absent (Baltimore City Public Schools, 2019). Additionally, I used attendance to compare Thurgood Marshall to other, similarly sized or located high schools. I collected the data for Thurgood Marshall and other schools through the BCPSS website. When a teacher does not take attendance the system defaults to the student being present, which may have skewed attendance figures slightly in favor of higher attendance. Additionally, attendance reporting changed for the school year in this needs assessment. When a student missed their first period class, they were marked absent for the day. Previously, if they had missed two or more classes they would be marked absent, so a student could come second period and be marked present for the day. A change of bell schedule from eight shorter periods to five longer periods was the reasoning for this attendance tracking change at Thurgood Marshall. The attendance
monitor also helped to lend context to why numbers might have been low and to some inconsistencies in the attendance analysis by communicating information students had told her. She did this during the staff focus group.

The district culture and climate survey data is from 2015-2016, the years when this needs assessment took place at Thurgood Marshall High School. I accessed the data through the Baltimore City Schools webpage. Specifically, I used portions of the survey focusing on sense of belonging to determine whether sense of belonging was low at Thurgood Marshall compared to other schools in the district. The focus group included ten staff members consisting of teachers, administrators, and members of the school’s attendance team. I conducted this focus group during the 2016-2017 school year. I asked staff members about sense of belonging at Thurgood Marshall and whether they thought it was a problem. During the focus group I noted specific responses in a notebook and abbreviated who made the responses with initials. These interviews helped illustrate whether staff perception of student sense of belonging was low.

Research Question 2) If students did experience a low sense of belonging, what did staff and students perceive as the causes? For the second research question, I used the district culture and climate survey and the staff focus group. I collected data on questions on the survey that focused on teacher-student relationships and safety to determine potential reasons for low sense of belonging at Thurgood Marshall High School because those were the most applicable options available on the survey. I used the staff focus group similarly to the way I used it in research question one. The main change was staff were asked to provide reasons they thought sense of belonging was low and to discuss reasons students had provided for not attending school in an attempt to draw a link between sense of belonging and attendance. These questions were more broad, and I encouraged discussion among staff during this focus group in an effort to get
authentic responses out of these staff members. I used specific responses from the coded notes and total number of staff members agreeing with certain statements to determine some reasons as to why sense of belonging may have been low among students at Thurgood Marshall.

**Data Analysis**

**Research Question 1) Did students at Thurgood Marshall experience a low sense of belonging?** For the first research question, I began by analyzing attendance. I analyzed attendance data by looking primarily at the 2016-2017 school year’s attendance, which was the most updated attendance data available figures at the time of this needs assessment. I also noted attendance between 2013 and 2015 to provide context for Thurgood Marshall High School.

Attendance data also included chronic absence rate as reported by the BCPSS websites for the schools. I also compared attendance at Thurgood Marshall to attendance at other high schools across the city to lend context to the attendance issues Thurgood Marshall faced specifically.

For the culture and climate survey, I compared mean responses on the survey across Thurgood Marshall and two other schools. I used the data collected from these surveys to compare Thurgood Marshall High School, other similar schools, and the district as a whole to evaluate how Thurgood Marshall did on certain measures. This was done by comparing the sections on sense of belonging between Thurgood Marshall, the district as a whole, and two other schools similar in demography and size. One school with similar demographic figures to Thurgood Marshall is Carver Vocational-Technical High School. Carver serves a similar number of students to Thurgood Marshall with almost exactly the same demographics by race, ELL, and FARMs. Even though Carver is a vocational school and one may hypothesize that the presence of career tracks would improve a number of the factors discussed below, Carver has exhibited a number of similar problems to Thurgood Marshall in recent years with safety and overall student
success. The other school was Paul Laurence Dunbar High School, which has similar demographics to Thurgood Marshall, with 93% African-American students and almost exactly the same percentage of ELL and FARMs students, and is also a similar size. While Dunbar does require a composite score to enroll, using Dunbar will allow me to see if this makes a difference among schools of similar sizes. Dunbar is a similar size to Thurgood Marshall while Carver is in the same neighborhood. This allows me to look at how different factors such as overall size and location of a school may impact these results. Using these schools allowed me to draw conclusions about student perceptions on sense of belonging at Thurgood Marshall.

I conducted the staff focus group and took notes on responses while answers were being shared, and I later coded the responses by types of responses using open coding. Frequency of responses related to whether or not students experience low sense of belonging led me to note them in my open coding. By looking at how many people in the focus group had certain ideas, which members of the focus group had those ideas (teachers or administrators), and the degree of consensus I was able to make conclusions about staff perceptions on whether low sense of belonging exists at Thurgood Marshall. The attendance monitor’s replies during the focus group were collected to help explain some of the data found in the attendance section as well.

**Research Question 2) If students did experience a low sense of belonging, what did staff and students perceive as the causes?** I used the culture and climate survey to analyze the difference between Thurgood Marshall’s results on questions about safety and student-teacher relationships and the results of other high schools and the district as a whole. By comparing the mean responses for these I was able to determine some potential reasons students at Thurgood Marshall might be experiencing lower sense of belonging than their counterparts at other schools.
I analyzed the responses in the staff focus group to determine the number of teachers who agreed with specific reasons why students might be experiencing lower sense of belonging at Thurgood Marshall. By looking at my coding notebook following the focus group, I was able to both quantitatively and qualitatively indicate what staff thought reasons were for low sense of belonging by examining frequency of responses as well as specific reasons provided by staff for low sense of belonging.

Results

Research Question 1) Do students at Thurgood Marshall experience a low sense of belonging? Data indicated that students at Thurgood Marshall did experience a low sense of belonging as measured through attendance. School attendance plays a key role in overall motivation and sense of belonging (Akiba, 2010; Appleton et al., 2008; School Connectedness, 2010). Between 2013 and 2015, Thurgood Marshall’s attendance average went from 85% to 75% (Baltimore City Public Schools, 2017). Even with lower overall enrollment after removing many truant students from the school roster in the 2016-2017 school year, Thurgood Marshall suffered low attendance once again. The school had a 68.4% average attendance during the 2016-2017 school year. This may have been artificially low, however, due to the nature of the way attendance was measured at that time.

When the attendance monitor was asked about the low attendance during the focus group, she stated that the students “don’t feel like they belong here.” She added that “academic withdrawal” was another leading reason for low attendance. She also stated that the strategy at the school for dealing with students who had low attendance included home visits and emergency meetings and stated that home visits were conducted during the summer and throughout the school year. The purpose of these visits was to make sure correct addresses and
phone numbers existed for students and that students stated their desire to return to Thurgood Marshall High School.

The attendance rate at Carver for the 2016-2017 school year is 78.5%, substantially higher than Thurgood Marshall. Additionally, the chronic absence rate at Thurgood Marshall was 85% while the rate for Carver was 55.2%. Despite being in the same community and with similar demographics, Carver did a better job ensuring students came to school. Based on the literature discussed in chapter one, this may be indicative of a greater sense of belonging among students at Carver. Dunbar, one of the schools discussed earlier, is in a different part of the city than Thurgood Marshall. Dunbar’s attendance for the 2016-2017 school year was 82.1% with a chronic absence rate of 52.8% (Baltimore City Public Schools, 2018). While the attendance numbers for Carver and Dunbar were also poor, it is clear that Thurgood Marshall’s problems were more pronounced. This may be due to a lower sense of belonging among students at Thurgood Marshall compared to the other two schools. Figure 3 below illustrates the differences between these three schools.

![Attendance and chronic absence rate at three Baltimore city high schools. This figure shows attendance and chronic absence for the three high schools discussed in the needs assessment.](image-url)
The district culture and climate survey also indicated a low sense of belonging. Survey data was grouped by topic of the questions and reported out on the district’s website. Comparing the data from 2015-2016 to the data from 2014-2015 illustrated a specific need. On the statement “I feel like I belong at my school,” 59.3% of students agreed in 2015-2016 compared to 67.0% of students in 2014-2015. This is below the high school average of 67.0% for this answer. The other two schools also showed low belonging. Carver did not have data for 2014-2015 but in 2015-2016 it had a lower sense of belonging than Thurgood Marshall, as only 56.4% of their students said they belonged at their school. This seems to run counter to the argument above, that attendance is an accurate measure of sense of belonging. Despite having better attendance, Carver may actually have been experiencing worse sense of belonging than Thurgood Marshall. It is possible then that the attendance disparity between the schools was not an indicator of a sense of belonging disparity and therefore attendance may not be an appropriate measure of sense of belonging. Dunbar’s information was virtually unchanged on this question between 2014-2015 and 2015-2016. Initially, Dunbar had 69.4% of students indicate that they felt they belonged in their school. This improved to 69.6% in 2015-2016. This high sense of belonging was supported by the superior attendance figures from Dunbar (Baltimore City Public Schools, 2018). For the district as a whole, the figures were 65.6% in 2014-2015 and 66.3% in 2015-2016. There is a great deal of variation between Baltimore City Public Schools based on neighborhood, grade-level, and demographic population but it is worth noting the differences between these schools and the average. Unfortunately, the district does not disaggregate data by grade-level, so I was unable to compare the schools discussed to all BCPSS high schools. The survey is discussed further in relation to the second research question.
Figure 4. Percent of students agreeing with “I feel like I belong at my school” from three Baltimore city high schools and BCPSS. This figure shows the results on the question “I feel like I belong at my school” for three high schools and the district as a whole.

The staff involved in the focus group also felt there was a low sense of belonging at the school. Of the ten staff members interviewed, eight felt that sense of belonging was a problem at Thurgood Marshall High School. The English department chair, who had been at the school for five years, was especially vocal. He claimed that “our kids don’t feel like this is a place they belong, if they did our scores would look a whole lot different,” referring to state test scores, which were low for the school.

Research Question 2) If students did experience a low sense of belonging, what did staff and students perceive as the causes? The district culture and climate survey and staff focus group helped to explain student perceptions as to why there may have been low student sense of belonging at Thurgood Marshall. A statement on the culture and climate survey, “I feel safe at this school” may have had implications for sense of belonging. In 2014-2015, 73% of students responded affirmatively that they felt safe at school. That dropped in 2015-2016, to 64.7%. Students who feel less safe at school due to bullying (Goldweber, Waasdorf & Bradshaw, 2013) or actual fear of physical violence in school (Akiba, 2010) are less likely to feel a strong
sense of belonging in school. The drop for Thurgood Marshall in safety may be partially related to an event that occurred towards the end of the 2014-2015 school year. A well-publicized uprising in response to police violence occurred right near the school. The 2014-2015 survey was taken before that event and the 2015-2016 survey was taken afterwards, so that may partially explain the safety disparity.

Safety at school was an issue for Carver as well. There are no survey figures from Carver for 2014-2015, but in 2015-2016 only 54.4% of students indicated they felt safe at the school. The same caveat regarding the event at the end of the 2014-2015 school year exists for Carver as well. This 2015-2016 figure was lower than that of Thurgood Marshall. At Dunbar, the safety measures went up between 2014-2015 and 2015-2016 from 67.7% to 72.5%. District-wide, the figures were basically unchanged between 2014-2015 and 2015-2016, as they were 69.9% and 69.8% respectively (Baltimore City Public Schools, 2018).

![Figure 5. Percent of students agreeing with “I feel safe at my school” from three Baltimore city high schools and BCPSS. This figure shows the results on the question “I feel safe at my school” for three high schools and the district as a whole.](image-url)
As indicated in chapter one, student-teacher and peer relationships are important for sense of belonging (Allen et al., 2016; Kiefer et al., 2014). In 2014-2015, Thurgood Marshall’s respectful relationships index was 61.8%. That dropped to 52.1% in 2015-2016, indicating that responses on questions of peer relationships and student-teacher relationships were answered affirmatively only 52.1% of the time. This may have been an indicator of low sense of belonging at Thurgood Marshall. Carver had low numbers as well, with 47.4% of students responding that relationships were positive at their school in 2015-2016. As is the case with the safety measures above, these figures may have been partially due to the event at the end of the 2014-2015 school year. One caveat to that is anecdotaly, it seems that student-teacher relationships improved after this event at Thurgood Marshall due to an effort by the teachers to make school feel especially welcoming to students. Therefore it is difficult to know the degree to which the event impacted these measures. Dunbar, which is not in the part of the city where this occurred, scored higher than the other two schools, with a 64.6% positive response rate in 2014-2015 and 65.2% in 2015-2016. District-wide, the respectful relationship scores were 50.6% in 2014-2015 and 51.3% in 2015-2016 (Baltimore City Public Schools, 2018).

Figure 6. Percent of students answering affirmatively on “respectful relationships” index. This figure shows the results on the “respectful relationship” index for three high schools and the district as a whole.
The staff focus group provided context for why there was low sense of belonging at Thurgood Marshall. The social studies department chair indicated that her son, a junior at the time, “has never been asked what he wants to do or learn or participate in” and that he felt that he “just comes to school and leaves, he has no connection here.” When asked about specific reasons there is low sense of belonging at the school, an assistant principal pointed to the school choice system in Baltimore City for high schools: “kids can go wherever they want, if they don’t go to school in their neighborhood they’re not going to feel like it’s their home.” The science department chair was more critical of the school, though. She stated that “if we suspend kids for minor stuff they won’t like it here, it’s simple.” When asked as a group, nine of the ten staff members highlighted overly strict disciplinary practices as a reason for low sense of belonging, and four of the ten staff agreed with the assistant principal that school choice contributes to low belonging. Surprisingly, nobody mentioned the event at the end of the 2014-2015 school year during the focus group as having a potential impact on students.

When asked if anything currently happening at Thurgood Marshall is helpful for student sense of belonging, the attendance monitor was quick to praise teachers. She claimed that “[you all] make the students feel like home, they sit in my office and they tell me that.” This indicates that students may have good relationships with teachers, but not other individuals in the school such as their peers or administrators. A young math teacher acknowledged that she agreed with this sentiment, but that “if every teacher isn’t doing that, we’re leaving kids behind.” When asked, all ten members of the focus group confirmed that they believed teachers play a positive role in school sense of belonging for students.
Discussion

Through the data presented above, it appeared that there was a low sense of belonging at Thurgood Marshall High School. By discussing the results of each research question I was able to determine that there should be an intervention at Thurgood Marshall focused on sense of belonging.

Research Question 1) Do students at Thurgood Marshall experience a low sense of belonging?

Thurgood Marshall had lower attendance than the other two schools, which is a potential indicator of low sense of belonging (Akiba, 2010; Appleton et al., 2008; School Connectedness, 2010). Even though the other two schools in the comparison had higher attendance rates than Thurgood Marshall, one of the two schools, Carver, had lower sense of belonging as well as lower marks on the other district climate survey measures. This indicates that while attendance is associated with student sense of belonging, this link may not be as strong as the tie between sense of belonging and safety or relationships. Since these two schools were similar demographically to Thurgood Marshall, in the same school system, and both were high schools, this idea that maybe attendance is less important to evaluating student sense belonging than other factors is important to consider for the future. It is possible that the high chronic absence rate at Thurgood Marshall, 85%, contributed to skewed survey results due to a selection bias. The students who experience chronic absenteeism are less likely to feel a strong sense of belonging, so the fact that they missed out on taking the student survey could have led to higher sense of belonging results for the school. Comparatively, Carver’s lower chronic absence rate may have meant that even students experiencing low sense of belonging took the student survey. This is supported by the results of the survey. Dunbar’s higher sense of belonging, lower chronic
absence rate, and higher attendance percentage are in alignment with the literature indicating that attendance and sense of belonging are correlated. The district-wide results were also higher than Thurgood Marshall’s, showing the school to be below average in general at cultivating student sense of belonging according to the survey.

Low sense of belonging at Thurgood Marshall is shown through the district survey, staff focus group, and attendance figures. These measures displayed three concurrent problems at Thurgood Marshall that may lead to low sense of belonging: low attendance, poor relationships, and a low feeling of safety. This can impact the school in a variety of ways and therefore must be a key focus of any attempt to improve Thurgood Marshall. The fact that Thurgood Marshall did have a low sense of belonging allowed me to confirm this as an issue and move forward in addressing it.

Research Question 2) If students did experience a low sense of belonging, what did staff and students perceive as the causes?

The culture and climate survey helped to explain why some students might not feel sense of belonging. Safety plays a key role in sense of belonging (Akiba, 2010; Goldweber et al., 2013), and students’ lack of feeling safe emphasized sense of belonging as an issue in the building. It is clear that students perceive two key problems at Thurgood Marshall related to sense of belonging: safety and relationships. The extent to which each of these impacted sense of belonging directly is impossible to gauge through the district survey, but the fact that both of these are low and that sense of belonging is low among Thurgood Marshall and Carver shows correlation and should be examined further to determine if there is causation.

The safety question is an interesting one since Carver and Thurgood Marshall are in the same area of the city. It is possible that students, when answering questions about school safety,
were considering safety at school relative to their neighborhoods. This would indicate that Thurgood Marshall does a better job ensuring student safety in similarly difficult circumstances and therefore should have higher sense of belonging than Carver. Even though this is the case, Thurgood Marshall’s safety scores were lower than the district as a whole. Additionally, the “respectful relationships” figures may be deceiving. While Thurgood Marshall’s scores were higher than Carver’s on this measure, Thurgood Marshall’s figures were trending down dramatically, from 73% to 65%. Despite this, Thurgood Marshall’s figures were better than those of the district as a whole. This may indicate that Thurgood Marshall was doing some good work in building these relationships, or it may be a reflection of the specific teachers at Thurgood Marshall during this time. The reduction in score Thurgood Marshall experienced could be indicative of a change in perceptions by the student body, which may help to explain why Thurgood Marshall’s sense of belonging went down as well. In fact, Thurgood Marshall’s sense of belonging score went down the exact same amount, eight percent, as did its “respectful relationships” figure.

Staff perceptions backed this up to a degree, while introducing a few additional factors. The focus group indicated that while some issues are systemic, like the school choice system that does not tie a student to his or her neighborhood school, school-based issues might impact behavior as well. Unfair disciplinary practices, like constant and seemingly arbitrary suspensions, were one factor cited by teachers in the focus group that may cause low sense of belonging. Thurgood Marshall had a very high suspension rate. Staff indicated that suspending students might lead to lower sense of belonging among Thurgood Marshall students. The 2016-2017 data on suspensions has validity concerns, as Thurgood Marshall went from suspending students to requiring “parent conferences,” where students would often not be able to have
parents come in for multiple days. These acted as suspensions in practice. According to the
district’s school profile, Thurgood Marshall’s suspension figures went from 112 in 2013 to 173
in 2014 to 148 in 2015 (Baltimore City Public Schools, 2017). Figures provided to me by the
school indicate that the total number of suspensions in 2016 was 119. This is down since 2015,
but still an extremely high number that, as stated above, made the district issue an ultimatum to
Thurgood Marshall to reduce its suspension rate. Compared to the other two schools, Thurgood
Marshall’s suspension rate is very high: Carver suspended 79 students while Dunbar suspended
just 19 (Baltimore City Public Schools, 2018). This disparity may lend legitimacy to the staff
focus group’s suggestion that suspensions can impact sense of belonging.

When asked about the number of suspensions for students, members of the school staff
varied in their responses. An assistant principal who has been at the school for a year and a half
stated that “we need to do something to penalize them for acting up” and was skeptical that “all
that positive stuff,” such as restorative practices or positive behavior interventions and supports
(PBIS), would work effectively. The English department head disagreed, stating that “we can’t
just suspend kids all the time and expect their behavior to get better, it hasn’t worked yet.” The
fact that Thurgood Marshall suspends so many students, both officially and unofficially, and that
sense of belonging has gone down to the degree it has over the years in this needs assessment
backs up the assessment of the English department head.

Given the scores on the student survey and the figures present for Thurgood Marshall, I
believe that low sense of belonging is an issue worth examining in a variety of different ways. As
I discuss in chapter three, there are a number of positive behavior interventions that are tied to an
improvement in student sense of belonging while punitive discipline hurts student sense of
belonging. Additionally, various other school-based factors can improve student sense of belonging, which is clearly a need at Thurgood Marshall.

**Conclusion**

This data showed a clear culture and climate problem at Thurgood Marshall that may be related to student sense of belonging. School attendance figures established a baseline of low attendance, which may be caused by low sense of belonging (Akiba, 2010). Despite attendance figures between the three schools not quite backing up this claim, the attendance monitor’s insight leads me to agree that this is indicative of a sense of belonging problem at Thurgood Marshall. A staff focus group consisting of ten staff members including the attendance monitor provided support for the hypothesis of low sense of belonging. Finally, student responses to the district culture and climate survey indicated a low sense of belonging at Thurgood Marshall as well as a low feeling of safety and poor relationships. This information convinces me that improving sense of belonging is a worthwhile cause in this setting. Given the results of this needs assessment and the existing research, it is possible that improved sense of belonging may improve student attendance as well as result in an overall safer school where students are happier to attend. Research indicates this may impact motivation and achievement as well (Eccles & Roeser, 2011; Prince & Hadwin, 2013; Ryan & Deci, 2000).
Improving Sense of Belonging

Chapter Three – Intervention Literature Review

As shown through the needs assessment, students at Thurgood Marshall experience low sense of belonging. I confirmed this through examination of attendance data, the district culture and climate survey, and a staff focus group. Given the importance of sense of belonging shown in chapter one and the clear problem of sense of belonging at Thurgood Marshall High School presented in chapter two, it is imperative to improve sense of belonging at the school. Improved sense of belonging could have far-reaching effects for the students of Thurgood Marshall, and therefore I next turn to an examination of the ways to best improve sense of belonging.

Intervention Literature Review

Defining Sense of Belonging

As in Chapter 1, this intervention literature review uses Booker’s (2004) conceptualization of sense of belonging as “how immediate contexts, specific activities, people, or events make students feel like they are part of the school community” (Booker, 2004, p. 132). The different elements that make up that description are included in this review: contexts, activities, people, and events. The contexts by which this review is organized are classroom and non-classroom interventions. Within those two contexts are the activities, people, and events. Extracurricular activities, service learning opportunities, or clubs in which students can participate are the activities. These are usually ongoing groups students can join. Interactions with classmates and school staff make up the people portion, and events are things like pep rallies or student showcases. Research indicates that greater sense of belonging will improve student attendance, which has a direct impact on student success (Akiba, 2010; Booker, 2004; Hughes et al., 2015) Although a comparison between three Baltimore high schools in the needs
assessment did not support a direct correlation between sense of belonging and attendance, the research heavily favors the idea that these factors are related.

**Review of Interventions on Sense of Belonging**

Few studies have examined sense of belonging in urban, low-income high school students. Some studies have attempted to improve sense of belonging in students at various levels of schooling up through college (Walton & Cohen, 2011). Other studies have used other indicators, such as motivation, to show a growth in sense of belonging (Cornelius-White, 2007). This review of interventions will focus on studies dealing with improving sense of belonging or factors associated with sense of belonging, with a review of different efforts that have targeted different levels of schooling and populations of students. Through the literature review and the needs assessment, it became clear that sense of belonging was a very meaningful factor to focus on in improving student outcomes. The literature supports the conclusion that other issues raised in the needs assessment such as safety (Goldweber et al., 2013), relationships (Allen et al., 2016; Kiefer et al., 2014), and attendance (Akiba, 2010; Booker, 2004; Hughes et al., 2015) are strongly correlated with student sense of belonging and that improved student sense of belonging could positively impact those factors in school. A focus on positive relationships through school-based interventions appears to have a large possible impact on sense of belonging (Ibrahim & El-Zataari, 2019). The improved peer relationships that can result from various school-based interventions like extracurricular programming or working together towards a goal can also have a substantial impact on sense of belonging (Allen et al., 2016; Juvnon et al., 2012). Teacher-student relationships can also be improved by these various interventions and may thus strongly impact student sense of belonging (Booker, 2004). For these reasons, and given my role as a teacher and director of student activities and school culture and climate at Thurgood Marshall,
the focus of this review will be on research to improve sense of belonging based on school-based interventions.

There are a number of interventions schools can undertake to improve student sense of belonging. A review of different interventions will be the first step in this chapter, followed by an analysis of feasibility of use of these interventions for me in my setting. The review will be organized by classroom interventions or frameworks and non-classroom interventions or frameworks. Classroom interventions include culturally responsive teaching and instructional methods specific to marginalized students (Gay 2002; Ladson-Billings, 2014; Walton & Cohen, 2011), efforts to change teacher beliefs and actions that will impact classroom teaching (Cornelius-White, 2007; Green, 2006; Trujillo & Tanner, 2014; Wooten & McCroskey, 1996), and the use of teamwork to help lower-performing students (Anderman, 2003). Non-classroom interventions include providing services to students (Mhurchu et al., 2013; Strolin-Goltzman, Sisselman, Melekis, & Auerbach, 2014), extracurricular activities (Booker, 2004; Fredericks & Eccles, 2006), service learning (Bell, 2014; Hartmann, Maluk & Riffer, 2007; Rossi, 2002), and school climate interventions (Cook et al., 2015; Ma, 2003). This review will conclude with an intervention selection based on the research that is best fit for the setting at Thurgood Marshall High School.

**Classroom interventions.** Classroom interventions can easily reach students directly and thus have a clear potential for influencing student sense of belonging. Additionally, these may improve teacher-student relationships in a direct way.

**Culturally responsive teaching.** By teaching students in a way that appeals to them and considers their cultural background and where they come from, teachers can improve student sense of belonging (Dickson, Chun, & Fernandez, 2016). Since the end of segregation, schools
have been institutions that cater to the White majority, which may lead African-American and low-income students to feel marginalized (Walton & Cohen, 2011). Culturally responsive teaching (CRT) is a way to help students who have been marginalized in education by valuing their cultural contributions, recognizing learning differences, and ultimately improving outcomes for those students (Ladson-Billings, 2014). As described by Dickson and colleagues, “CRT may indeed be helpful in bridging the disconnect between culturally diverse students and their school” (Dickson et al., 2016, p. 151). To increase sense of belonging for those marginalized students, schools must not force them to change themselves in order to meet the expectations of the dominant (White) culture, but make them feel welcome and comfortable in the classroom (Gay, 2002; Ladson-Billings, 2014).

Culturally responsive teaching is a framework that can bridge that belonging gap that may exist in American schools by having teachers understand the vast cultural differences among their students (Anyichie & Butler, 2017; Gay, 2002; Ladson-Billings, 2014). Culturally responsive teaching takes work to prepare for, and Anyichie and Butler (2017) describe a thorough framework for teachers to prepare to use CRT in the classroom. First, teachers need to acquire knowledge about the cultural diversity in their classrooms and self-assess their own biases that may be impacting learners (Anyichie & Butler, 2017). Teachers also must ensure they are listening to students to learn about the students’ cultural diversity while also honoring that diversity and seeing it as a positive rather than something to be corrected (Anyichie & Butler, 2017). This relates to the next step, which is improving instructional practices (Anyichie & Butler, 2017). This requires a process Gay (2002) called “cultural scaffolding,” where teachers use the students’ own unique cultural experiences to improve pedagogy by allowing students to construct their own knowledge. This may mean that teachers use different pedagogical strategies
than the ones they are used to, allowing for differences in the ways different students participate, organize ideas, and interact (Anyichie & Butler, 2017). Once teachers learn about other cultures, the next step is to examine classroom materials. This requires that teachers do a “deep cultural analyses of textbooks and other instructional materials” (Gay, 2002, p. 108). This includes work students do as well as the classroom environment. This may require teachers to utilize parents and students in selecting classroom materials such as textbooks to ensure true cultural relevance (Anyichie & Butler, 2017). After teachers complete these preparatory steps, they can move into the implementation stage of CRT. This includes a focus on including students’ prior experiences in instruction and creating opportunities for discussion (Anyichie & Butler, 2017).

Often, teachers view these cultural differences and the need to leave their comfort zones as negatives for students, given the focus on White, middle class values in current schooling practices (Vavrus, 2008). By recasting cultural differences among students not as deficits or problems but as assets, teachers signal to students that their cultures, and therefore the students themselves, are valuable (Anyichie & Butler, 2017; Vavrus, 2008). One such way to build that cultural knowledge and thus improve instruction to better serve all students is the “funds-of-knowledge” framework where teachers learn about different students’ cultures through home visits and conversations with people in the students’ homes (Vavrus, 2008, p. 53). This allows teachers not only to successfully implement culturally responsive teaching, but to ensure that they do not stereotype groups of students by using pedagogical methods that are meant to be useful for them based solely on race, gender, or class. Not every student from the same background learns the same way, so learning as much as possible about students individually can ensure that teachers tailor lessons to best fit their specific students, not just the backgrounds from which they come (Vavrus, 2008).
One intervention using culturally responsive teaching took place in Western Canada and focused on the Aboriginal population. Aboriginal youth drop out of Canadian schools at a high rate, have disproportionately low academic success, and are often concentrated in urban centers (Kanu, 2007). These are problems similar to those faced by African-Americans in the United States and the population I worked with in Baltimore. By increasing Aboriginal representation in the ninth grade social studies curriculum, providing resources centered around Aboriginal history, and using teaching methods and interaction patterns that historically work well with Aboriginal students, student outcomes changed: students achieved at a higher rate, fewer students dropped out, and school attendance improved (Kanu, 2007). When teachers focused on teaching students their own history in a way that made sense to them, these students showed higher sense of belonging (Kanu, 2007). Culturally responsive teaching plays a key role in improving student sense of belonging, and this research with Aboriginal students could be applied to African-American students in Baltimore.

When teachers are culturally responsive, they allow their students to feel like they belong in school. As previously stated, schools have historically marginalized African-American and low-income students, as well as all non-White students (Walton & Cohen, 2011). This is due to the way schools are set up, as reflections of White, middle-class culture (Ware, 2006). Students who do not adapt to this culture by code switching or “culture switching” may struggle to feel belonging or achieve at the highest levels (Ware, 2006, p. 429). One way to combat this is to introduce students to “nonthreatening interpretations of adversity,” where students could celebrate shared adversity and work together to improve their collective sense of belonging in their institution (Walton & Cohen, 2011, p. 1448). This can include essays, recordings, and other narrative pieces to help internalize shared experiences for students and build a collective sense of
belonging to a group within the larger institution (Walton & Cohen, 2011). For example, a high school teacher could have students personalize challenges they are having in school through a writing assignment and then share the responses with a partner. Students who find that there are shared challenges among their peers may show improved sense of belonging as a result.

Having students participate in sharing their own nonthreatening interpretations of adversity may be linked to an improved GPA and sense of belonging (Walton & Cohen, 2011). This idea, using students’ experiences as assets, goes hand-in-hand with culturally responsive teaching. Walton and Cohen (2011) describe minority students, who represent the majority of Thurgood Marshall’s population, thusly: “their ethnic group is often negatively stereotyped or marginalized [so] they may be unsure of whether they will be fully included in positive social relationships” in school (p. 1447). A feeling of not belonging in school may be inherent to these students. The shared adversity model of appreciating the unique struggles that minority students go through can be used in conjunction with culturally responsive teaching to ensure a greater sense of belonging for these students. The students at Thurgood Marshall have likely been made to feel like they do not belong in mainstream American institutions like schools, so the use of culturally responsive pedagogy to both illustrate and appreciate shared adversity may improve student sense of belonging and outcomes.

Some ways to make students feel like they belong in American schools is to treat those students with trust and respect, and to demand high expectations. Teachers can act as “warm demander[s]” of students, ensuring their safety and success while having high standards for them and African-American teachers are more likely to do this for African-American students (Ware, 2006, p. 432). The warm demander framework applies to African-American students specifically in this case and requires teachers to be nurturing of a student’s individual culture, have a strong
beliefs in student capabilities for success, have a strong dedication to the needs of students, and be especially nurturing of low-performing students and African-American male students. When teachers do all of these things they may be able to improve outcomes and overall sense of belonging for students through strong relationships and feelings that the student can be successful (Ware, 2006). The “warm demander” framework from Ware (2006) has been associated with improved student-teacher relationships and achievement in math classes as well (Evans, 2018).

The warm demander framework was based on a study that analyzed the pedagogical methods of successful African-American teachers (Ware, 2006). A key element of being a warm demander is responding in culturally appropriate ways to behavior management issues (Ware, 2006). Some students respond better to a private conversation, sarcasm, or joking while others respond to stern conversations or more traditional discipline, but it is important within the warm demander framework to know one’s students well enough to know which is the appropriate method of demanding more from students. These actions not only treat students humanely and as individual people, but also ensure that their prerequisite needs to have motivation and success are met (Ryan & Deci, 2000). By granting students autonomy and trust to complete tasks, allowing students to show competence, and relating to students in a meaningful and culturally appropriate way, teachers can ensure all student needs are met and that the students will be successful (Ryan & Deci, 2000). Generally speaking, CRT can have a strong impact on improving student sense of belonging. Dickson and colleagues (2016) indicated that while CRT may lead to a growth in student sense of belonging, that growth is largely due to improved student-teacher relationships. Therefore, CRT is not entirely necessary for growth in sense of belonging if student-teacher relationships can be improved in other ways.
**Teacher beliefs and actions.** Showing competence, as discussed in SDT, is important for students to be motivated and show sense of belonging (Ryan & Deci, 2000). Many teachers assume that when a student cannot do an assignment, it is due to a lack in ability in the subject area (Trujillo & Tanner, 2014). This kind of thinking is an example of a deficit mindset and shows the assumption that students lack skill. Actions resulting from this view, like reducing the difficulty of work or increasing penalties on students, may reduce student interest in general or their sense of belonging in a specific field (Green, 2006). Low-income or minority students are often the subjects of this kind of thinking, which can be harmful to them when policy-makers and reformers make decisions based on a deficit model (Green, 2006). In subjects and fields with low representation for minority or low-income students, interaction with teachers can improve sense of belonging and achievement outcomes and help alleviate the deficit thinking a student may have, including that he or she is unable to be successful in a field (Dickson et al., 2016; Trujillo & Tanner, 2014). These teacher-student relationships play a role in student sense of belonging as well and can improve student beliefs and feelings on certain subject matters or fields of study (Dickson et al., 2016; Goodenow & Grady, 1993).

Positive teacher-student relationships help students feel that teachers are responsive to their needs. When teachers adequately respond to the requests of students, students feel that teachers listen to and care about them; they feel more trust in teachers, and this can impact student sense of belonging (Wooten & McCroskey, 1996). Additionally, trust improves when teachers are assertive and demanding of their students (Wooten & McCroskey, 1996). There are a number of ways teachers can work to improve these relationships, which positively impact belonging. Teachers can befriend students by interacting with them informally or involve
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students in the decision-making behind pedagogical choices in order to increase trust between the student and the teacher (Margonis, 2004).

Allowing students to make pedagogical decisions is not the only way to listen to students. When teachers hear students’ real opinions on real-world problems, create contracts between students and teachers, create learning groups, and use peer tutoring at the request of students, they operate from within a person-centered framework that can increase student sense of belonging (Cornelius-White, 2007) A person-centered framework in the classroom can also improve relationships, motivation, and student behavior and is based on a willingness to listen to and trust others (Cornelius-White, 2007). When teachers show trust in students by allowing them to participate in a classroom that uses the person-centered framework, student sense of belonging thrives. It is often difficult for teachers to let go of full control of the classroom and allow students to work effectively with each other, but it can also lead to major benefits. This satisfies students’ needs for autonomy and competence which are important in improving student motivation and belonging (Ryan & Deci, 2000).

**Teamwork in the classroom.** While sense of belonging is important for success in school, the relationship between success in school and sense of belonging may be reciprocal as prior school success may also lead to greater sense of belonging (Anderman, 2003). Since grades are a large point of emphasis in middle and high school, students may not feel like they belong in school if they are not successful there. Anderman (2003) found that by using a team approach in the classroom, all students, even those who score lower on assessments, can feel like they are successful by assisting the group in accomplishing a goal. Students’ perception that it was okay to make mistakes as long as they worked together towards a solution, as laid out by the teacher, led to a higher sense of belonging in that class even if grades and sense of belonging to the
school as a whole were low for students (Anderman, 2003). By making it okay to make mistakes, even lower-performing students felt more comfortable in the classroom and more like they belonged (Anderman, 2003).

While grades are obviously an important factor in schooling, fostering a learning community rather than one of competition can help lower-performing students feel more accepted in school. Certain activities in the classroom involving group problem-solving strategies can help to foster this growth in sense of belonging (Pham, 2017). By having students play games in teams and share details about their own lives, sense of belonging can improve among groups (Pham, 2017). Additionally, when a teacher emphasizes respect in the classroom, students feel more a part of the group and can exhibit greater success (Anderman, 2003). This satisfies student needs for competence and allows them to feel belongingness with the group as a whole (Ryan & Deci, 2000). This can offset the drop in sense of belonging that often occurs as schooling goes on for low-income or minority students (Anderman, 2003). Good relationships between peers are often a prerequisite for student sense of belonging improving through teamwork, so the relationship in these two factors may be reciprocal (Timmons & Thompson, 2017). If good relationships between peers are needed for teamwork to be effective as a method for improving student sense of belonging, and good peer-to-peer relationships already positive impact student sense of belonging, it is unclear to what degree instituting teamwork in the classroom may help students (Mezuk, Bondarenko, Smith, & Tucker, 2011; Timmons & Thompson, 2017).

Summary. Classroom interventions can be very useful to improving student sense of belonging. These interventions get at the base interactions students have in school: with teachers, with instruction, and with classroom materials. By changing these either to be more culturally
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responsive or student-centered, or by making the classroom a safer environment to make mistakes, teachers can improve students’ sense of belonging. Specifically, using CRT in the classroom and implementing it in a methodical way can improve student sense of belonging (Dickson et al., 2016). This improvement in sense of belonging may come from improved teacher-student relationships that result from CRT and can also come from teacher beliefs and actions in the classroom (Dickson et al., 2016; Trujillo & Tanner, 2014). Using teamwork in the classroom can improve sense of belonging as well, but it requires a significant amount of mutual trust among students prior to achieving this growth as students are expected to share details about their lives with each other (Pham, 2017). Additionally, good peer relationships are a prerequisite for teamwork to be successful, so the relationship may be reciprocal with student sense of belonging (Timmons & Thompson, 2017).

Non-classroom interventions do not focus on direct instruction or curriculum materials, but other methods schools can implement to improve sense of belonging. Some of these could take place in an individual classroom, but have been studied at the school-level. These include additional services, extracurricular activities, service learning, mentoring, alternate disciplinary practices, or special events. A comprehensive literature review requires analysis of factors beyond the classroom, so by including non-classroom interventions I will be able to more appropriately and comprehensively plan a potential intervention to do at Thurgood Marshall.

**Non-classroom interventions.** Schools as a whole can create a better school environment and increase sense of belonging by utilizing a number of non-classroom but still school-based methods. These are more systemic changes that take place in schools.

**Providing services to students.** One way to make students feel like they belong at school is to provide them with necessities they may not receive at home. This can include such things as
food (Mhurchu et al., 2013) or healthcare (Strolin-Goltzman, Sisselman, Melekis, & Auerbach, 2014). One study in Australia found that when low income students received breakfast at school they reported feeling safer and more like they belonged there than they did if they did not receive breakfast (Mhurchu et al., 2013). The authors hypothesized that this may also lead to an increase in attendance as a result of having their needs met at school (Mhurchu et al., 2013). When students’ basic needs for food and safety are met, they can excel and feel more connected to the school they are in (Baumeister & Leary, 1995). This implies that schools providing any necessity in a student’s life may improve their sense of belonging in school.

Other needs can be met at school as well. Providing healthcare for students can help increase their sense of belonging in school (Strolin-Goltzman et al., 2014). The presence of school-based health centers (SBHCs) that can provide a variety of services to students including prenatal care to pregnant students, primary care, or social-emotional healthcare is related to school sense of belonging and connectedness (Brindis, Klein, Schlitt, Santelli, Juszczak, & Nystrom, 2003; Strolin-Goltzman et al., 2014). Despite the assumption that students who frequently use SBHCs may miss school more due to the health problems that draw them to the centers in the first place, a study found that they indicate higher sense of belonging and school connectedness than students who do not use them (Strolin-Goltzman et al., 2014). This is indicative of the importance of students feeling that their needs are taken care of and that feelings’ importance to sense of belonging. An additional adult in a different role who shows that they care about students in a different way is invaluable for student sense of belonging (Wooten & McCroskey, 1996). Unfortunately, many schools lack the resources to provide these services to students.
Extracurricular activities. Extracurricular activities include sports and clubs and can be used to increase positive feelings about school culture and sense of belonging (Booker, 2004; St-Amand, Girard, & Smith, 2017). For both male and female students and for both sports and extracurricular clubs, a study found that sense of belonging can increase when students participate in a school-sponsored extracurricular activity (Booker, 2004). Students create peer groups by participating in clubs or sports and identifying themselves that way helps them feel a sense of belonging in relation to a specific group (Mezuk et al., 2011). Students define themselves based on these peer groups, which help them develop a sense that they fit in and belong in their school. Low-performing students generally have low sense of belonging and do not participate in clubs or other extracurricular activities, but finding activities that appeal to them may be key to improving their sense of belonging (Booker, 2004). It is even more important, then, for schools to vary the types of extracurricular activities they offer so that students can feel more involved, specifically those less likely to participate in clubs or extracurricular activities.

Booker (2004) analyzed the role of extracurricular activities in student sense of belonging and found that in addition to peer identification, the relationships students create with teachers through extracurricular activities can improve sense of belonging. Students look to peers and teachers for norms and appropriate behaviors, and when these relationships reflected general openness and acceptance of individuals it led to greater sense of belonging for these students (Booker, 2004). The longer students participated in extracurricular activities, the higher the sense of belonging and academic achievement students showed (Fredericks & Eccles, 2006). When students constantly have additional elements that draw them to school they are more likely to
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experience prolonged improved sense of belonging, improved attendance, and higher achievement (Akiba, 2010).

Extracurricular activities can include school clubs or sports, but school clubs have shown a much more positive effect on students than have athletics, for both sense of belonging and student self-reported grades (Fredericks & Eccles, 2006). While athletics are important for school spirit and the politics of schools may make it implausible to end athletics in favor of extracurricular clubs, the research of Fredericks and Eccles (2006) shows the importance of clubs in schools. Students who participate in any extracurricular activities show marked improvements in achievement (Cooper, Valentine, Nye, & Lindsay, 1999). When compared to other things students can be doing after school such as homework, a job, or watching television, extracurricular school-based activities are the highest predictor of improved standardized testing scores and a predictor of improved classroom grades (Cooper et al., 1999). This may be because higher performing students are more likely to join clubs, but these students are also more likely to do homework and there is still a stronger correlation between extracurricular school-based activities and academic success than there is between doing homework and academic success. Academic clubs like debate can even improve academic performance on school grades as measured by GPA, the ACT, the SAT, and graduation rates (Mezuk et al., 2011).

The impacts of extracurricular activities on performance are present across demographics. Even when controlling for FARMS, gender, and ethnicity, school-based extracurricular activity involvement is correlated with success on state tests (Cooper et al., 1999). Additionally, time in structured group activities not sponsored by the school, such as religious groups, is positively correlated to success on state tests (Cooper et al., 1999). This positive correlation with structured group activities is also true of teacher-given grades, as measured by
school GPA (Cooper et al., 2016). Schools set students up for success by allowing students the opportunity to participate in school-based extracurricular activities. Even if structured peer activities do not occur in association with the school, these programs and activities help students achieve success. Schools can increase the number of programs their students are involved in by allowing community organizations like church groups to recruit or by advertising certain programs that may occur in nearby areas to students, not limiting them to activities that take place in the school.

Service learning. Service learning participation can also positively impact student sense of belonging. Service learning is defined as a “merger of community service and classroom learning” (Rossi, 2002, p. 31) or “formal learning combined with community service” (Baker, 2019, p. 8) with the goal of increasing student learning while helping to strengthen students as people (Rossi, 2002). The feeling of belonging to a larger society wherein people help one another, which a student can get through participating in service learning, has the potential to help students feel belonging in the school community as well (Pak, 2018; Rossi, 2002).

Traditionally, service learning has five elements: investigation, preparation, action, reflection, and demonstration (Kaye & Connolly, 2017). These allow students to take complete ownership over a service learning project and reflect on its meaning. A number of service learning programs exist in districts similar to BCPSS, including Need in Deed (NID) in Philadelphia. Students participating in the NID program work with teachers to plan and develop their service learning project, and they felt a greater sense of belonging in their classrooms afterwards (Hartmann, Maluk, & Riffer, 2007). Additionally, NID reports that students are happier with their teachers, perhaps due to the informal relationships they fostered through service learning, at the end of the NID program (Hartmann et al., 2007). These improved student-teacher relationships can
themselves positively impact student sense of belonging (Dickson et al., 2016). When teachers effectively engage in service learning with their students in an authentic way, student belonging increases.

Aside from standard service learning programs, it is possible to transform the way a school operates to include service learning. One example of this type of service learning is found in Expeditionary Learning Schools (ELS). ELS include long-term, interdisciplinary service learning projects with meaningful, authentic outcomes (Beesley, Clark, Barker, Germeroth, & Apthorp, 2010). These schools have high character goals related to working effectively and responsibly with others and emphasize those goals throughout the program (Beesley et al., 2010). By working cooperatively on authentic projects students can improve their sense of belonging and engagement (Hartmann et al., 2007). Since this work is relevant to the students’ lives and involves interesting academic topics, students are likely to feel a sense of belonging as a result of participating in service learning in these schools (Beesley et al., 2010). Using Expeditionary Learning as the framework for service learning requires that all teachers are engaged and that the process is a part of the school’s mission. These schools trust students and allow them to work autonomously to show their competence and make them feel a sense of relatedness to their peers, satisfying their needs to exhibit motivation and participate in positive school actions as described by SDT (Ryan & Deci, 2000).

Service learning can also help students transition from one school or level of schooling to another. When service learning exists as part of the students’ transition to high school, it can increase sense of belonging for ninth graders, which is in turn tied to graduation rates (Bell, 2014). This is especially true for students at-risk of dropping out of high school (Bell, 2014; Burke, 2013). When implemented effectively, community-based learning in which students
make connections between school and the real world can help turn around a failing school by engaging students in their community (Shannon & Bylsma, 2006). Service learning is a great example of community-based learning, and when students feel linked to their communities through service learning, their connectedness and sense of belonging improves (Shannon & Bylsma, 2006). By establishing an effective link between students and their community, service learning can improve outcomes for students by increasing their sense of belonging in school.

The positive effects of service learning can be offset when it becomes a requirement or is not framed appropriately. When service learning is required for graduation, students may feel disconnected from the purpose of the service learning project and thus the broader school community (Jones, 2016). In Maryland, all public high school students must complete 75 hours of service learning “that includes preparation, action, and reflection components” or be a part of a specially designed program for their service learning (Maryland State Department of Education, 2018, p. 4). At Thurgood Marshall High School, students often complete their hours without the preparation or reflection, often helping to clean classrooms or the cafeteria or volunteering at a local church or community organization. To genuinely meet the state requirements, planning and reflecting are key. Planning should include student voice so that students are given the opportunity to participate in a service learning project that speaks to them. Forcing students to complete service learning as a graduation requirement, as Maryland does, or not framing the service learning as part of classroom learning as described by Rossi (2002) can limit the benefits greatly (Jones, 2016).

**School climate.** School climate can play an important role in student sense of belonging as well. Regardless of student SES, race, gender, or the number of parents in the home, having a positive school climate is an important factor for improving sense of belonging in school (Ma,
When comparing two different schools across two grades, the most important element in improving student sense of belonging was the type of climate the school created (Ma, 2003). Ma (2003) analyzed two schools, specifically looking at the way the schools treated students and tried to create a warm school climate. When schools did not challenge students and were more punitive disciplinarily, student sense of belonging was lower (Ma, 2003). These factors are important to consider when devising an intervention regarding student sense of belonging. By making school a positive place to be, it is possible to make students care more about school and be more successful, despite other challenges the students may have (Cook et al., 2015).

There are a number of ways to create a positive school climate, including a mentoring program for students (King et al., 2002; Ma, 2003). Mentoring programs where upper classmen can help freshmen adjust to high school allow freshmen to feel a greater sense of belonging in the school while giving the mentoring upperclassmen the previously stated benefits of extracurricular activities (King et al., 2002). One study found that having a mentor helps students increase their self-esteem, which is directly tied to school connectedness and achievement (King et al., 2002; Ma, 2003). In another study, researchers found that for the mentored students, mentoring can create a stronger connection to the school and society as a whole (Karcher, Davis, & Powell, 2002). The growth in sense of belonging through mentoring programs may be related to students being able to view their futures more positively (Kraus & Cleveland, 2016). In their study on cross-grade mentoring programs, Kraus and Cleveland (2016) found that students’ views of themselves in their own futures, called their “self-in-future” scores, improved. The researchers then hypothesized that based on a connection between positive views of the future and sense of belonging, that if students’ “self in-future” scores improved their sense of belonging would improve as well (Kraus & Cleveland, 2016). Mentoring programs have the additional
benefit of teaching students to become leaders of their peers, and peer leadership skills have been shown to help students become college and career ready and creatively problem solve as well (Meyer, 2006).

Creating a positive relationship between peers is significant, but it is also important to create a positive relationship between students and the school. Positive behavior interventions and supports (PBIS) can contribute to creating this positive school-student relationship. PBIS is a school-wide framework meant to “improve school climate, reduce exclusionary discipline, and improve overall student success” (Swain-Bradway, Pinkney, & Flannery, 2015, p. 245). PBIS has the added benefit of a positive effect on school climate for staff, leading to an improvement in collegial relationships, staff feelings about one another, academics, and overall organizational strength (Bradshaw et al., 2009). This feeling of satisfaction for staff is related to school performance and student sense of belonging, especially for schools with low-income or minority students (Griffith, 2004). PBIS has also been linked to an improvement in students’ mental health (Cook et al., 2015). When students internalized the idea that their behavior could be rectified, rather than focusing on the negative consequences of poor behavior, students’ opinions of themselves improved (Cook et al., 2015).

Restorative practices, which include focusing on restoring classroom or school communities following wrongdoing and allowing students to make up for mistakes, can improve student sense of belonging (Cook et al., 2015). When students are penalized through harsh disciplinary practices like exclusionary discipline they feel marginalized from the school as a whole (Wearmouth, Mckinney, & Glynn, 2007). Restorative practices empower students to forgive their peers while supporting sense of belonging for the students committing the wrongdoing (Wearmouth et al., 2007). In order to effectively participate in restorative practices,
schools must train their staff. Wearmouth and colleagues (2017) established a framework for creating an effective restorative practice program in their study of schools in New Zealand implementing restorative practices. First, schools must analyze their setting to see if restorative practices fit with the school’s and district’s vision, and then they must train their staff (Wearmouth et al., 2007). Schools then need to set up a process for to begin using restorative practices and set up a formal list of actions that requires restorative practices (Wearmouth et al., 2007). Once these steps are completed, schools can effectively participate in welcoming students back into the school community by forgiving them for improper behavior allowing them to feel a strong sense of belonging.

**Pep rallies and special events.** Principals have successfully used pep rallies and school-wide forms of public recognition to improve student achievement and make students feel like they belong in school (Freiberg, 1993). The growth in sense of belonging from these special events is often related to improved relationships both among peers and between students and teachers (Palmgren, Pyhältö, Soini, & Pietarinen, 2017). In addition, student achievement on state tests can be positively impacted by non-academic rewards, including pep rallies or material rewards like gift cards or pizza parties (Hollingsworth, Dude, & Shepherd, 2010). Principals specifically highlighted the importance of motivating students prior to taking state tests (Hollingsworth et al, 2010), due to the principals’ perceptions that these tests were not necessarily indicative of intelligence, so motivating students and increasing their sense of belonging through these interventions was key to higher scores and success (Hollingsworth et al, 2010).

Special events are even more impactful when student voice is involved. Student voice initiatives, or ways students can have their voices heard and positively affect their peers, allow
students to take on leadership roles in their schools (Johnson, 2009). Allowing students to have a voice in their school’s activities and programs can increase sense of belonging (Johnson, 2009). As evidenced through student interviews and the results of the psychological sense of school membership (PSSM) survey, students at a school that gave them a say in activities and programming felt greater belonging than those at a school that did not, showing the importance of authentically including student voice in planning (Johnson, 2009). In order to authentically increase student voice, schools should follow a three step-process: allowing students to be heard, having students work with adults, and building student capacity for leadership (Mitra & Gross, 2009). Students often feel frustration as a group if they believe they are not heard, and they want to be treated as equals in adult partnerships rather than subordinated to authority (Mitra & Gross, 2009). Giving students the ability to be heard and making them feel their voice truly matters only increases the effectiveness of special events. This is in line with Ryan & Deci’s (2000) work, as increased student autonomy can lead to improved student sense of belonging.

Youth-adult partnerships to create a more democratic school setting, or when students work with adults and share responsibility for the vision, goals, and direction of the group, can help students feel they are heard and improve student sense of belonging (Mitra & Gross, 2009). When adults are open and honest with students, it aids the process of creating an appropriate partnership that truly involves students and can increase sense of belonging (Mitra & Gross, 2009). By being honest with students and sharing the responsibility of a work group and planning, teachers and students can not only improve relationships but also help improve student sense of belonging.
Intervention Selection and Rationale

Researchers associated with three of the interventions described above specifically attribute the growth in student sense of belonging to relationships students form as a result of the interventions (Booker, 2004; Palmgren et al., 2017; St-Amand et al., 2017). Having special programming or events at school can improve sense of belonging, but researchers attribute those gains to the improved relationships as a result of those events (Palmgren et al., 2017). Extracurricular activities allow students to create their own peer groups and identify with them, leading to a greater sense of belonging within the school community (Booker, 2004; St-Amand et al., 2017). However, either of these interventions would be problematic to implement. It is difficult to mandate that students participate in extracurricular activities, and therefore this may not be the best intervention to pursue. Special activities, while important for student sense of belonging and creating a positive school climate, require administrative oversight that would require the assistance of the principal and funding that the school does not have.

Improving school climate through mentoring programs or PBIS is difficult because these require reinforcement across the school (Swain-Bradway et al., 2015). Despite my role as director of school culture and climate, with a large staff it would be beyond my scope to ensure that every teacher participated in this intervention and it was done across the school. According to Ma (2003) the main way PBIS would improve student sense of belonging is through reducing harsher discipline, but implementing PBIS has not been proven to reduce the amount of suspensions or expulsions (Smith, 2019). Changing school-wide policies like PBIS are often done through teacher professional development. Professional development presents a series of challenges, as teachers do not buy in if they do not feel listened to, and many professional development initiatives tend to come from the top down (Datnow & Castellano, 2000).
Additionally, even if teachers do attempt to implement whatever is taught through professional development, they often struggle to do so without prior experience in the area on which the professional development focuses (Ikemoto, Steele, & Pane, 2016). Unless teachers are already good at meaningful feedback and working with marginalized students to increase sense of belonging in the classroom, they will struggle with it, which may delay the help that the students at Thurgood Marshall need. The services a school can provide are heavily limited by budgetary constraints and by what physical equipment exists in a school. For example, a school cannot provide healthcare with adequate equipment or a health care provider present.

Culturally responsive teaching has been shown to strengthen student sense of belonging and outcomes when implemented across the school for students (Dickson et al., 2016; Ladson-Billings, 2014; Walton & Cohen, 2011). Dickson and colleagues (2016) hypothesized that the growth in student sense of belonging from CRT is largely based in the improved student-teacher relationships that come from its use. Pak (2018) argues that service learning is culturally responsive teaching because many non-White cultural groups succeed when there is teamwork towards a positive goal as a classroom activity. Service learning also allows students to form peer groups similarly to the way that is done in extracurricular activities and bond (Martin & Beese, 2016). Structuring a service learning project to be culturally responsive and include a focus on peer group building through student voice may be the most effective way to improve student-teacher relationships and sense of belonging given the budgetary constraints and scope of this study.

Engaging incoming freshmen in service learning is not only an effective, research-based way to increase student sense of belonging, but it is the way I could best attempt to run a successful intervention. Doing a service learning project with a cohort of incoming freshmen
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would have the potential to allow me to successfully implement an intervention, monitor its impact, and limit outside influences. Incorporating student voice in the service learning and giving students a say in selecting what they wanted to do could not only enrich the experience for students, but might perhaps create a stronger link between the classroom and the service learning projects (Bell, 2014; Shannon & Bylsma, 2006). Giving students autonomy, as described by Ryan and Deci (2000) has the potential to improve sense of belonging. This would also make the service learning project culturally responsive, as using teamwork and cooperative learning is, according to research, a culturally responsive method for African-American students (Dickson et al., 2016) who make up the majority of Thurgood Marshall High School. These methods will not necessarily work for all students, but planning a project using teamwork and cooperation as a base with the plan to personalize the project to the specific students is in line with the research by Anyichie and Butler (2017) for developing a culturally responsive classroom. Including the ELS framework could allow the school to implement service learning broadly and interdisciplinarily, which is key to success (Beesley et al., 2010). Allowing students to communicate with each other and teachers to plan service learning into their curriculum is also important.

The teachers that work with the students on a service learning project would need to learn to act differently than usual, which might prove complicated. Acknowledging “advisor angst,” the general discomfort teachers have with letting students lead projects on their own, among the adults while using this as an opportunity to coach teachers and students in this new method of decision-making could help to offset these issues (Johnson, 2009). Consistently returning to student voice when discussing what service learning activities would take place is key and will
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need to occur to ensure buy-in from students (Johnson, 2009). Without student buy-in, the benefits of service learning are not as pronounced (Jones, 2016).

Since freshmen have minimal other direct experience at Thurgood Marshall, their senses of belonging are less impacted by previous thoughts, feelings, or actions by the school when compared to older students in the school. This will allow me to limit the number of outside factors that may impact the sense of belonging students show or any sense of belonging changes that may occur over the course of the year. The freshmen leadership team and administration need to put together a comprehensive plan that includes planning and teaching freshmen about service learning. The team also needs to come up with the mechanisms to allow for student voice. By truly engaging with the students in meaningful service learning that they choose, Thurgood Marshall has a chance of increasing belonging among freshmen students during this difficult transition period from middle school to high school.
Chapter Four – Intervention Procedure and Program Evaluation Methodology

Theory of Change

The needs assessment conducted at Thurgood Marshall High School showed low student sense of belonging and findings in the intervention literature review suggested that sense of belonging can be improved by focusing on a student-driven, culturally responsive, comprehensive service learning program. Therefore, the intervention I have chosen for this study will be service learning for incoming freshmen at the school. Ninth-graders’ sense of belonging is positively correlated to graduation rates (Bell, 2014), so an intervention targeting ninth-graders is useful in that it might help stem dropouts. Ninth-graders’ sense of belonging are minimally influenced by any previous experiences at Thurgood Marshall, since this is their first year at the school. The goal of this intervention is to improve student sense of belonging at Thurgood Marshall by working to create a project with student input and thoughtful planning.

Service learning can improve students’ feelings of belonging by making them feel part of a larger group or society (Park, 2018; Rossi, 2002). When these projects are long-term, interdisciplinary, autonomous, and relevant to students’ lives, service learning has been shown to improve engagement in school, which has a direct impact on sense of belonging (Beesley et al., 2010; Furrer & Skinner, 2003; Ryan & Deci, 2000). Figure 7 below is the theory of change, with the Pak (2018) and Rossi (2002) studies directly connecting long-term service learning and improved sense of belonging.
Throughout this chapter I will be describing an intervention to improve student sense of belonging based on a service learning project. After explaining the intervention and the logic model behind it, I will discuss the research design divided by research question, including the measures, data collection, and data analysis.

**Explanation of Intervention**

The goal of this intervention was to improve student sense of belonging for freshmen through a service learning project. First, the Biology teacher and I planned and developed a curriculum in order to effectively integrate the planning and execution of service learning into the school year without negatively impacting the academics of the groups not participating or taking too much time from the participating group. The Biology teacher was included in the planning because my class, US History, was only a semester long and the students who had me for US History were to be in her class in the second semester.

At the beginning of the school year, a cohort of the freshmen were introduced to service learning. The selected cohort were introduced to the service learning program during the regular
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timeline of the US History course. The US History course began the year focusing on current issues facing Baltimore, then progressed to service learning within that unit as a way to evaluate what issues the students wanted to work on for their service learning project. This started with a definition of what service learning is, an example of service learning projects other students have done across the country, and an analysis of the impact of service learning. These lessons were to begin the third week of school.

Students were to be offered the opportunity to volunteer to be peer leaders, and those who did were to receive training. The goal was to have at least four students volunteer to be peer leaders. The peer leaders’ job was to help lead class discussions on service learning projects and facilitate the planning. They were to be trained biweekly, during their lunch. The training was to include activities of the Peer Group Connections (PGC) curriculum about leading a group conversation, asking effective questions, and dealing with interpersonal issues within the group. I taught the PGC course to upper classmen in previous years and adapted those lessons for this program to make them age appropriate. PGC is a course upper classmen can take to mentor freshmen, and it focuses on decision-making and handling the transition to high school. In order to mentor the freshmen, the upper classmen are taught general facilitation skills. This two-week period was to occur the third and fourth weeks of school. The plan for peer leader training is below, in Table 2.
Table 2
Proposed Training Activities for Peer Leaders

<table>
<thead>
<tr>
<th>Training Day</th>
<th>Proposed Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 18th</td>
<td>• “What is a peer leader?” self-identification activity. (30 minutes)</td>
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<tr>
<td></td>
<td>o Students visually represent what a peer leader is through a drawing and discuss</td>
</tr>
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<td></td>
<td>important attributes of being a peer leader.</td>
</tr>
<tr>
<td>September 20th</td>
<td>• “Red, Yellow, Green” activity. (30 minutes)</td>
</tr>
<tr>
<td></td>
<td>o This activity is meant to teach students how to keep conversations going by</td>
</tr>
<tr>
<td></td>
<td>asking good questions. Students see three levels of questions for keeping</td>
</tr>
<tr>
<td></td>
<td>conversations between groups going (red – bad, yellow – okay, green – great) and</td>
</tr>
<tr>
<td></td>
<td>model them.</td>
</tr>
<tr>
<td>September 25th</td>
<td>• Resolving conflict activity. (30 minutes)</td>
</tr>
<tr>
<td></td>
<td>o Designed like a board game, students go through potential conflicts in group</td>
</tr>
<tr>
<td></td>
<td>settings and try out ways to alleviate them. The students then get to see the</td>
</tr>
<tr>
<td></td>
<td>results of their choice.</td>
</tr>
<tr>
<td>September 27th</td>
<td>• “Am I Ready?” activity and closing questions. (30 minutes)</td>
</tr>
<tr>
<td></td>
<td>o Students participate in the “Am I Ready?” activity, which evaluates what</td>
</tr>
<tr>
<td></td>
<td>students learned. They then get to ask any final questions or discuss concerns</td>
</tr>
<tr>
<td></td>
<td>with their fellow leaders.</td>
</tr>
</tbody>
</table>

After being introduced to the concept of service learning in class and with student leaders selected, the cohort began to select their service learning project. These lessons were to occur the fifth week of school, early in October. This was to begin as a teacher-led classroom lesson revisiting some problems facing Baltimore the students came up with, then it was to turn to the idea of which project students wanted to complete. The class suggested ideas for the service
learning project and worked in groups to research options related to their suggestion or a suggestion they liked and wanted to work with. The students then voted on which project they wanted to work on by private ballot. The students then worked on the service learning project approximately every three weeks for a whole class period. This was to eventually culminate in a service learning project.

**Logic Model Explanation**

If the students experience the inputs, activities, and outputs described the logic model represented in Figure 8 below, there are expected intermediate and long-term outcomes. Research indicates that service learning when done as described in Figure 8 would improve student sense of belonging in the intermediate (Dickson et al., 2016; Pak, 2018; Rossi, 2002). The expectation is that through an increase in student sense of belonging, student attendance (Akiba, 2010), achievement (Hughes et al., 2011), and grades on both state tests and in the classroom (Anderman, 2003) would improve in the long-term.

**Inputs**
- Time spent planning the curriculum.
- Time spent developing a plan to monitor student participation.
- Class time devoted to the service learning project.
- Time spent training students to be peer leaders.
- Time spent contacting outside organizations with whom to partner for the service learning project.

**Activities**
- Planning between freshmen teachers.
- Identifying student leaders through student volunteers.
- Training the students to be peer leaders.
- Brainstorming potential service learning options.
- Logistical support for student planning.
- Completing the service learning.

**Outputs**
- A fully-integrated, service learning-focused US History and Biology curriculum.
- Students who are trained to be peer leaders.
- Students having the chance to reflect on their work.
- Students being present on service learning class days.
- Students participating in the service learning project.
- A student-driven service learning program for students in the selected cohort.

*Figure 8. Logic model. This figure shows the inputs, activities, and outputs for the logic model for the intervention.*
Research Questions

In order to effectively evaluate this intervention, the research questions are:

(1) Did the service learning program occur as planned at Thurgood Marshall High School?
(2) Did the service learning program utilize best practices?
(3) Did sense of belonging for this cohort of freshmen at Thurgood Marshall improve over the course of this intervention relative to their peers who did not participate in the intervention?
(4) What elements of the service learning program did students perceive as having impacted school sense of belonging among freshmen at Thurgood Marshall High School?

Research Design

To answer the first two research questions, which were process-related, I used a convergent mixed-methods design. I collected both qualitative and quantitative data during the same time frame, the 2018-2019 school year, and analyzed it to determine fidelity in the implementation of the processes of this study. This included quantitative data such as the attendance on days the class worked on the service learning project and the attendance of students on the days they were trained to be student leaders. Observations of the degrees of student participation were sometimes presented quantitatively, as I assigned a number value to the participation, but other times presented qualitatively.

For the first two research questions, based largely on process, there are a number of key features to consider. For the first question, I needed to determine whether the project occurred as planned based on whether the project was implemented into the curriculum effectively, if students attended class at an acceptable level, and whether or not it was actually completed. For the second research question, I needed to define best practices, which included student voice...
being centered. This stems from research by Jones (2016) on the effectiveness of using student voice in a service learning project and Dickson and colleagues (2016) on ways to make service learning culturally responsive. The key features to center student voice were: training students to lead the group, letting students suggest the ideas for the service learning project, and having students plan the service learning project in groups to incorporate teamwork and to be culturally responsive to the group of students. Another key feature for the second research question was giving students a chance to reflect on the project, which is tied to a growth in sense of belonging from a service learning project (Kaye & Connolly, 2017).

To answer the third research questions, which was outcome-related, I used a quasi-experimental design. The school’s master scheduler, an assistant principal, ran the students through the school’s scheduling program, InfiniteCampus, which randomly assigns students to classes based on the needs of their schedule. I was not directly involved in the randomization as that is done on InfiniteCampus. All freshmen had the same scheduling needs and there were no freshmen honors classes. In this way, I tried to get as close as possible to a randomized control trial. Once the students were put into class cohorts, I selected the cohort at random by numbering my classes one through four and using a random number generator to pick the cohort to receive the treatment. This was done in an attempt to randomize to the best of my abilities. The third research question was answered strictly quantitatively through the Psychological Sense of School Membership (PSSM) survey, while the fourth research question was answered qualitatively through the focus groups.
Methods

Participants

The participants in this study included the 2018-2019 incoming freshmen class of Thurgood Marshall High School. Specific data as to the size and composition of each class is not available, but school-wide data can be used to approximate the population for this study. In the 2018-2019 school year Thurgood Marshall High School had 800-1000 students (a range is given to protect the anonymity of the school), which allows an estimation of approximately 250 to 300 freshmen for the 2018-2019 school year (Baltimore City Public Schools, 2019). All freshmen were placed into either the treatment or control group based on the scheduling system the school used. The scheduler at Thurgood Marshall entered the standard required freshmen classes and then the system, InfiniteCampus, placed them into cohorts. Large portions of those cohorts took all of their classes together. Since all freshmen needed the same classes, there were no honors freshmen courses, and that was the only information inputted into the scheduling system, those cohorts can be assumed to be consistent in distribution of demographic factors. The treatment group was a freshmen cohort that I taught during the first semester of the school year. About half of the freshmen take US History in the second semester, but for the purpose of this intervention I needed to work with students who took US History first semester. I numbered the four cohorts I taught during the first semester one through four and ran a random number generator to randomly pick a number one through four to determine which cohort would be the treatment.

The treatment class had 31 students in it. Of the 31 students in that class, 28 of them were true freshmen so they are the group that will be evaluated for the purpose of this study. Therefore the treatment group was 28 students. For the group of 28 true freshmen, 11 were female and 17 were male; 27 were African-American and one was Hispanic/Latino; and nine of the students
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qualified as students with disabilities (SWD). None of them were English Language Learner (ELL) students. Information such as Free and Reduced Priced Meals (FARMs) percentage, a measure of poverty, was not available to me as it is not collected on a class-to-class basis and is protected information. There were 234 other true freshmen at Thurgood Marshall that year. Within that group, 130 were male and 104 were female; 228 were African-American, five were Hispanic/Latino, and one was White. I did not have access to school-wide SWD figures, as that information is protected and available only to the teachers who teach those specific students.

Three students in the freshmen class were ELL students. Information on FARMs percentage was not available as it was not collected on a grade-by-grade level. Based on what I knew about the InfiniteCampus scheduling system and the way scheduling was done at Thurgood Marshall as described above, I was able to assume that the freshmen class’s demographics in terms of FARMs and SWD were similar to the rest of the school and that the treatment group’s was similar to the rest of the freshmen class’s.

Measures

The measures for this study will be organized by research question in order to describe the specific ways I evaluated every element of the study.

Fidelity measures.

Presence of service learning in curriculum. The first measure for this research question was whether or not the curriculum integrated service learning. The US History Curriculum is listed in Appendix B and the Biology Curriculum is listed in Appendix C.

Attendance. The second measure for this research question was whether or not students attended class at an acceptable level.
Completion of the service learning project. The third measure is whether or not the project was completed.

Attendance at peer leader training. Attendance at peer leader training will allow me to determine whether or not the students had the opportunity to learn to be peer leaders. To do this, I measured the presence of students at peer leader trainings that occurred during the students’ lunches. This is purely quantitative as it is an attendance figure, but explanations for student attendance are added as a qualitative explainer.

Participation. To further measure student involvement, I observed the class’ participation and took field notes about it, focusing specifically on how students suggested the ideas for the service learning project and carried out the project. I used my notes and a three-point scale of participation (3 - participating fully, 2 – participating readily, with some distraction, or 1 - not participating at all) to evaluate student participation on those days. My notes were purely qualitative, but the three-point scale was a quantitative measure. I evaluated the class suggestions and the way they were generated in class (whether or not they came from students) and the way the final decision was made using my notebook as well, to determine whether the student leaders and I influenced the decision the class made. These served as qualitative measures.

Reflection present in lesson plans. To determine whether students had a chance to reflect I examined lesson plans from the days following the planning and the service learning project. This allowed me to evaluate whether there was reflection integrated into the curriculum during all parts of the service learning project.

Outcome measures.

Sense of belonging. To measure whether sense of belonging improved for the two groups, I used the Psychological Sense of School Membership (PSSM) survey. This was the sole
measure of this research question and is a fully quantitative measure. The survey has 18 statements and has been validated by Goodenow (1993) in her work on student sense of belonging. The survey is included in Appendix D. Goodenow (1993) conducted three separate studies in different communities in the Northeastern United States: a suburban school, an urban school with similar numbers of White, Black, and Hispanic students, and the same suburban school a year later (Goodenow, 1993, p. 82). To establish construct validity, Goodenow (1993) operated under the following four assumptions: (1) suburban students would have a higher PSSM score than urban students due to the small, homogeneous nature of their communities; (2) within the suburban students, living in the town longer would be correlated with higher PSSM scores; (3) students who were ethnic minorities compared to their school setting, students who were in special education, and boys would exhibit lower scores on the PSSM; and (4) students rated higher in social standing by their teachers would score higher on the PSSM than those rated in low social standing by their teachers (Goodenow, 1993). The first assumption was, with the suburban students scoring an average of 3.86 on the PSSM and urban students scoring an average of 3.10, \( t(753) = 20.0, p<.001 \). The second assumption was also true, as students who were in the town longer scored high than newcomers \( (F=7.16, p<.01) \) (Goodenow, 1993). The third assumption was true, but only due to the differences in scores between boys and girls (Goodenow, 1993). A three-way ANOVA found a significant effect \( (F=5.41, p<.001) \) that was due largely to the sex differences \( (F=12.17, p<.001) \) between the groups (Goodnow, 1993). Finally, the fourth assumption was true as well, as students who were rated with a high, medium, or low social standing among their peers scored an average of 4.23, 3.87, and 3.32 on the PSSM respectively (Goodenow, 1993). Overall, the study was reliable for both suburban and urban students and in multiple languages (Goodenow, 1993).
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About one-third of the items are written in a negative phrasing in order to avoid the development of what she calls a “response set” for students, where they select the same answer for the whole survey (Goodenow, 1993, p. 82). The survey uses a five-point Likert scale with scores ranging from “not true at all” (1) to “completely true” (5) in regards to the statements on the survey. The researcher started with 28 statements and ran three sample studies, eliminating the 10 statements that lacked internal consistency within schools and low variability between schools (Goodenow, 1993).

**Elements of service learning perceived as effective.** To evaluate this research question I used small focus groups. One focus group included students who participated in the service learning project, while the other was made up of students who were in the control group. The focus groups were conducted by my advisor to ensure that I did not influence student responses as their teacher, which was a requirement of the BCPSS IRB. The focus group sample questions, which can be found in Appendix E, focused largely on students’ feelings about school and for the treatment group, the service learning project as well. These focus groups lasted between 10-15 minutes.

**Procedures**

The section that follows details the procedures for data collection and data analysis. They are organized by research question.

**Data collection.** The way data was collected varied for the different features of the research questions depending on whether they were quantitative or qualitative. For some parts of the study, data was collected by me in the classroom using school protocols such as attendance. For other research questions, I needed to take notes on what occurred during the class, obtain data from the school, or have students participate in a focus group.
**Fidelity measures.** Presence of service learning in curriculum. The first feature in this research question is the presence of service learning within the curriculum. I asked for and received the syllabus from the Biology teacher and provided my own syllabus for this analysis.

Attendance. I accessed the school’s attendance system, InfiniteCampus, for the days that the class worked on the service learning project.

Completion of service learning project. The data for this was collected by observing whether the service learning project occurred throughout the school as described in the measures section.

To determine whether best practices were used, I had to collect data on three elements of best practices: whether students were trained to lead the group, the degree to which suggestions and planning came from students, and whether students had a chance to reflect.

Attendance at peer leader training. To determine the degree to which students were trained to lead the group I took attendance on the days the students who volunteered to be peer leaders were scheduled to be trained during their lunches. I took attendance using Google Forms each training day. I collected some additional data to determine the reasons students may have missed a peer leader training as a qualitative element. For this part, I asked the students and noted in my notebook the reasons students missed training sessions.

Participation. I observed the class working on the service learning project and took field notes to determine the extent to which suggestions, planning, and ideas on the execution of the project came from students. Using classroom observation, I scored each student’s participation on these days on a three-point scale and collected that data by looking back at my notebook from this time period. This allowed me to determine how many students had meaningful input.
Reflection present in lesson plans. I consulted my own lesson plans by looking back in my planning documents and assessing them to determine if students had a chance to reflect.

Outcome measures. Sense of belonging. I collected this data by accessing the PSSM surveys that English teachers gave to their students. This was done at the request of school administration, who granted me permission to look at and analyze this data. English teachers read a script, gave the survey to their class over a number of days to ensure maximum participation despite the attendance problems Thurgood Marshall experienced and brought the surveys to me to be analyzed. That script is listed in Appendix F. This happened twice during the school year, once in September and once in May. The surveys were delivered to me in a sealed envelope and I entered the scores into an excel spreadsheet on my computer. I divided students into either the treatment or control group and assigned each student a number so their scores remained anonymous on the document. I also kept my computer locked with a password.

Elements of service learning perceived as effective. The data from the focus groups was collected by my advisor running the focus groups and recording the conversation using the application RecorderHQ. The phone is locked at all times except when in use by me. There were two separate focus groups, one for the treatment and one for the control. My advisor ran both of these focus groups on two different days.

Data analysis. Data was analyzed differently for each of the types of data collected for each research question. Some parts of analysis, like student attendance and the three-point scale, are repeated across multiple research questions. When a type of data is repeated across two research questions I will not restate how it was analyzed; rather I will refer the reader to the prior question.
**Fidelity measures.** Presence of service learning in curriculum. I analyzed the curriculum by looking at whether or not a discussion on Baltimore’s problems and solutions, as well as the presence or absence of a discussion of what service learning is, existed in the curriculum. This allowed me to determine if the service learning project was actually integrated into the curriculum in the way it was supposed to be.

**Attendance.** I analyzed student attendance by measuring the percentage of the 28 students who attended class on service learning days and compared the attendance figures across the days the class worked on the service learning project to the school’s attendance as a whole. An acceptable level is defined as at or above the school’s average attendance for that school year.

**Completion of service learning project.** The presence of a completed project at the end of the year will indicate that students did in fact complete a service learning project. I also noted whether or not the students actually did their service learning project they had brainstormed either in the school or community based on the problem they chose at the beginning of the year or not through observation.

**Attendance at peer leader training.** To determine whether students were present during training to lead the group, I calculated the percentage of the four student leaders who attended each training day. I compared the students to each other and then to the group as a whole. I was able to determine whether there was any specific reason a student missed by asking the students who attended and then asking the student the next time I saw him or her and I noted these answers in my field notes for a qualitative explanation. In order to reach fidelity on this measure, peer leaders needed to attend training 75% of the time.

**Participation.** I used field notes and coding to determine student participation on days we worked on the project in class. I took notes on what students did, how they interacted, what their
suggestions were, and their score on the three-point scale. Using the three-point scale, I compared the number of each score (1, 2, or 3) each day and the class’s average score on each day. This allowed me to determine how engaged the class was on average and how engaged most students in the class were in the suggesting and planning of the service learning project. For student participation to reach fidelity, the class needed to average at least a two on the three-point scale for participation.

*Reflection present in lesson plans.* To analyze whether students had a chance to reflect on what they were doing, I analyzed the presence or absence of reflection in my lesson plans for the days following service learning days. If reflection was present in the lesson plans I noted “yes reflection was present,” and if it was not I noted “no reflection was not present.” To reach fidelity, lesson plans needed to include reflection 75% of the time.

*Outcome measures. Sense of belonging.* For this measure, I analyzed the PSSM. I conducted a repeated measures t-test using SPSS to compare the fall and spring scores on this survey. These were used both as whole group measures (the entire freshmen class, the service learning cohort, and the non service learning cohort) and individual measures via a paired-sample t-test. The mean answers for each question were also compared across the whole group, noting specific questions with a higher or lower average answer than the others or with a higher or lower difference between the first survey and the last one. Standard deviations for those answers were also analyzed in order to estimate effect size using the formula ES = T1-Tc/SD. I also compared the means of the differences between the different fall and spring surveys using an independent samples t-test.

*Elements of service learning perceived as effective.* Focus groups were recorded and coded using multiple methods of coding. I used selective coding to provide a quantitative
number of students who said something specific in response to a closed-ended question. I used open coding since student responses were hard to anticipate for the questions in the focus group. Finally, axial coding allowed to attribute student answers to specific results found on the PSSM. First, I listened to the focus groups that were recorded using RecorderHQ. I then coded these recordings using the methods described in table two, below. Additionally, I included qualitative analysis using quotes and anecdotal evidence from these focus groups to triangulate points and ideas found quantitatively in other elements of the study. Student quotes from the focus groups serve to highlight elements of the other measures and lend potential rationale to other results.

The table below shows the different methods of coding for the focus groups.

Table 3
Types of Coding

<table>
<thead>
<tr>
<th>Type of Coding</th>
<th>Qualitative or Quantitative?</th>
<th>How Was it Analyzed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selective Coding</td>
<td>Quantitative</td>
<td>Looking at the total number of students who replied with a specific response within the treatment and control groups.</td>
</tr>
<tr>
<td>Open Coding</td>
<td>Qualitative</td>
<td>Identifying specific quotes that highlight student feelings on broader school issues.</td>
</tr>
<tr>
<td>Axial Coding</td>
<td>Qualitative</td>
<td>Identifying specific quotes that explain results on the PSSM or other measures.</td>
</tr>
</tbody>
</table>

Summary matrix.

Table 4
Summary Matrix for the Study

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Measures</th>
<th>Operationalization</th>
<th>Collection</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the service learning program occur as planned at Thurgood Marshall High School?</td>
<td>Presence of service learning, student and discussion Baltimore’s</td>
<td>Was there an inclusion of service learning and a discussion of problems facing Baltimore and solutions in the curriculum?</td>
<td>Curriculum review obtained from teachers, attendance taken by school’s system, and</td>
<td>Presence of service learning as part of the curriculum – yes or no.</td>
</tr>
<tr>
<td>Question</td>
<td>Data Collection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What percentage of students were present during service learning class days? Did the service learning project happen?</td>
<td>Observation of a completed service learning project. Percentage of students present at all stages of service learning.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of a completed service learning project.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the service learning program utilize best practices?</td>
<td>Did students attend the training sessions to become peer leaders and what were they taught at those training sessions? Did students make suggestions for the service learning projects and what percentage of students actively participated in the conversation? Did students make the presentations and final decisions on which service learning project they would do and what percentage of students actively participated in that conversation?</td>
<td>Did students attend the training sessions to become peer leaders and what were they taught at those training sessions?</td>
<td>Did students make suggestions for the service learning projects and what percentage of students actively participated in the conversation?</td>
<td>Did students make the presentations and final decisions on which service learning project they would do and what percentage of students actively participated in that conversation?</td>
</tr>
<tr>
<td>Did sense of belonging for freshmen participating in service learning at Did sense of belonging for this cohort of freshmen at Thurgood Marshall improve over the course of this</td>
<td>Pre-test average of freshmen students on whole survey and specific questions, sub-grouped by cohort. Pre-test average of freshmen on whole PSSM pre-test and post-test.</td>
<td>Survey given in classes twice a year on paper form, turned in to me by teacher. Paired-sample t-tests between the pre-test and post-test.</td>
<td>Pre-test average of freshmen students on whole survey and specific questions, sub-grouped by cohort. Pre-test average of freshmen on whole PSSM pre-test and post-test.</td>
<td>Survey given in classes twice a year on paper form, turned in to me by teacher. Paired-sample t-tests between the pre-test and post-test.</td>
</tr>
<tr>
<td>Question</td>
<td>Methodology</td>
<td>Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What elements of the service learning program did students perceive as having impacted school sense of belonging among freshmen at Thurgood Marshall High School?</td>
<td>Focus groups with freshmen. Coded responses measured by frequency of responses with anecdotal quotes about specific topics as well.</td>
<td>Responses coded by me, amount of times responses come up compared and quotes from students considered.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention relative to their peers who did not participate in the intervention?</td>
<td>Post-test average of freshmen students on whole survey and specific questions, sub-grouped by cohort.</td>
<td>Post-test average of freshmen on whole survey and specific questions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Survey and specific questions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chapter Five – Description of Intervention and Results

The intervention described in the previous chapters was implemented at Thurgood Marshall High School during the 2018-2019 school year. The goal of the intervention was to improve student sense of belonging through a service learning program. I evaluated that intervention to determine the impact of a student-led service learning project on student sense of belonging for one freshmen cohort relative to the other freshmen at the school.

**Implementation**

The intervention began as planned by reviewing the Biology curriculum with a freshmen science teacher at Thurgood Marshall High School in order to ensure that the elements of the service learning project were embedded in both US History and Biology classes. We devised our curricula so our two courses would incorporate service learning into the regularly scheduled class time. I had anticipated the classes being cohorted, so the same students would travel together all day and thus have Biology and US History together. However, this was not the case, as my students had US History with me but were divided and mixed among Biology classes. This meant that the intervention had to be revised to take place only in the US History class so as to avoid mixing the treatment and control groups.

At the beginning of the school year, students took the PSSM in their English classes to collect baseline data during the planned week of September 17th. Additionally, I introduced the service learning project to the randomly selected class of my US History students that same week as per the original intervention plan. Before brainstorming specific service learning options, I trained peer leaders to mediate the group’s brainstorming for a project and discussions as well as lead the implementation later on. Since attendance was low at the peer leader training sessions, I had to alter the way the intervention worked in class. I was required to mediate the conversations
in class much more than I initially anticipated due to the students not being adequately prepared to do so. Table 5 below details the plan for each peer leader training day and what actually occurred on those days.

Table 5
Proposed and Actual Training Activities for Peer Leaders

<table>
<thead>
<tr>
<th>Training Day</th>
<th>Proposed Training</th>
<th>Description of What Occurred</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 18th</td>
<td>• “What is a peer leader?” self-identification activity. (30 minutes)</td>
<td>• The initial training day went as planned.</td>
</tr>
<tr>
<td></td>
<td>o Students visually represent what a peer leader is through a drawing and discuss important attributes of being a peer leader.</td>
<td></td>
</tr>
<tr>
<td>September 20th</td>
<td>• “Red, Yellow, Green” activity. (30 minutes)</td>
<td>• Only one student came this day, so the student and I discussed what he thought the challenges would be in being a peer leader for 10 minutes.</td>
</tr>
<tr>
<td></td>
<td>o This activity is meant to teach students how to keep conversations going by asking good questions. Students see three levels of questions for keeping conversations between groups going (red – bad, yellow – okay, green – great) and model them.</td>
<td>We then discussed how he could encourage his fellow peer leaders (two of whom were friends of his outside of school) to attend training sessions going forward for five minutes.</td>
</tr>
<tr>
<td>September 25th</td>
<td>• Resolving conflict activity. (30 minutes)</td>
<td>• As a group we did the “Red, Yellow, Green” activity and looked at some of the cards from the board game without actually playing it to discuss ways to alleviate conflict.</td>
</tr>
<tr>
<td></td>
<td>o Designed like a board game, students go through potential conflicts in group settings and try out ways to alleviate them. The students then get to see the results of their choice.</td>
<td>This lasted the whole 30 minutes.</td>
</tr>
</tbody>
</table>
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September 27th

- “Am I Ready?” activity and closing questions. (30 minutes)
  - Students participate in the “Am I Ready?” activity, which evaluates what students learned. They then get to ask any final questions or discuss concerns with their fellow leaders.

- The final training day went as planned, despite only having two students present.

The brainstorming and researching part of the service learning project selection was planned for the week of October 1st. I led a student brainstorming session on broader problems in Baltimore that led to students suggesting crime, violence, litter, and education as potential focus issues. Students then self-divided into groups based on these suggestions and came up with a service learning proposal for the class. The original plan was for this to take a day and a half, but it ended up taking two full days of class time. I walked around the class to help students who were struggling with the assignment, as in another deviation from the plan the peer leaders had decided they wanted to work on a potential service learning project instead of leading the group.

The first two days of planning, October 1st and 2nd, were instructive in seeing how large a role different students played in working on their group’s ideas for a service learning project. Since students grouped themselves based on the issue they wished to focus upon, they were all fairly engaged in the discussion. Of the 20 students in class on October 1st, five were in the group that identified crime as their biggest issue, eight were in the violence group, one student considered litter the biggest issue and the remaining six students were researching education as their biggest issue. The following day when students were finalizing their ideas and proposing them to the class for a vote, the crime and violence groups merged and added one of the students who had been absent the day before, giving them fourteen students. The other student who had
been out the day before joined the litter group, giving them two people and the remaining six students focused on education.

Eventually, students selected the proposal from the crime/violence group through a class-wide vote. The proposal the students chose was to have a school-wide kick-off day for Baltimore Ceasefire, a local organization that provides programming four weekends a year in hope of breaking the cycle of murders in Baltimore. The students’ plan was to host a school-wide Ceasefire day on the Friday of the city-wide Ceasefire on February 1st. This would include having t-shirts made and selling them to raise money for the organization, bringing in guest speakers, and allowing students in classes to “sign the pledge,” a strategy Baltimore Ceasefire uses that includes a promise to “not be numb” or use violence during that weekend. The original plan was for the service learning project to be ongoing for the full year, but the dates of the Ceasefire weekends did not align with that goal. Table 6 below describes the class activities every day of the service learning project. Every day at the end of class I collected the students’ plans and gave them a grade then returned the plans the next day the class worked on the project.

Table 6
Activities on Each Service Learning Day

<table>
<thead>
<tr>
<th>Date</th>
<th>Service Learning Project Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 1st</td>
<td>Students were introduced to the service learning project and asked to pick a problem in Baltimore.</td>
</tr>
<tr>
<td></td>
<td>Students grouped themselves and used computers to conduct research.</td>
</tr>
<tr>
<td>October 2nd</td>
<td>Students continued their research and finalized their presentation to the class on why their service learning project should be the one the class does. Students presented their ideas to the class and the class voted.</td>
</tr>
<tr>
<td>October 24th</td>
<td>Students decided on the three elements to the service learning project described above and broke into groups began to plan their sections of the project.</td>
</tr>
</tbody>
</table>
November 13th
The group focused on selling shirts did a rough sketch of the shirts and started searching online vendors, the speaker group began researching speakers, and the “sign the pledge” group researched Ceasefire’s site to determine what specific elements of the pledge they wanted up in the school.

December 11th
The group focused on selling shirts finalized their design, the speaker group reached out to three potential speakers, and the “sign the pledge” group began drafting the school-specific version of the “pledge.”

January 8th
The selling shirts group found a vendor and ordered the shirts, the speaker group confirmed an alumnus of the school who had been shot and was now active in the community as the speaker, and the “pledge” group began making posters to go up throughout the school.

January 22nd
The selling shirts group made plans for who would be present to sell shirts at what time, the speaker group called the alumnus and spoke to the assistant principal about where the speaker would be, and the “pledge” group continued making their posters.

January 24th
The shirt selling group went into different classes to let them know the different elements of the service learning project that would be happening on February 1st, the speaker group made a sign-up sheet for teachers to bring their classes to the speaker and posted it in the teachers’ lounges throughout the school, and the “pledge” group remained in class making posters and called Ceasefire to get the signs they have delivered to the school.

Students worked on this project once every three weeks. The initial planning and coming up with these three elements of the service learning plan (shirts, guest speaker, and signing the pledge) was done by student suggestion and vote. I moderated that conversation in class due to the peer leaders not wanting to and missing trainings, which was a deviation from the plan. Once students decided on these three ideas, they worked in groups without teacher guidance. I assigned one leader per group, which was not necessarily a student that volunteered to be a peer leader, to ensure groups stayed on task. The students successfully sold shirts and fundraised for Ceasefire, eventually donating the $315 made from the shirts to the organization. Speakers from
the organization and community came and spoke to a few classes and the signs around the school for students to “sign the pledge” were signed by between 60-80 students total.

The PSSM was given again in May in students’ English classes as planned. Unfortunately, only 61 students completed the PSSM at both the beginning and end of the year. This may be due to students transferring schools, attendance dropping significantly at the end of the year, or teachers not committing as thoroughly to school-wide initiatives towards the end of the school year. Biology teachers were recruited to read scripts and hand out permission forms for the focus group. My original plan was to have eight to ten students in two different focus groups. One focus group would be for the treatment group and the other for the control. These focus groups were to be moderated by me. The focus groups were considerably smaller since fewer students turned in their permission forms. The treatment focus group had three students and the control had six. Focus groups were recorded and coded.

Findings

Fidelity Measures

Below are the answers to the two specific fidelity research questions.

Did the service learning program occur as planned at Thurgood Marshall High School? The initial measure of the first research question was the presence of service learning curriculum. This required me to analyze the curriculum that I created prior to the school year by looking at the syllabus. Service learning was integrated into the curriculum meaningfully, meaning that there were service learning connections to content throughout the US History course. Had the service learning project occurred independently at the beginning of the year or been unrelated to the general themes of the curriculum, this would not have been full integration.
Since those are evident in looking at the syllabus for the US History course, this element of the first research question was done with fidelity.

Attendance is a prerequisite for students to participate in the service learning project. Since average student attendance on the service learning days was 66.95% and the average attendance for Thurgood Marshall High School for the school year was 58.90%, fidelity was reached on student attendance on the service learning days. Figure 9 shows attendance on the service learning days.

![Figure 9](image-url)

Figure 9. Attendance of the 28 freshmen students on service learning days. This figure shows attendance of the 28 students in the treatment group as a percentage.

The final measure of this research question was whether or not a service learning project occurred. The project did occur, as evidenced in the implementation section above. The program occurred in the school and was based on the problem (crime and violence) the students chose at the beginning of the year. I noted my observations from the day of the service learning project's implementation in my field notes. Students sold shirts to raise money for Ceasefire, hung signs around the building, and had speakers come in.
**Did the service learning program utilize best practices?** In order to determine whether the service learning program utilized best practices, I needed to examine whether or not the students led the class and the degree to which students participated in the project in order to determine if student voice was centered. Additionally, I needed to determine if opportunities for reflection were given.

The first way I centered student voice was through the peer leader training. Over the four peer leader training sessions student attendance was largely inconsistent. Peer leader one (PL1) attended all four of the sessions, peer leader two (PL2) attended three of the four sessions, peer leader three (PL3) attended one of the four sessions, and peer leader four (PL4) transferred shortly after volunteering to be a peer leader. The four training days were September 18th, 20th, 25th, and 27th during students’ lunch periods. Students attended an average of 62.5% of the training days. This data makes clear that students were not trained effectively to lead the group because they did not attend sufficient training days. The specific information on the percentage of attendance on each of the training days can be found in Figure 10 below.

![Figure 10. Percentage of attendance of peer leaders on training days. This figure shows the attendance of the peer leaders on the training days.](image-url)
The second way I centered student voice was by ensuring the suggestions for the project came from students. My observation notes indicate that all suggestions for service learning projects were made by the students. Every three weeks throughout the semester, the students planned for their service learning project. I collected data for student participation on service learning days through a coding notebook for qualitative data and quantitatively by assigning each student present a number between one and three to mark the quality of their participation. On each day that the treatment group worked on service learning, I gave each student a quantitative participation figure between one and three, with one indicating that they were barely participating or not participating at all, two indicating they were participating readily but were sometimes distracted, and three indicating they were participating the entire class period. Figure 11 below shows the average participation score, while Figure 12 below shows the breakdown of the numbers for each day. Generally, on all service learning days, the average student was engaged at least at the level of “participating readily but with some distraction.” On all service learning days, more students were participating the entire class period than were barely participating at all. The benchmark for fidelity was an average of a 2.0 on the three-point scale for the class on the service learning days. The average student score for every individual day was over 2.0 and the majority of students scored a two on the scale for service learning days. This, combined with student attendance, indicates fidelity on the student participation element of the service learning project.
The last feature of a service learning program that follows best practices is to give students the opportunity to reflect on the work they are doing. In order to determine if students had a chance to do that, I examined the lesson plans for the days of and immediately following each of the service learning planning days. None of the lesson plans included a reflection on what students did for the service learning project. All of the lesson plans from the day following a service learning work day were standard US history lessons and did not reference service
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learning, while all of the lesson plans from service learning days dedicated all the time to student work and none to reflection. This falls below the fidelity benchmark of 75% of lessons gave the opportunity to reflect.

Overall, best practices were largely not followed, but students still participated readily and were engaged as evidenced by the three-point scale and attendance on service learning days. I did not include the chance to reflect in the service learning program largely because the students took the whole class period to complete the work they were doing for the project. Despite this, I still should have included it in the lesson plan and the class period, as it would have made the service learning project more aligned to best practices. Despite the lack of following best practices, the strong participation showed by the students could have led to increased sense of belonging.

Outcome Measures

In order to answer the research questions related to outcomes, I evaluated the student scores on the PSSM and convened two focus groups. The PSSM scores show growth in certain areas, despite being lower than expected. The focus groups allowed me to lend context to why PSSM results were low and evaluate what the students found were important to improving student sense of belonging.

Did sense of belonging for this cohort of freshmen at Thurgood Marshall improve over the course of this intervention relative to their peers who did not participate in the intervention? Table 7 below shows the mean scores on the fall and spring survey and standard deviations for the whole group, treatment group, and control group on the PSSM.
Table 7
Mean Score and Standard Deviation for Different Groups for Fall and Spring PSSM Surveys

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Fall</th>
<th>Mean Spring</th>
<th>Standard Deviation Fall</th>
<th>Standard Deviation Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Group</td>
<td>61.18</td>
<td>59.00</td>
<td>11.61</td>
<td>10.17</td>
</tr>
<tr>
<td>Control Group</td>
<td>61.85</td>
<td>59.56</td>
<td>11.68</td>
<td>10.20</td>
</tr>
<tr>
<td>Treatment Group</td>
<td>57.33</td>
<td>55.78</td>
<td>11.05</td>
<td>9.93</td>
</tr>
</tbody>
</table>

Among the 61 freshmen who completed both surveys, the mean score for the fall was 61.18 and the mean score for the spring was 59.00. The means had a negative difference of 2.18. The standard deviation for the whole group was 11.61 for fall and 10.17 for spring. This shows a vast difference in sense of belonging among the students. Students’ sense of belonging differed, as some student scored very high while others scored very low. There was a significant, positive correlation between the two variables, fall and spring for the whole group, \( r = .583, n = 61, p = .01 \).

Independent t-tests were also conducted to determine if there was a statistical difference between the pre-test and post-test survey results for the treatment or control groups. The small sample size limited a more in depth statistical analysis and also suggested the that the findings were not statistically significant. There was no significant difference between the groups on the pre-test, \( t(59) = 1.078, p > .285 \), or the post-test, \( t(59) = 1.030, p > .307 \). Therefore, I need to analyze the figures for each group separately and then compare the results of that analysis. This will allow me to determine the impact of the service learning project on PSSM scores on the treatment group compared to the control group.

For just the control group, \( n = 52 \), the fall mean score was 61.85 and the spring mean score was 59.56. The means had a negative difference of 2.29. The fall standard deviation was 11.68 with scores between 35 and 88 and the spring standard deviation was 10.20 with scores between
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41 and 86. This again indicates a wide range of answers across the group. There was a significant, positive correlation between the two variables, fall and spring for the control group, $r = .607$, $n = 52$, $p = .01$.

For the nine students completing both assessments, the mean of the fall survey was 57.33 and the mean of the spring survey was 55.78. The difference in the means was negative, at 1.55. This is a smaller drop than the control group. The standard deviations for the fall survey was 11.05 with scores from 38 to 78 and the standard deviation for the spring survey was 9.93 with scores from 43 to 72. This shows a wide difference in opinion in answers to the items, although a smaller difference than the control group. There was a positive correlation between the two variables, fall and spring for the treatment group, $r = .356$, $n = 9$, $p = .347$. The high p-value indicates no significance for this correlation, possibly due to the small sample size. While the mean differences between the two groups were both negative, meaning the scores went down between fall and spring, the treatment group had a smaller difference. The control group’s mean went down by 2.29 points on the PSSM while the treatment group’s mean went down by 1.55. This may indicate that the service learning project did something to stem the decrease in sense of belonging among freshmen.

Overall, it is clear that sense of belonging, as measured by the PSSM, did not meaningfully improve for the treatment relative to the control group. While it did drop by a smaller amount for the treatment than the control group, sense of belonging did not actually improve at all for any of the groups measured (whole group, treatment group, or control group). Figure 13 below shows the fall and spring means for the control and treatment groups.
The PSSM results indicate that there was no statistically significant impact of the service learning project, although a number of mitigating factors are discussed in the discussion section below.

What elements of the service learning program did students perceive as having impacted school sense of belonging among freshmen at Thurgood Marshall High School?

Per BCPSS IRB requirements, my advisor conducted the focus groups after school for around fifteen minutes each. The treatment focus group met May 21st and had three students until one student left while the control focus group had six students and met on May 23rd. I analyzed the data from the focus groups both quantitatively and qualitatively. First, I looked at the frequency of certain phrases across the two focus groups (treatment and control). I noted specific things the students said to use qualitatively in the conclusion section of this study. Table 8 below shows the frequency of certain responses for the treatment group, and Table 9 shows the frequency of certain responses for the control group. The questions are paraphrased from the recorded focus groups and broader responses are recorded with examples of specifics in bullet points below.
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Table 8
Focus Group Results for the Treatment Group

<table>
<thead>
<tr>
<th>Question</th>
<th>Response 1</th>
<th>Response 2</th>
<th>Response 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you feel like you belong at TMHS?</td>
<td>Feel comfortable (3/3)</td>
<td>No and cited other schools they should have gone to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Live nearby (2/3)</td>
<td>(2/3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Activities (2/3)</td>
<td>• Other students as a negative (2/3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Knew current students (1/3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What could the school do to make you feel like you belong more?</td>
<td>More activities for students (3/3)</td>
<td>Cleanliness (2/3)</td>
<td>Better food (2/3)</td>
</tr>
<tr>
<td></td>
<td>• Sports (2/3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Vocational programs (3/3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What was the impact of the service learning on belonging?</td>
<td>Positive feelings about the school (3/3)</td>
<td>Only some students like the service learning project (2/3)</td>
<td>No broader impact possible (2/3)</td>
</tr>
<tr>
<td></td>
<td>• Helping the community (2/3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Interesting pedagogy (2/3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is TMHS a place students like to be?</td>
<td>Some students (2/3)</td>
<td>No because it is dangerous (2/3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Some students like that they can get away with “being bad” (2/3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9
Focus Group Results for the Control Group

<table>
<thead>
<tr>
<th>Question</th>
<th>Response 1</th>
<th>Response 2</th>
<th>Response 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you feel like you belong at TMHS?</td>
<td>Feel Connected (4/6)</td>
<td>No and cited other schools they should have gone to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Extracurricular Activities (3)</td>
<td>(4/6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Friends (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Family (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What could the school do to make you feel like you belong more?</td>
<td>More events (4/6)</td>
<td>Basic supplies (4/6)</td>
<td>Better food (3/6)</td>
</tr>
<tr>
<td></td>
<td>• Field trips (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What made you feel more negative about the school?</td>
<td>Violent event (4/6)</td>
<td>Lack of basic supplies (3/6)</td>
<td>Other student behaviors (4/6)</td>
</tr>
<tr>
<td>Do the teachers help you feel like you belong?</td>
<td>Yes (5/6)</td>
<td>No (2/6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Can talk about non-school things (3/6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Encouraging (2/6)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Treatment group.** When asked if they felt like they belonged at Thurgood Marshall High School, two of the three students initially expressed mixed opinions because they had low perceptions of the school and thus felt they were “too smart” for TMHS. This came up later in the focus group as well. When asked what the school could do to make them feel like they belonged more at Thurgood Marshall all three students mentioned improving the cleanliness of the building, more incentives or activities for them, and having vocational education pathways. Two of the three students also stated that the other students taking school less seriously than they did made them feel like they did not belong at Thurgood Marshall. One student stated, “I’m not like them” when discussing his fellow students. They also stated that the school was dangerous and one student clearly stated, “I don’t feel safe here.”

When the question was rephrased to ask about comfort in the school, all three students responded affirmatively that they felt comfortable. When asked specifically why they felt comfortable, students gave a number of answers: living nearby, participating in activities, or the fundraising service learning project that took place earlier in the school year. When asked what about the service learning project made students feel like they belonged or made them more comfortable, one student replied that he “felt better [about the school] because we were finally doing something.” All three students agreed it made them feel good about the school because it would have a greater impact both inside and outside the school. The students mentioned the pedagogy of the service learning project as well. Two of the three students said that working in groups helped their sense of belonging and that is was “cool to do something different.” These same two students (the third student had left at this point) mentioned dissecting a frog in Biology as a similarly positive experience that helped improve their sense of belonging.
Finally, students were asked what could make other students feel like they belonged more at the school. The two remaining students again discussed issues related to access to trades and cleanliness and mentioned the need for better food and more teachers. The moderator asked about the service learning project here too and students suggested that while it made them feel a greater sense of belonging, other students did not like the project and thus it did not have the possibility to improve the sense of belonging at the school broadly.

**Control group.** When asked if they felt like they belonged at Thurgood Marshall, four of the six students said no and stated that they should have gone to other schools. When the moderator rephrased the question to ask if students felt connected to the school, four of the six students replied affirmatively, citing playing sports, having friends, and having family that were alumni of the school as reasons why. One of the students who said no explained that it was her first year, so she did not feel connected yet. After being asked if TMHS was a place students wanted or liked to be, students largely explained that it sometimes felt like that, depending on the behavior of other students.

When asked specifically what Thurgood Marshall could do to make students feel more connected or more like they belonged students cited the need for more events (such as field trips), better food, and basic things such as a fully stocked nurse’s office, adequate heat or air conditioning, and soap in the bathroom. To that last point, when one student elaborated that fixing the lack of basics would make it feel like the school “cares more about you,” three other students emphatically added their agreement. The students felt that extracurricular programming such as sports or mentoring groups increased their feelings of belonging, with three of the six students citing specific extracurricular activities in which they participated. Students highlighted a specific event during the school year as a reason they had negative opinions about the school.
To protect the school’s anonymity, I will generalize that the event was violent in nature and made national news. It is referred to in the findings from the focus group as “violent event.” Four of the six students explicitly stated that this event led to them having negative opinions about the school.

Overall, when students were asked about other elements of the school that might contribute positively to sense of belonging, five of the six students highlighted the teachers in the school as having an overall positive impact. Three students said “most teachers” allow students to talk about non-school issues and that the teachers offer guidance. Two students mentioned pedagogy or levels of the classes, stating that when classes are “less fun” or “harder,” it negatively impacted their sense of belonging. Three students also mentioned fighting as an issue that leads to them liking school less but they did not think there was anything the school could do about it.

**Summary of both groups.** Some responses were relatively similar between these two groups. For example, when asked if they belonged at Thurgood Marshall, two-thirds of both groups originally said they could have gone to other schools, highlighting the negative feelings many students in Baltimore have towards TMHS. When the moderator elaborated on this to ask if students “feel connected to” the school, two-thirds of each groups said they did feel connected. Students in both groups referenced activities and friends as the reasons why. When asked what could make students feel more connected to the school, both groups mentioned the need for better supplies, basic needs like food and cleanliness, and more special programming to engage students.

The groups also differed in some of their answers. The control group spoke extensively about the role teachers played in their sense of belonging in the school. Most of the students were
complimentary and felt that teachers helped them feel a sense of belonging. The treatment group did not even bring up teachers as a reason for feeling greater sense of belonging, instead discussing pedagogy in response to a question about the service learning project. Those students felt that doing something different kept them engaged and helped them feel a greater sense of belonging and that helping the community increased their sense of belonging as well. They did note that they did not believe it was generalizable to the whole school due to some students not enjoying the project. The students in the treatment group also noted the school being “dangerous” as a reason some they did not like it.

Discussion

For each of the two sections below, fidelity measures and outcome measures, I may omit some research questions because I am solely discussing broader impacts of these results. For the fidelity measures, I discussed the degree to which best practices occurred and the potential impact of that. For the outcome measures, I discussed specific takeaways from both the PSSM and the focus groups.

Fidelity Measures

The service learning program did not utilize all of the best practices for creating a service learning program for students in high school. Despite a lack of sufficient training for the peer leaders and reflection after service learning days, the program was student-centered and incorporated student voice. The project emphasized teamwork and group success throughout. Students had meaningful input over every step of the process of the service learning project. Their attendance and participation indicates that they had input and the treatment group’s focus group indicates that they enjoyed the service learning project. By making the project as student-centered as possible, even given the lack of adequate training for the peer leaders, I was able to
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increase the chances that students felt ownership over the process. Anecdotally, the students seemed to enjoy days we focused on the service learning project and would often ask when we would be working on it next.

Student-specific performance during the service learning project also shows the potential impact of best practices being used. Students were evaluated on how they participated on service learning project days and for each day that the class participated in the service learning project, the average score was above a two or “participating readily with some distraction.” This matches the student reports during the focus groups, which indicated that the treatment group found the pedagogy and working in groups that occurred during the service learning project to be interesting. Students even hypothesized that participating in that way and doing classwork using this method of instruction positively impacted their sense of belonging. One of the negatives the students pointed out during the treatment focus group was that “it seems like the school doesn’t trusts us,” so trusting them to work independently during the service learning project may have countered this issue. Additionally, doing the project so early may have impacted their PSSM results, which I will discuss below.

Allowing students a chance to reflect over the process, which I did not do at all, may have allowed students to realize that what they were doing was important and actually improve their sense of belonging as a result. By not giving students the chance to reflect consistently during this process, students did not get the chance to analyze their impact or think about what they were doing for others. It is possible that by reflecting on the good they were doing by supporting an organization with proven results like Ceasefire (Phalen, Bridgefod, Gant, Kivisto, Ray, & Fitzgerald, 2020), they would internalize their positive work and feel a greater sense of belonging to their school and community.
Outcome Measures

The changes to the PSSM score were slightly negative and were not statistically significant. Despite this, information from the specific items on the PSSM and the student focus groups provides both context to why it had negative results and potential next steps to continue to improve student sense of belonging.

In looking at the data between the two cohorts, there was no meaningful change of sense of belonging from the fall PSSM to the spring PSSM. As a group, the control group scored about two points lower on their spring PSSM score than on the fall PSSM score. This was an unexpected outcome, as one could expect that by being in school for longer the spring PSSM score would be higher than the fall one. The treatment group also had their PSSM score go down over the course of the year, by about one and a half points. The control group’s results were significant but the treatment group’s were not, perhaps due to the small sample size, so the results of this study can be interpreted as inconclusive. Even given this information, the drop in PSSM scores over the course of the year was smaller for the treatment than for the control group, potentially indicating a slight success of the project. Other research indicates that for urban students, PSSM scores average 55.8 and do not change over the course of the school year (Fiala, 2017; Goodenow, 1992). Both groups PSSM scores were higher than that in both fall and spring and the results were basically neutral. Therefore, the results of this study should have been expected since they are in line with previous research. The goal of the intervention was to improve sense of belonging for the treatment group, but this previous research indicates that goal may have been more difficult to achieve than initially expected.

Looking at specific PSSM items may lead to a deeper analysis of why students felt the way they did about sense of belonging at Thurgood Marshall High School. Table 10 below
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shows the results on six specific items that had substantially higher (above 4.0) or lower (below 2.5) scores on the spring survey for the whole group. Specific items on the survey had much higher or lower scores than others and are worth examining individually, as they may show specific elements of the school that impacted student sense of belonging. Therefore, isolating these items and comparing them to scores for just the treatment group or just the control group is important in discussing root causes of low sense of belonging at Thurgood Marshall. For the whole group, items 10, 16, and 17 had a substantially lower spring score than the rest while items three and nine had a substantially higher spring score.

Table 10
Questions with Notable Spring Scores for the Whole Group

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Question Phrasing</th>
<th>Spring Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>People at my school notice when I’m good at something.</td>
<td>4.11</td>
</tr>
<tr>
<td>9</td>
<td>Teachers here are not interested in people like me (scored reciprocally).</td>
<td>4.20</td>
</tr>
<tr>
<td>10</td>
<td>I am included in a lot of activities at my school.</td>
<td>2.46</td>
</tr>
<tr>
<td>16</td>
<td>I wish I were in a different school (scored reciprocally).</td>
<td>2.48</td>
</tr>
<tr>
<td>17</td>
<td>I feel proud to belong to my school.</td>
<td>2.46</td>
</tr>
</tbody>
</table>

Figure 14 below shows the difference between the means for the whole group for each question. A negative difference indicates the spring was lower than the fall. The x-axis represents each item on the survey.

Figure 14. The difference in means between fall and spring for each item on the PSSM. This figure shows the difference in the mean, where negative numbers indicate a lower score on the spring than the fall.
Only two items (eight and 15) went up by at least .4 points, an overly high figure compared to the other items, among the whole freshmen class. Item eight says “people at my school are friendly to me” and item 15 says “people at my school know that I can do good work.” Conversely, five items went down by at least that same amount: items five, 11, 14, 16, and 17. Item five states “most teachers at my school are interested in me.” Items 11 and 14 state “I am treated with as much respect as the other students in my school” and “teachers at my school respect me.” Item 16 stated “I wish I were in a different school” and is scored reciprocally, while item 17 reads “I feel proud to belong to my school.”

For the control group items 10 and 17 were significantly lower (below 2.5) than the rest and items three, nine, and 15 had higher spring figures than the rest (above 4.0). There is overlap here between the items the control group had especially higher or lower answers on and those items where the whole group answers were especially higher or lower, probably due to the control size of 52 being such a large proportion of the 61 total respondents. Table 11 below shows the responses and their spring scores for the control group.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item Phrasing</th>
<th>Spring Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>It is hard for people like me to be accepted at my school (scored reciprocally).</td>
<td>4.10</td>
</tr>
<tr>
<td>9</td>
<td>Teachers here are not interested in people like me (scored reciprocally).</td>
<td>4.23</td>
</tr>
<tr>
<td>10</td>
<td>I am included in a lot of activities at my school.</td>
<td>2.44</td>
</tr>
<tr>
<td>15</td>
<td>People at my school know that I can do good work.</td>
<td>4.00</td>
</tr>
<tr>
<td>17</td>
<td>I feel proud to belong to my school.</td>
<td>2.50</td>
</tr>
</tbody>
</table>

For the control group items 11, 14, 16, and 17 had the largest negative change between the fall and spring PSSM administration. Items 11 and 14 are generally about the way students
are treated and respect given by teachers or administration in the school. Item 11 states “I am treated with as much respect as other students in my school” while item 14 says “teachers at my school respect me.” While item 11 does not directly reference teachers, a student can easily read this as teachers treating students fairly. This indicates a larger problem of mutual respect between staff and students in the school and the way students perceive how teachers feel about them in school. Both focus groups indicated that they thought teachers at the school offered support and helped to improve belonging but these figures were not reflected on the survey. A selection bias may be present here, as the students who were more likely to listen to their teachers and turn in the paperwork necessary to participate in the focus groups are more likely to like their teachers.

Items 16 and 17 are specifically about broader feelings on the school. Item 16 states “I wish I were in a different school” and is coded in reverse as per the directions of the PSSM (a score of five is coded as a one because it is phrased negatively) and item 17 states “I feel proud to belong to my school.” These items do indicate that a lack of pride in their school is a problem at TMHS and may be something worth focusing on in the future. Thurgood Marshall experienced two national news stories related to violence in the school during the 2018-2019 school year that may have impacted the PSSM scores, specifically the pride students felt in their school. Additionally, students may have generally felt less safe as a result of these events, which may have negatively impacted their PSSM scores as a whole. It is also important to consider that Thurgood Marshall had a negative reputation around BCPSS prior to this year for a number of reasons. Primarily, the school is directly next to the site of, and often blamed for, a large uprising in response to the death of someone at the hands of the local police department. Figure 15 below shows the difference in fall and spring responses on the different items of the PSSM.
Figure 15. The difference between means between fall and spring for each item on the PSSM for the control group. This figure shows the difference in the mean for the control group, where negative numbers indicate a lower score on the spring than the fall.

By far the largest positive change among the control group in the fall and spring PSSMs was item 15, “people at my school know that I can do good work.” This item delves into personal ability, other people’s perception of an individual student’s ability, and being noticed by others for it. Over the course of the year, students and teachers getting to know each other better would give both parties an idea of who can “do good work” and who cannot. This aligns with students’ need for competence to feel motivation and sense of belonging under Ryan and Deci’s (2000) SDT. A positive gain between the fall and spring surveys makes sense since this item is directly related to getting to know students better and allowing students to show their abilities over the course of the school year. The goal of the service learning project, even though this is the control group, was to improve sense of belonging through a number of factors. One of the ways that service learning could improve sense of belonging discussed in chapter three was through improved relationships between students and teachers. This response indicates that that may have occurred during the school year.
Spring scores for the treatment group were especially high (above 4.0) on items three, seven, nine, and 18 and especially low (below 2.5) on items two, four, 12, and 16. Table 12 below shows these results and the specific phrasing for the items.

Table 12
*Items with Notable Spring Scores for the Treatment Group*

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item Phrasing</th>
<th>Spring Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>People at my school notice when I’m good at something.</td>
<td>2.11</td>
</tr>
<tr>
<td>3</td>
<td>It is hard for people like me to be accepted at my school (scored reciprocally).</td>
<td>4.22</td>
</tr>
<tr>
<td>4</td>
<td>Other students in my school take my opinions seriously.</td>
<td>2.33</td>
</tr>
<tr>
<td>7</td>
<td>There is at least one teacher or adult I can talk to in my school if I have a problem.</td>
<td>4.22</td>
</tr>
<tr>
<td>9</td>
<td>Teachers here are not interested in people like me (scored reciprocally).</td>
<td>4.00</td>
</tr>
<tr>
<td>12</td>
<td>I feel very different from most other students in my school (scored reciprocally).</td>
<td>1.89</td>
</tr>
<tr>
<td>16</td>
<td>I wish I were in a different school (scored reciprocally).</td>
<td>1.33</td>
</tr>
<tr>
<td>18</td>
<td>Other students at my school like me the way I am.</td>
<td>4.00</td>
</tr>
</tbody>
</table>

The students in the treatment focus group claimed they had been told they were “too smart” for the school, the school was “ghetto,” and when asked about other students stated “I’m not with them.” Additionally, both students who stayed in the treatment focus group the whole time had been told they should transfer schools. One student stated that “my math teacher told me I’m too smart for that class” while the other student relayed the same experience, saying the teacher “told my parents to transfer me.” Both students claimed the teacher they discussed told them that they “don’t belong here” because they were supposedly smarter than their peers. Given these responses in conversation, it is no surprise that the respondents to the spring PSSM in the
treatment group felt different than students in the school. This may be why there was such a low score on item 12 for the spring survey for the treatment group as well as the large difference between fall and spring for that item, shown in Figure 16 below. Students in the treatment group reporting that they feel different than other students may also have been impacted by the context of the survey. They may have known they were different because they were doing the service learning project and other freshmen were not. Figure 16 below shows the difference in fall and spring responses on the different items of the PSSM.

Two items showed a large, positive difference between the fall and spring surveys for the treatment group (at least .4): item seven and 18. Item seven makes sense given the focus group discussion on teachers and the indication that the treatment students generally liked their teachers and categorized them as a potential positive for sense of belonging. Since relationships play a large role in student sense of belonging, the indicator here that students had a positive relationship with adults is important to note (Dickson et al., 2016). It is also possible that these students were referring to me, their teacher with whom they completed the service learning project, as participating in a service learning project had the potential to improve student-teacher...
relationships (Dickson et al., 2016). The fact that item seven had a substantially higher spring score for the treatment group than the control group supports this hypothesis. Given that only nine students in the treatment group completed both the fall and spring PSSM surveys, a selection bias may exist that the students most likely to be present and complete both surveys also have positive relationships with teachers. Item 18 barely changed for the control group but showed the second largest change in the treatment group. This may indicate that the service learning project positively impacted peer relationships.

Specific items came up as large changes for both the treatment and control surveys, and comparing those may indicate specific elements of the intervention that impacted the treatment group. Item 10, which states “I am included in a lot of activities at my school,” had a large, negative difference between the fall and spring survey for the control group. The score on the treatment survey was an average score, not showing up in either the exceptionally high (above 4.0) or exceptionally low (below 2.5) scores. This may be directly related to participating in the service learning project.

The largest negative differences for the treatment group were on items two and twelve. Item two states “people at my school notice when I’m good at something.” This indicates students do not feel seen by their teachers or peers and that they do not think they will be rewarded or even noticed for acting in a way they think is appropriate. The slight difference in wording between this item and item 15 may have been interpreted differently by students. Item 15 is clearly related to schoolwork while a student could read item two as being good at something outside of school. In the past few years Thurgood Marshall had a robust list of extracurricular activities, special programming for students for homecoming or making honor roll, a comprehensive PBIS rewards program, and a beloved principal. 2018-2019 was the first
year of a new principal who decided to eliminate most of this extra programming in favor of focusing on improving behavior and academics in the classroom. A large proportion of the budget went to hiring more hall monitors, and a new, more punitive behavior system was implemented in the school. Given that more than half of the students in both focus groups stated that they knew upperclassmen at Thurgood Marshall prior to attending the school, it is possible that they noticed this change even though the participants in the study were first-year freshmen.

Given all of this information, the changes over time to the PSSM start to make more sense. Specifically, responses stating that students wished they went to a different school or were not proud to go to their school gain some more context. They were even told this by one of their teachers. It is hard for students to admit that they feel like they belong in a school that has a negative perception around the city and about which students have only heard negative things. Students in the treatment focus group stated that, “some students like being here” because “they could do whatever they want here,” which made the treatment focus group students want to disassociate from those students. Additionally, students answering that they are not noticed when they do something good could be related to the lack of special programming compared to previous years in the school. Hearing upperclassmen discussing the lack of special programming compared to years past as well as teachers potentially admitting this frustration to students, could have influenced these responses on the PSSM.

The data from the focus group with the treatment group is important in analyzing the final research question. When asked directly about the service learning project, students liked that they were doing something positive for the school. Students discussed feeling like they knew the school had some problems but were happy to do something about them, stating that they “felt better because we were finally doing something.” They also felt special just to be doing
something positive for the school, claiming that they had, “never seen anybody do something that good for [Thurgood Marshall High School].” When pushed on that last point, students highlighted that they were from the neighborhood surrounding the school and that they felt good to be helping that community out. The community surrounding TMHS is historically marginalized and suffers from disinvestment so doing something positive in that community meant something to the students and had the potential to increase their sense of belonging.

Earlier in the focus group, those students highlighted being from the neighborhood surrounding the school as a reason why they felt comfortable and like they belonged at Thurgood Marshall, so this sentiment is in line with that idea. When asked what made them feel like they belonged earlier in the focus group, a student mentioned “doing fundraising.” Since this was the only fundraising enterprise during the school year, it stands to reason that the student was discussing the service learning project and that participating in the project made him feel a greater sense of belonging.

The parts of the service learning project that students felt most positively impacted their sense of belonging were the pedagogy and the activities done during the service learning project. The students felt that working in groups helped their sense of belonging because they got to choose their groups and the classmates with whom they worked, specifically highlighting that they liked working “with certain people.” They also cited dissecting frogs in Biology as an example of group work that is interactive and meaningful and as having a positive impact on their sense of belonging. The students found the service learning activity interesting and felt it was “cool to do something different” than they did in their usual classes. By giving students say over the project and a degree of control over what they focused on, the students felt their sense of belonging increased. The students did admit that even though they liked the service learning
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project, they did not think it would help all students. They stated that “only some” of the students liked the service learning project and that this was not something that could be generalized throughout the school.

Limitations

The study had several limitations. The service learning project in itself was impacted by low student attendance. While attendance for the class during the project was generally in line with the school’s attendance, the school’s attendance was still very low, and therefore attendance for the treatment group on service learning days was very low. The whole cohort thus did not receive the full intervention, as many missed at least one or two days of the project. Additionally, doing the project once every three weeks may have been too spread out. Concentrating service learning days or spending more time on the project may have led to a greater impact. This was limited by the requirements of the regular US History class and the fact that the students only did the project in US History. Had the students been cohorted and in class together all day, as was initially planned, the students could have worked on their service learning project in other classes as well and the results of the study may have been different.

The fact that the service learning project was implemented from September through February may explain the lack of a change for student PSSM scores in May, given that it was so far away from the spring PSSM. This, in addition to the small sample size, limits the generalizability of this study. The small sample size may have been related to giving the post-test PSSM at the end of the year as well, as my anecdotal observations indicate student attendance and teacher adherence to school policies both drop towards the end of the year. It also could be related to the general problem of attendance from which the school suffers. The outcome measures may also have been strongly influenced by the two different nationally covered, violent
events that took place in between the fall and spring surveys. These factors make the results of the study difficult to accept as an accurate indicator of the impact of a service learning project.

**Conclusion**

While the intervention was inconclusive with negative changes to PSSM scores, there are some positives to take away from the research. Primarily, students seemed to genuinely enjoy participating in the service learning project as evidenced by my classroom observations and the student focus groups. They stated that “it was cool to do something different” and positively remarked that they “had never tried anything like that before.” Students specifically discussed liking this assignment because it was hands-on and they got to work in groups. This relates to the pedagogy associated with the service learning project, which was more hands-on, participatory, and student-led. Students’ mention of dissecting a frog in Biology as another example of an assignment they liked lends more credence to the idea that a participatory pedagogy can have great impact on students’ opinions of school and potentially on their sense of belonging. One student stated that he had been “wondering when we were going to dissect something in Biology” and related the excitement behind this to class functioning differently. The treatment group mentioned that not all the students were specifically interested in service learning, so changing pedagogy to reflect the type of teaching during the service learning project could engage more students and be more effective overall. Teachers also played a large role in students’ overall growth and enjoyment of school, as evidenced in the focus groups responses.

There are also troubling takeaways related to the results of the PSSM and the negative elements mentioned in the focus groups. Students indicated that investment in basic needs like better food and nursing supplies, as well as other options for students like extracurricular programming and vocational programs, could improve sense of belonging. Without these things,
even a change in pedagogy may not impact student sense of belonging meaningfully enough to improve student achievement, attendance, or engagement. These are broader problems relative to the city’s and school system’s budget and suggest that investing more in schools can impact how students feel about schools and therefore improve achievement. This would not be a quick fix and if the improvement did not occur immediately, I am not confident a funding increase would be sustained.

**Implications for Future Research**

Changes to the PSSM scores of both the treatment and control groups were relatively inconclusive, perhaps due to small sample size. Despite this, the results were generally negative. Using the focus groups to lend context as to why the results were negative and to show some positive elements of the TMHS allowed for a more thorough examination of this intervention and the implications for improving sense of belonging in schools. The treatment group did indicate that the service learning project helped them feel a sense of belonging because they were helping their community. Additionally, they described enjoying the pedagogy of the service learning project, the ability to work in groups, and having input into what they would be working on. Students said other students would not enjoy the service learning project, which means service learning may not be generalizable to a whole school or grade level. In the future, studies should focus on the implications of specific pedagogical interventions to improve student sense of belonging. Letting students determine the scope and sequence of their work and giving them greater control over it were described by the treatment group as leading to a greater sense of belonging. They specifically related those features of the intervention to a similar pedagogy in a different class (dissecting a frog in Biology). On the PSSM, the control group indicated a lack of teacher-student respect in the school building, which negatively influenced their spring scores. In
addition to pedagogy, the relationships between teachers and students are important to sense of belonging and have been studied previously. Further examining the role of student-teacher relationships in the context of a service learning project may lead to findings to help improve student sense of belonging.

The control group also mentioned extracurricular activities as a factor in their sense of belonging in school. This has already been validated by research and does not need to be studied further. Additionally, both the treatment and control groups brought up special programming in the school as something they felt was missing and that would make them enjoy school more. Additional research could focus on the impact of events that support the honor roll students, school trips, or class cookouts.

In general service learning should to be studied further, with a larger sample size and the chance for students to reflect on what they did, and without the bevvy of external factors that may have impacted the results of the PSSM at Thurgood Marshall this school year. It seems that there were too many mitigating factors, including outside factors influencing the school, two rare tragedies at the school in the same year, or an overhaul of the administration, to adequately use this school year as the basis for any conclusions. Therefore, the recommendations students made in the focus group that were supported by responses to specific items on the PSSM are a good place to look for possible implications of using service learning in the future. Combining service learning with other factors that students found to be positive, and using service learning to work to improve elements of the school that they found to be subpar, may lead to an increase in student sense of belonging. Those factors could include pedagogy or student-teacher relationships within a service learning project. As a result, future research should focus on the following research questions:
(1) Do different teaching methods among teachers whose classes were participating in service learning impact student sense of belonging? Which teaching methods do student perceive to have the biggest impacts on a change in sense of belonging?

(2) Do service learning projects have an impact on student-teacher relationships? What elements of the service learning project do students perceive as having impacted relationships?
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Appendix A

Staff Focus Group Protocol

The following is the script I emailed staff prior to the staff focus group:

“This focus group is taking place to determine any problems that may exist at Thurgood Marshall High School and the extent to which a group of staff think they may be related to certain factors. All responses will be noted by me and kept private. Your names will not be used in any way.”

The following is a list of questions I used to generate discussion in the focus group:

(1) What are some problems you think exist at Thurgood Marshall right now?

(2) Do you think these problems may be due to low sense of belonging at the school?

(3) Do you think these problems are related at all to attendance?

(4) What other factors may contribute to these problems?

(5) What can we do as a staff to correct these problems?

(6) What do we do well?
## Appendix B

### US History Curriculum

<table>
<thead>
<tr>
<th>US History Unit</th>
<th>Service Learning Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit 1 – Baltimore Today</strong></td>
<td>• This is where students begin to analyze problems in Baltimore for their project and introduces service learning</td>
</tr>
<tr>
<td>• De facto segregation</td>
<td></td>
</tr>
<tr>
<td>• Current problems in Baltimore</td>
<td></td>
</tr>
<tr>
<td><strong>Unit 2 – Civil War and Reconstruction</strong></td>
<td>• Discussion of hatred in communities of people who are different and how to work with that</td>
</tr>
<tr>
<td>• Causes of the Civil War</td>
<td>• Can talk with students about how to make people equal</td>
</tr>
<tr>
<td>• Goals of Reconstruction</td>
<td>• Students can think about ways to improve their communities and what is needed, as was the goal of the Reconstruction</td>
</tr>
<tr>
<td>• Was the Reconstruction successful?</td>
<td></td>
</tr>
<tr>
<td><strong>Unit 3 – Industrialization and Progressivism</strong></td>
<td>• Environmental health</td>
</tr>
<tr>
<td>• Changes from Industrialization</td>
<td>• Labor laws and equality</td>
</tr>
<tr>
<td>• Attempts to bring notice to problems during Progressive era</td>
<td>• Bringing up problems so people know about them (muckraking)</td>
</tr>
<tr>
<td></td>
<td>• Muckraking allows for a discussion of many problems, since there were many muckrakers</td>
</tr>
<tr>
<td><strong>Unit 4 – World War I, The Great Depression, World War II</strong></td>
<td>• Hatred of others and extreme nationalism</td>
</tr>
<tr>
<td>• Causes and results of WWI</td>
<td>• Economic justice</td>
</tr>
<tr>
<td>• Causes and results of Great Depression</td>
<td>• Understanding and tolerance</td>
</tr>
<tr>
<td></td>
<td>• This is a discussion that can be community-based or school-based and can be framed as an anti-bullying measure or broader community issues</td>
</tr>
<tr>
<td>• Causes and results of WWII</td>
<td></td>
</tr>
<tr>
<td><strong>Unit 5 – 1950s to Today</strong></td>
<td>• Housing equity</td>
</tr>
<tr>
<td>• GI Bill</td>
<td>• Civil Rights movement today or Black Lives Matter as it relates to search for equal rights</td>
</tr>
<tr>
<td>• Civil Rights Movement</td>
<td></td>
</tr>
<tr>
<td>• Cold War</td>
<td></td>
</tr>
<tr>
<td>Biology Unit</td>
<td>Service Learning Connection</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Unit 1 – Nature of Science</td>
<td>• Can use local experiments or local content to show students how to do experiments, lead to further discussions about local issues</td>
</tr>
<tr>
<td>• How to do experiments</td>
<td></td>
</tr>
<tr>
<td>Unit 2 – Macromolecules</td>
<td>• Healthy eating</td>
</tr>
<tr>
<td>• The food students eat</td>
<td>• Food deserts</td>
</tr>
<tr>
<td>Unit 3 – Cells</td>
<td>• Connection to Johns Hopkins and Henrietta Lacks as it relates to informing the community and medical consent</td>
</tr>
<tr>
<td>• Cell structures and mutations</td>
<td></td>
</tr>
<tr>
<td>Unit 4 – Living Systems</td>
<td>• Physical activity works with muscular and skeletal systems</td>
</tr>
<tr>
<td>• Muscular and skeletal systems</td>
<td>• Helping others works within the nervous system</td>
</tr>
<tr>
<td>• Nervous system</td>
<td>• Anything with food availability can work with the digestive system</td>
</tr>
<tr>
<td>• Digestive system</td>
<td></td>
</tr>
<tr>
<td>Unit 5 – Reproduction</td>
<td>• Can talk with men’s and women’s groups in the school and community about consent</td>
</tr>
<tr>
<td>• Consent</td>
<td>• Can work with lead poisoning and its effects on the blood and reproduction</td>
</tr>
<tr>
<td>• Genetics</td>
<td></td>
</tr>
<tr>
<td>• Traits</td>
<td></td>
</tr>
<tr>
<td>Unit 6 – Ecology</td>
<td>• Work with local community on nutrition</td>
</tr>
<tr>
<td>• Food webs</td>
<td>• Work with soup kitchens to provide nutrition to communities</td>
</tr>
</tbody>
</table>
Appendix D

PSSM Survey

<table>
<thead>
<tr>
<th>Question</th>
<th>(1) Not at all true</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>(5) Completely true</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I feel like a part of my school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2) People at my school notice when I’m good at something.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3) It is hard for people like me to be accepted at my school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4) Other students in my school take my opinions seriously.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5) Most teachers at my school are interested in me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6) Sometimes I feel as if I don’t belong in my school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7) There is at least one teacher or adult I can talk to in my school if I have a problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8) People at my school are friendly to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9) Teachers here are not interested in people like me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10) I am included in lots of activities at my school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11) I am treated with as much respect as other students in my school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12) I feel very different from most other students in my school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13) I can really be myself at my school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14) Teachers at my school respect me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15) People at my school know that I can do good work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16) I wish I were in a different school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17) I feel proud to belong to my school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18) Other students at my school like me the way I am.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix E

Sample Focus Group Questions

1. Do you feel like you belong at Thurgood Marshall?
   a. What about the school makes you feel that way? It can be teachers, activities, friends, or something else entirely.
   b. What could the school do to make you feel more like you do belong?

2. Did the project we did this year make you feel a certain way about Thurgood Marshall?
   a. What about the project? Was it working together, being led by peers, the teachers, the specific project we did, or anything else?

3. Do you feel like Thurgood Marshall is a place students like to be?
   a. What makes you feel that way? It can be teachers, activities, friends, or something else entirely.
   b. What could the school do to make it a place students like to be more or feel more comfortable at?
Appendix F

Script for PSSM Handout

The following is the script English teachers will be given to read when they hand out the PSSM to students:

“Today you will complete a survey to give the school an idea of how you feel about being here. The survey has 19 questions and asks you to circle your answer on the sheet using a pen or pencil. You’ll mark how true the statements are from 1 (not at all true) to 5 (completely true). Sometimes the statements are good and sometimes they are bad, so just picking all 1 or all 5 does not mean you answer all positive or all negative. There is also a question about how much service learning time you have gotten. You need 75 hours to graduate high school, and many of you have some or all of those already. Please be honest about how much time you have, as your answer to this question doesn’t change anything. Even though you are asked to put your name on your survey, your answers will be anonymous. Mr. Schneiderman is the only person who will see your answers and he will give each student a number as soon as he gets the surveys so your name will not be attached to your results. The only reason for having your names on the surveys is to see differences between different classes and groups of students. Please let your teacher know if you have any questions.”
Jesse was born in New York City and grew up just north of the Bronx, in the suburb of New Rochelle. After studying history at the University of Delaware, he decided to immediately get his graduate degree in teaching at nearby Wilmington University. Following his time in Delaware, Jesse moved back to New York and became a high school history teacher at the Architecture, Engineering, and Construction Industries (AECI) Charter High School in the Bronx. He taught there for two years, then moved to Baltimore and taught history at Frederick Douglass High School. He eventually became the director of student activities and school culture and climate. Jesse left Douglass at the end of the 2019 school year and currently works as the Executive Director of the Adult Learning Center (ALC), a program of Strong City Baltimore. The ALC provides free adult education courses in GED, foundations math and reading, and English language acquisition for individuals in and around Baltimore. Jesse lives in the Upper Fells Point neighborhood of Baltimore with his partner, Megan and his four-year-old pitbull, Waffles. He has been working towards this doctoral degree since 2015.