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Differences in Black and White Students' Achievement Gap between Public Charter Schools and Traditional Schools in Minnesota

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Abstract

The purpose of this research is to determine whether the achievement gap between Black and White students differs significantly between Minnesota public charter schools and traditional Minnesota public schools. The reading and math proficiency gaps between Black and White students in Minnesota are among the largest in the nation. Despite the fact that public charter schools have been around since 1991, it has not been determined whether or not they may have an impact on Minnesota's achievement gap. Long-standing disparities in socioeconomic status, mental health, and college enrollment may be addressed through closing the achievement gap between Black and White children. The study examined whether there are statistically significant differences in the Minnesota Comprehensive Assessment (MCA) reading and math proficiency achievement gap between Black and White students based upon whether they attend Minnesota public charter schools or Minnesota traditional public schools. The researcher used *t*-tests to analyze the statistically significant differences in the achievement gap using data from the 2021-2022 MCA assessments. The results suggest that public charter schools in Minnesota had a significantly lower achievement gap between Black and White students in reading and math MCA proficiency scores compared to traditional public schools in Minnesota. Additionally, Black students tended to have the higher proficiency rates for reading and math at public charter schools compared to traditional public schools and White students tended to have higher rates of proficiency than Black students regardless of whether they attended public charter schools or traditional public schools.

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Preface

The passage in Romans 8:28, "And we know that in all things God works for the good of those who love him, who have been called according to his purpose," is particularly relevant in light of the societal challenges that have arisen since the onset of the pandemic. I am reminded of this verse as I contemplate the ways in which God is preparing me for what lies ahead. During the spring of 2020, my school was thrown into a state of upheaval, with students being compelled to engage in remote learning. As an educator, I struggled to fulfill the demands of this new mode of instruction. This experience underscored the critical role that schools play in their respective communities.

As a result of the pandemic, I was obliged to modify my pedagogical approach and adopt a new delivery mode, with mixed results. While some of my students excelled in the remote learning environment, others encountered significant difficulties. I attribute the success of certain students to the absence of classroom distractions, peer pressure, and disciplinary concerns that might have impeded their learning progress. Conversely, students who struggled with remote learning likely experienced a lack of guidance and structure, which are typically provided by in-person instruction.

It became apparent to me that students with supportive family backgrounds tended to perform better in the remote learning environment. Such students often had the benefit of parental support, access to high-speed internet, and were held to high academic expectations. In some instances, families expressed appreciation for the instructional delivery model, which was new to them. However, students from low-socioeconomic backgrounds struggled with remote learning, likely due to factors such as inadequate internet access and challenging family circumstances. The absence of necessary structure and accountability further compounded the

difficulties faced by such students, ultimately resulting in disappointing academic outcomes.

Upon careful consideration of both sides of the situation, certain observations became apparent. Firstly, it emerged that not all students require a full eight-hour school day to complete their assignments. With the freedom to work at their own pace, students were able to either expand on their ideas or move on once their work was complete. This arrangement allowed them to utilize their time efficiently, without being constrained by class periods or having to spend unnecessary time in study halls. Consequently, students had more time available to assist with household chores, work at part-time jobs, or focus on extracurricular activities. Conversely, the absence of the structured classroom environment proved to be a disadvantage for some students, with too much independence resulting in suboptimal outcomes. Certain students required face-to-face interactions with both teachers and peers to thrive academically.

During the fall semester of 2020, my school implemented a hybrid instructional model whereby students alternated between in-person and remote learning. Specifically, half of the students engaged in face-to-face instruction on certain days of the week, while the remaining half participated in remote learning. This transition led to a significant reduction in class sizes from 30 students to 15, thereby presenting an opportunity for a potential paradigm shift. Despite the flaws that existed in the system, I remained optimistic about the prospect of a better future. The reduction in class sizes resulted in a significant decline in negative classroom behaviors, as I was able to establish a more personal connection with each of the 15 students. This, in turn, facilitated improved interactions and prompt feedback. Moreover, I observed a marked increase in in-class participation during various activities. The smaller class sizes created a more comfortable and less anxiety-inducing environment, making it easier for students to participate actively.

The challenge of supervising two cohorts of students, alternating between in-person and remote learning, proved to be arduous. Consequently, some students displayed lackluster engagement on non-in-person days, posing a concern for the quality of education delivered. Moreover, apprehensions arose over the adequacy of at-home supervision, particularly in the context of unfavorable or harmful home environments. Further compounding the situation, the hybrid model of instruction was a new undertaking, introducing uncertainties and challenges that resulted in anxiety and frustration for both students and teachers.

Over time, there was an evolution in my school system whereby certain measures were implemented to address the needs of students who were facing difficulties during non-in-person days. Specifically, students who were classified as English learners (EL) or had special education (SPED) needs were permitted to receive daily in-person instruction. Concurrently, successful online learners were given the flexibility to continue their studies remotely. The reduction in class sizes enabled more individualized attention and increased interaction with general education teachers for EL and SPED students. Additionally, the improved classroom environment facilitated flexible grouping and personalized learning for all students, while also providing the opportunity to incorporate flipped models of education. This development gave rise to my own sense of optimism regarding the potential transformation of the educational landscape. Regrettably, the progress made was halted prematurely.

During the Spring semester of 2021, my school resumed its regular operations with a full return to in-person learning. The transition was completed by mid-February, reinstating the previous classroom setup with 30-plus students grouped by subject and grade in distinct siloed classes. Students reverted to a structured schedule with standardized start and end times. It is worth noting, however, that this conventional approach need not be regarded as the only option.

As previous instances in history have illustrated, disturbances, although initially inconvenient (Christensen et al., 2008), can often serve as catalysts for progress.

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Chapter 1: Introduction

Overview

For decades, the academic achievement gap has persisted in our education system, with students' demographic characteristics often determining their academic outcomes. Despite countless efforts, educators and educational leaders have failed to bridge this divide (Hanushek et al., 2019). According to the National Assessment of Educational Progress (NAEP), White students in the fourth and eighth grade outperform their Black peers by an average of 26 points in reading. This disparity is mirrored in math, with equally concerning results. Even more concerning is the fact that, in twelfth grade, only 7% of Black students scored at or above proficient in math, compared to a staggering 32% of their White counterparts (U.S. Department of Education, 2022). The persistence of these gaps highlights the urgent need for more effective solutions.

In Minnesota, there is a significant gap on reading scores based on students' race/ethnicity and socioeconomic backgrounds on the Minnesota Comprehensive Assessment (MCA). Close to two-thirds (61.0%) of White students were proficient in grade 10 reading compared to 33.8% of Native American students, 34.8% of Black students, and 37.2% of Hispanic students in 2022 (Minnesota Department of Education, 2023). Also, 42.9% of White students were proficient in grade 11 math compared to 14.4% of Native American students, 13.5% of Black students, and 15.8% of Hispanic students in 2022 (Minnesota Department of Education, 2023). Furthermore, students from higher socioeconomic backgrounds on average were more proficient in grade 10 reading (between 45.4% to 70.6%, depending upon students' race/ethnicity) compared to students who qualify for free/reduced-price lunch (between 25.2% to 45.2%, depending upon students' race/ethnicity), with a similar gap in grade 11 math proficiency

in 2022 (Minnesota Department of Education, 2023). The rates of achievement among students remain relatively consistent throughout their K-12 academic school years, which also means that the achievement gap does not change across grade levels but instead remains stagnant (Tirado & Shneyderman, 2020).

Minnesota has one of the largest educational achievement gaps by race, ethnicity, and socioeconomic status in the country (Grunewald & Nath, 2019). Students who are behind grade level demonstrate more negative behaviors, frustration, and confusion, which further leads to a lack of academic engagement (National Association of Secondary School Principals, 2005). Negative behaviors and lower academic engagement contribute to lower attendance and graduation rates. For instance, congruent with the educational achievement gaps, White students and students from high socioeconomic backgrounds have much higher graduation rates than Black students, Hispanic students, Native American students, and students from lower socioeconomic backgrounds in Minnesota (Grunewald & Nath, 2019).

The modern educational system was formed in the 1920s (The History of American Academic Education, 2006), and the school structure has remained mostly traditional, with a defined starting and ending time, rigid class scheduling, a classroom teacher, and heterogeneous background of students (Neufeld, 2015). However, the demographics of students have drastically changed during this time; for instance, the number of English-language learners in schools has increased by almost 300% ("Every Student Succeeds Act: Minnesota State Plan Executive Summary," 2017). In addition, in the 1950s, White students comprised 90% of public school attendance. Today, they make up less than half of K-12 enrollment, illustrating the drastic demographic shifts in school systems (Government Accountability Office, 2022).

Income disparities have also increased, leading Americans to raise children in

communities and schools with large economic disparities (Hanushek et al., 2019). Yet, even as classrooms have become more diverse and disparities have widened, the methods of delivering education have remained unchanged. Increasingly heterogeneous schools still operate under the same structure as they did when classrooms were more homogenous.

Traditional testing, grading, and grouping practices have inadvertently perpetuated the educational achievement gap (Hanushek et al., 2019; Yeh, 2020). Even at a young age, traditional education systems negatively impact marginalized pupils' educational possibilities, social and emotional well-being, and quality of life (Beard, 2018). Implementing more elaborate and demanding versions of existing school structures, content, and initiatives is not the answer to resolving the achievement gap (Farkas, 2020); however, experts have found that flexible education programs or non-traditional settings may be successful in reducing the educational achievement gap (Neufeld, 2015). Flexible education programs can be defined as any educational setting that deviates from one or more of the traditional educational structures. Flexible educational settings may or may not have a rigid bell schedule, provide more individualized instruction, offer vocational training, and demand higher accountability from schools and students (Neufeld, 2015).

Public charter schools may be excellent choices for families looking for the ideal academic fit for their child because they may satisfy these criteria through offering flexible learning options in a different environment from traditional schools (Charlton, 2021). A public charter school offers an educational option while upholding academic standards. Public charter schools can be flexible in how they operate so parents can select the right educational choice for their children (Charlton, 2021).

Charter Schools

The first public charter school was established in Minnesota in 1991. The first charter was issued to Bluffview Montessori School in Winona, while the first public charter school to open its doors was City Academy in St. Paul on September 7, 1992 (Minnesota Association of Charter School, 2023). Choice schools, known as charter schools, were created without the restrictions seen in traditional public schools (American Institute of Research, 2006). These institutions provided a novel educational approach designed to raise students' achievement. In addition, the public charter school movement focused on encouraging low-income and underperforming students' parents to enroll their children which provided reduced class sizes, flexibility, increased one-on-one teaching time, and promote better chances for students (Koonce & Harper, 2005).

Former Minnesota state senator Ember Reichgott Junge is the author of the first public charter school law in Minnesota and the nation (Junge, 2014). Junge wanted to expand options for K-12 public education by allowing organizations other than local school districts to deliver public education and offer more responsive options outside the current framework. Chartering involves issuing a school with a charter. It is not a structure or a school. It is the authorization of a different organization to provide public education in the manner that best suits the requirements of their students (Junge, 2014).

Public charter school administrators agree to be accountable in their performance contract in exchange for independence (Junge, 2014). Public charters have to fulfill their performance obligations, otherwise the schools risk closing (Junge, 2014). District public schools do not have this type of accountability. Public charters exchange bureaucracy for accountability and regulation for results (Junge, 2014). In Minnesota, by ensuring that there was money available to educate low-income families, legislators directly impacted educational policies and were

essential to creating public charter schools (Vergari, 2007). In addition, public charter school families benefited from political consideration of cultural understanding and well-developed policies (Loveless & Jasin, 1998).

School options, such as public charter schools, can increase students' academic achievement, save government money, and lessen racial educational achievement gaps (American Federation for Children, 2022). However, there are no studies that have been conducted in Minnesota to examine whether public charter schools may lessen the educational achievement gap between Black and White students compared to traditional public schools.

Statement of the Problem

According to the Minnesota Department of Education (2023), the achievement gap in the state's MCA scores is most prominent between Black and White students, although Black students performed slightly better than Native American students in 10th-grade reading in 2022. This issue is further exacerbated by Minnesota's standing as one of the states with the highest overall disparities between Black and White students (Gruenwald & Nath, 2019. The impact of these disparities extends beyond educational attainment, as Minnesota holds the distinction of having the worst racial disparities in the country when it comes to income, home ownership, and enrollment in postsecondary education for Black and White individuals (Horowitz et al., 2021).

Teachers and school administrators have long fought to close the racial achievement gap as expected by society (Basch, 2011; Brown et al., 2011). Efforts have been made by school leaders and administrators across Minnesota and the country to reduce the racial achievement gap between White students and Black students. These efforts have included pedagogical improvements, staff training on diversity and culture, and other institutional reforms (Elias et al., 2014). However, the achievement gaps between these student groups have remained (Yeh,

2020).

Inequities between Black and White children are becoming more apparent due to the expected growth in the number of children in the United States from 2018 to 2050 (Federal Interagency Forum on Child and Family Statistics, 2019). By 2026, according to the National Center for Education Statistics, 55% of students attending U.S. schools will be students of color, compared to 45% of White students (Byrd, 2020). Ethnic diversity is also predicted to rise significantly by 2050. Therefore, continued efforts are necessary to bridge the achievement gap (Byrd, 2020).

When analyzing the consistency of the achievement gap over time, the constant variable is the traditional structure of education (Hanushek et al., 2019; Yeh, 2020). Certain student groups benefit significantly from the structure of traditional education, including how schools and courses are designed (Colgren & Sappington, 2015). Colgren and Sappington suggested that increasing the rigor of the current system only enhances the benefits that White and non-low-income children receive from the design of these courses inside the traditional construct of schooling. Increases in the number of Black students enrolled in advanced placement (AP) courses still resulted in a similar achievement gap (Colgren & Sappington, 2015). This reality poses a difficult issue for schools hoping to enhance educational outcomes and ensure achievement equity for all students (Colgren & Sappington, 2015).

Traditional public schools must adhere to more stringent regulations than public charter schools do. For instance, nondiscrimination, health and safety, and the length of the school year are all subject to the same laws in traditional public and public charter schools. Beyond that, however, public charter schools operate independently in accordance with agreements with the organizations that each granted them a distinct charter (American University School of

Education, 2020).

Administrators well-positioned to lead in public charter schools know the needs of families from diverse cultural and economic backgrounds. They know how to execute strategies to narrow the achievement gap between White and non-White students (Ladson-Billings, 2005). In traditional public schools, African American parents claimed that the staff showed negative attitudes and gave their kids insufficient attention. Another issue raised by African American parents was a lack of cultural knowledge in the classroom, which was apparent in their White counterparts' traditional schooling (Comer, 2005).

In order to provide opportunities for success, public charter schools are free to create a structure that meets the requirements of both students and parents (Manojlovic, 2017). Parents choose public charter schools because they feel their child receives an effective education that has smaller classroom sizes and better staff relationships (Comer, 2005). Public charter schools give parents the opportunity to manage their children's academic objectives and ensure their achievement (Garcia, 2008). The educational opportunities, social and emotional well-being, and quality of life of underprivileged students are impacted by traditional educational institutions (Beard, 2018). While the recent pandemic compelled shifts in delivery due to school closures, fundamentally, the education system features the same structure, content, and single instructor format (Neufeld, 2015). Further research is required to determine whether learning environments other than traditional public school models, such as choice public charter schools, impact the achievement gap between Black and White students.

Purpose of the Study

The goal of this study was to investigate whether Minnesota public charter schools have a significantly different achievement gap between Black and White students than traditional

Minnesota public schools. Minnesota has one of the worst disparities between Black and White students on the Minnesota Comprehensive Assessment in reading and math (Gruenwald & Nath, 2019). Public charter schools have existed since 1991 (National Charter School Resource Center, 2022); yet, it has not been explored whether or not public charter schools may have an impact on the achievement gap in Minnesota. Eliminating the longstanding achievement gap between Black and White students may address long-term gaps in socioeconomic status, mental health, and college enrollment (American Psychological Association, 2017; Lynch & Oakford, 2014; Ma et al., 2019).

Research Questions and Hypotheses

Two research questions were used to frame this study.

RQ1: Is there a statistically significant difference on the MCA reading proficiency achievement gap between Black and White students based upon whether they attend Minnesota public charter schools or Minnesota traditional public schools?

H_o1: There is no significant difference in the achievement gap on MCA reading proficiency between Minnesota public charter schools and Minnesota traditional public schools.

H_a1: There is a significant difference in the achievement gap on MCA reading proficiency between Minnesota public charter schools and Minnesota traditional public schools.

RQ2: Is there a statistically significant difference on the MCA math proficiency achievement gap between Black and White students based upon whether they attend Minnesota public charter schools or Minnesota traditional public schools?

H_o2: There is no significant difference in the achievement gap on MCA math proficiency between Minnesota public charter schools and Minnesota traditional public schools.

H_a2: There is a significant difference in the achievement gap on MCA math proficiency

between Minnesota public charter schools and Minnesota traditional public schools.

Significance of the Study

School administrators have moral and ethical obligations to provide equitable educational outcomes for all students (Fullan, 2020). Despite immeasurable initiatives developed by traditional public schools to provide equal outcomes for all students, the achievement gap remains. This study aims to discover whether Minnesota public charter schools have a different achievement gap between Black and White students in reading and math compared to traditional public schools. The results of this study may inform changes in Minnesota's educational models and options for parents. Those changes, in turn, may have societal and economic impacts.

Policy Significance

The results of this study may have policy implications for public charter schools in Minnesota. For instance, if there is a reduced achievement gap between Black and White students in public charter schools compared to traditional public schools, it may be easier for public charter schools to expand their efforts in Minnesota. It was difficult for the legislature to approve the proposal of opening up the K-12 system to public charter schools (Junge, 2014). Originally, the powerful Minnesota teacher unions were opposed to the formation of public charter schools, creating political pressure (Junge, 2014). However, the 1991 public charter law of Minnesota was drafted by both political parties and approved by voters from the middle of the political spectrum (Hawkins, 2014).

The findings of this dissertation may offer valuable insights to parents, community members, and other stakeholders regarding the potential efficacy of public charter schools in mitigating the academic disparities between Black and White students. These findings could potentially empower these stakeholders to advocate for more public charter school opportunities

for students. Public charter school legislation is an excellent illustration of how concerned citizens can take a concept and make it a reality (Junge, 2012). Traditional public schools were never intended to be replaced by public charter schools. As an alternative, public charter schools began to provide parents and students options so they can attend quality institutions that emphasize innovation and experiential learning (Junge, 2012).

In order for public charter schools to continue to exist in the future, stakeholders, policymakers, and leaders need data regarding the effectiveness of public charter schools (Junge, 2014). Whether it is appropriate for public charter schools to receive funds from school systems is a topic of contention. However, all sides should have the same goal: providing all K-12 students with high-quality educational opportunities (Junge, 2014). Favorable public charter school legislation passed more frequently than anticipated in 2022, possibly due to state legislators' ongoing understanding that parents desire more options for their children's education due to the pandemic (Ziebarth, 2022). California, Delaware, and Illinois each successfully fought off proposed anti-charter legislation (Ziebarth, 2022). States such as Florida, Washington, New Mexico, Missouri, Massachusetts, Tennessee, and Colorado all received increased funding to public charter schools (Zeibarth, 2022). Kentucky created its first public charter school law in 2017 but failed to include permanent funding; however, a permanent funding bill was recently passed (Zeibarth, 2022).

Economic and Well-Being Significance

The findings of this study may offer insights for families considering public charter schools. If the results suggest that public charter schools reduce the achievement gap between Black and White students, parents may use the information to make informed decisions regarding whether to enroll their children in public charter schools. The disparities in test scores

between White and Black children are worsening (Matheny et al., 2022); however, improvements in academic achievement can have a significant impact on individuals' quality of life, as well as future generations (Ma et al., 2019). Therefore, parents who make decisions today about where to send their children for school can affect the outcomes of generations that follow.

The costs associated with modifying educational models aimed at reducing the achievement gap may be offset by increased economic returns due to the strong positive correlation between educational attainment and income (Ma et al., 2019). Reducing the achievement gap may increase the number of Black students eligible for pursuing bachelor's degrees, as evidenced by higher grade point averages and graduation rates. Bachelor's degree attainment has been linked to higher wages, lower unemployment rates, and reduced reliance on public assistance (Ma et al., 2019). For instance, only 4% of individuals aged 25 years and above who hold bachelor's degrees live in poverty compared to 13% of high school graduates. Moreover, 95% of new occupations created following the 2008 recession require at least a bachelor's degree (Center on Education and the Workforce, 2022). Considering the projected shortage of workers in America, closing the achievement gap may increase the economic potential (Center on Education and the Workforce, 2022).

It is predicted that the U.S. economy would grow by as much as 5.8% if the educational achievement gaps were closed between student groups (Lynch & Oakford, 2014). By 2050, this increase would result in 20.4 trillion dollars (Lynch & Oakford, 2014). Reducing the achievement gap in school would increase Minnesota's gross domestic product (GDP) by 3-6% within the next 30 years (Grunewald & Batbold, 2013). The subsequent increase in GDP would result from tax revenue generated by higher incomes, consumer purchases, and a decrease in government assistance (Grunewald & Batbold, 2013).

The dramatic rise in poverty and near-poverty that qualifies students for free and reduced-price meals reflects the lack of mobility and declining incomes that millions of American families have faced over the past generation. For example, Black students' poverty level has increased 37% to 68% over the last 20 years (Orfield et al., 2016). By increasing academic achievement and educational attainment among Black students, cycles of poverty may be disrupted, and future generations of Black children may experience fewer adverse childhood experiences, thus also increasing their chances of continued success (Krasnoff, 2019; Souers, 2016). It is projected that an increase in Black students' achievement, and consequently higher wage earnings, will lead to more Black families being able to send their children to prestigious higher education institutions (Ma et al., 2019). Education must offer all students a pathway to success and improve students' social mobility, and public charter schools may provide a setting that can demonstrate this pathway (School House Connection, 2021).

Definition of Terms

Achievement gap: The achievement gap is the persistent disparity in academic achievement between minority and disadvantaged students and their White counterparts (Porter, 2022).

Black or African American person: A person having origins in any of the Black racial groups of Africa (United States Census Bureau, 2018).

Public charter school: A charter school is a public school that operates as a school of choice and is exempt from significant state or local regulations related to operation and management. Public charter schools are also autonomous and have more flexibility in the operations and management of the school than traditional public schools (National Charter School Resource Center, 2022).

Critical race theory: Critical race theory (CRT) is an understanding of how racism in America has shaped policies. The idea is historical policies are embedded with racism and are still impacting organizations today (Sawchuck, 2021).

Minnesota Comprehensive Assessments: Minnesota Comprehensive Assessments (MCAs) are yearly standardized assessments taken by students in Minnesota to measure achievement and knowledge in mathematics, reading, writing, and science (Minnesota Department of Education, 2018b).

Traditional public school: A traditional public school is teacher-centered delivery of instruction to students with a focus on having students master academic core subjects, including math, reading, writing, science, and social studies. Traditional public schools are highly regulated and must track student performance in a certain way (American University, 2020).

White person: A person having origins in any of the original peoples of Europe, the Middle East, or North Africa (United States Census Bureau, 2018).

Organization of the Remainder of the Study

Chapter 2 includes relevant information about the Minnesota Comprehensive Assessments, achievement gap, critical race theory, public charter schools, and changes in educational needs. Chapter 3 describes research procedures, limitations, and methodologies. Finally, Chapter 4 reveals the findings, and Chapter 5 discusses implications and recommendations for future research.

Chapter 2: Literature Review

The literature review provides background research on the Minnesota Comprehensive Assessment test, the historical significance of the achievement gap between student groups, and potential causes of the achievement gap. More specifically, this chapter outlines the theoretical framework for the research study. Critical race theory identifies how race and public policy have impacted education and contributed to the development and continuation of the achievement gap (Sawschuck, 2021). Finally, public charter schools and student educational needs are discussed.

Minnesota Comprehensive Assessment

The Minnesota Comprehensive Assessment (MCAs) encompass a set of standardized assessments employed by educational stakeholders including leaders, administrators, educators, and parents, with the intention of evaluating students' academic progress and ensuring adherence to the educational mandates stipulated by Minnesota (Minnesota Department of Education, 2018a). Attainment of the state-established benchmarks is instrumental in ascertaining eligibility and placement of students within Minnesota's state universities (Minnesota Department of Education, 2018b). As a means to guarantee the fulfillment of graduation prerequisites for public-school students in Minnesota, the state legislature enacted a series of measures in 1995, which subsequently led to the inception of the initial iterations of the MCAs (Minnesota Department of Education, 2018b).

For children in the third, fifth, and seventh grades, the Minnesota legislature developed a model of testing and accountability in 1997 (Minnesota Department of Education, 2018a). This plan established a standard for using statewide tests to evaluate all Minnesota students in that particular grade. The MCAs were further expanded in 2004 and 2006 to include math and reading assessments for all third through eighth-grade students, science assessments for fifth and

eighth-grade children, and standardized tests for reading in tenth grade and math in eleventh grade (Minnesota Department of Education, 2018a).

Several revisions were made to the Minnesota Comprehensive Assessments between 2006 and 2018 specifically for children receiving support for their English as a second language and special education services. A variety of accommodations were offered to students with individualized educational programming (IEP) plans and English language learners who took the assessing comprehension and communication in English state-to-state (ACCESS) exam to gauge English language ability (Minnesota Department of Education, 2018a).

Measuring overall school-level and district-level student proficiency on state standards and potential areas, or strands, for growth is another function of the MCAs (Minnesota Department of Education, 2022). Schools receive school-wide, disaggregated, and individual student MCA results (Minnesota Department of Education, 2018b). Aggregated and disaggregated MCA results are a public record of school and district performance. They are accessible to the general public through the Minnesota Department of Education's Report Card Website (Minnesota Department of Education, 2018c). Disaggregated reports show achievement discrepancies between various student groups (Minnesota Department of Education, 2018c).

MCAs are not designed to be the exclusive or definitive measure of students' educational advancement. Instead, they are considered as part of a comprehensive array of data points utilized by schools and districts to inform evidence-based decision-making processes (MDE, 2021). By incorporating the MCAs as a component of a broader assessment framework, educational institutions can gain valuable insights into the effectiveness of their instructional practices, curriculum design, and overall educational policies (MDE, 2021). The inclusion of multiple data sources helps ensure a more comprehensive and holistic understanding of students'

progress, enabling educators to make informed adjustments and improvements to enhance learning outcomes (MDE, 2021).

Schools are encouraged to use the MCA results of the students to enhance classroom teaching and learning and identify general strengths and weaknesses in curriculum and instruction. For example, it is possible to identify the areas where students excel and use that information to reinforce the methods for using the skills-specific teaching strategies. Conversely, it may be determined that areas where students perform poorly must be improved by adding more instruction time or changing the curriculum (MDE, 2021). District-level administrators can monitor and capitalize on data trends to identify professional development needs (MDE, 2021).

Science, reading, and mathematics MCA scores are not meant to be factored in course grades or students' grade point averages (GPA). Each student obtains a MCA score that falls into one of four achievement levels: Does Not Meet the Standards, Partly Meets the Standards, Meets the Standards, and Exceeds the Standards. Students who reach the Meets and Exceeds levels are regarded as proficient in the knowledge, skills, and abilities listed in the Academic Standards (MDE, 2021). Students who reach the Does Not Meet the Standards, Partly Meets the Standards, or choose not to take the Minnesota Comprehensive Assessments (MCAs) are categorized as not proficient in the knowledge, skills, and abilities listed in the Academic Standards (Rosell, 2021).

Academic Achievement Gap

The composition of student populations in schools has undergone significant changes over time, and this trend is expected to continue (Byrd, 2020; Howard & Navarro, 2016). It is predicted that there will be a 7% decline in the number of White students attending public schools by 2028. In contrast, the proportion of Black and Hispanic students are expected to increase by 9%. Additionally, there is an anticipated 51% rise in the number of students

belonging to two or more races (National Center for Education Statistics, 2019). Given the continued growth of diversity in public schools, the achievement gap may continue to widen unless there are interventions aimed at restructuring the public school system.

American education relies on high stakes testing and data to determine success (Supovitz, 2021). Yet, the results of standardized test scores show that Minnesota has one of the country's largest achievement gaps between Black and White students. In particular, Minnesota has a significant gap in reading and math scores between White students and Black students on the MCAs, a gap that has largely remained unchanged at around 30% in the last 50 years (Grunewald & Nath, 2019). Despite numerous policies and school reforms implemented with the aim to reduce the achievement gap between student groups, there has been little to no sign of the educational achievement gap dissipating (Howard, 2010). Table 1 shows that Minnesota's achievement gap between student subgroups is wider than the national average based on the percentage of students proficient in reading. Reading was selected because it is a key factor in students' ability to learn and achieve in subsequent grades (Grunewald & Nath, 2019).

Table 1

National Achievement Gap Average Compared to Minnesota

Grade Level	Black-White Achievement Gaps	
	U.S. Avg.	MN
4	26%	30%
8	27%	36%

Note. From *A statewide crisis: Minnesota's education achievement gaps.* Grunewald, R., & Nath, A. (2019). Federal Reserve Bank of Minneapolis.

Causes of the Achievement Gap

A large portion of the academic achievement gap may be generally attributed to opportunities, or lack thereof, even though precise causes can differ depending on demographic

groups, geographic location, and socioeconomic situations (Johnston, 2011). According to historical data, non-White students in America receive a disproportionately smaller share of advanced academic opportunities compared to White students (Grishom & Redding, 2016). For instance, even though Black students comprised 16.7% of the student body in 2009, only 9.8% participated in gifted and talented programs (Grishom & Redding, 2016). Similarly, there is a disparity of Black students taking Advanced Placement courses compared to White students (Banales et al., 2019).

In addition to the establishment of choice schools, there are other factors contributing to the observed outcomes. One such factor is the unequal opportunities available to students and families in schools, communities, and jurisdictions. For example, access to resources like libraries, before and after school programs, and summer enrichment opportunities may vary across different areas (Rothstein, 2013). It has been noted that communities with fewer opportunities tend to have lower academic achievement compared to their more privileged counterparts (Rothstein, 2013).

Research conducted by the National Center for Educational Statistics in 2022 found significant variation in the proportion of students attending high-poverty schools among different racial and ethnic groups. The study revealed that the highest percentage of students enrolled in high-poverty schools was among Black students (45%), followed by Hispanic students (43%), American Indian/Alaska Native students (37%), and Pacific Islander students (25%). In contrast, the percentage of White students attending high-poverty schools was considerably lower at 8 percent, along with Asian students at 14 percent, and students of two or more races at 17 percent (National Center for Educational Statistics, 2022). To address racial achievement inequalities, it is crucial to ensure that all children and families have access to more equitable opportunities

(Johnson, 2011).

A contributing factor to the achievement gap is the differences in teacher quality. A key to school improvement is understanding the impact of high-quality instruction on student outcomes (Slater, 2013). The quality of education professionals differs noticeably between the upper middle class, primarily White communities, and that of more urban, poorer, and diverse communities (Goldhaver et al., 2016). Compared to their White, middle-class peers, students in poverty and students of color are considerably more likely to have teachers with less experience and fewer advanced degrees (Clotfelter et al., 2005). Students with highly qualified teachers had better academic gains (Clotfelter et al., 2005). All students' long-term educational and financial success depends on their ability to access qualified educators. The achievement gap might start closing if excellent teachers taught more students of color (Adamson & Darling-Hammond, 2012).

The current education model has traditionally been tailored to the needs of middle to upper-class White students, which may not be applicable enough for students from other subgroups, according to Howard (2010). Specifically, the educational needs of culturally and ethnic minority students are frequently neglected in the current system. This discrepancy is due to the fact that marginalized families and lower-income families are less likely to have access to preschool and early childhood education, which is the basis for academic achievement (Howard, 2010).

Furthermore, the achievement gap may reflect the long-standing policies and practices that have been established within a society that are inherently racist (Howard, 2010). For instance, the historic segregation of schools along racial lines has led to disparities in access to quality education, resources, and experienced teachers (Sawchuck, 2021). These inequalities are

further perpetuated by discriminatory policies and practices such as tracking, which often places students from marginalized communities into lower-level classes, where they may receive an inferior education compared to their White counterparts (Sawchuck, 2021).

It is essential to acknowledge and address the impact past policies have had on the education system (Ray & Gibbons, 2021). This entails implementing policies that actively promote equity and inclusion, such as improving the quality of education in under-resourced schools. By ensuring all students have access to a high-quality education that is responsive to their individual needs, schools can begin to close the achievement gap.

Critical Race Theory

Critical race theory (CRT) aims to demonstrate how racist policies have impacted educational outcomes in various public systems, including housing, criminal justice, healthcare, and education (Ray & Gibbons, 2021). The specific policies, such as segregated schools, underfunding of Black school districts, and discipline discrepancies, that have resulted in unjust and systemic disparities between Black and White people are examined in CRT (Sawchuck, 2021). Analyzing Minnesota public charter schools and traditional public schools can shed light on social processes and outcomes within these educational settings (Powers, 2007).

The roots of CRT can be traced back to the 1970s when law professors began investigating how race and racism have impacted American law and society (Borter, 2021). According to Copland (2021), CRT promotes academic frameworks that interpret the impact of past policies on power and oppression in the current society. In education, CRT critiques persistent inequalities in educational outcomes among student groups and argues that achievement disparities among racial groups are not due to academic performance but are manifestations of a public education system that has perpetuated racial inequality from the

beginning (Owens, 2021).

By examining current injustices, it is possible to address the essential questions about policy decisions in education that have led to the current situation (Owens, 2021). Traditional testing, grouping, and funding have continued to be issues that perpetuate the achievement gap between Black and White students and are a direct result of racist policies, legislation, and practices that have existed for centuries (Sleeter, 2016; Yeh, 2020).

The application of critical race theory sheds light on the historical and contemporary role of racism in perpetuating inequities in education, including the achievement gap. The enactment of Jim Crow Laws in 1874, which institutionalized racial segregation and created a separate system of education for White and Black students, contributed to disparities in educational opportunities and outcomes (Brown, 2004b). As a result, African Americans established private schools and self-taught themselves, often with limited resources and support (Clift, 1986).

The inequities in education were evident in the disparities in the quality of education received by White and African American students during this time period, yet many individuals accepted segregation as morally justifiable (Kumar & Hamer, 2012). This demonstrates the deep-rooted nature of racism in the education system, which continues to have an impact on students from marginalized communities today.

Racial redlining and zoning are examples of how past policies have contributed to unequal educational outcomes in today's youth. In the 1930s, officials from the government drew lines around places they considered to be poor financial risks, frequently because of the racial makeup of the population. As a result, banks in those communities stopped approving mortgage loans for Black people and other people of color. These laws assigned Black people to only be able to purchase property in some neighborhoods and White people to be able to

purchase property in other neighborhoods (Mohl, 1987, 2001). Some cities maintained racial zones in their master plans and awarded construction licenses accordingly (Mohl, 1987, 2001).

Redlining and racial zoning have impacted the academic achievement gap. First, racially segregated neighborhoods often lack access to high-quality schools and resources that are critical to academic success, such as experienced teachers, advanced courses, and adequate funding (Orfield & Lee, 2006). This means that students living in these neighborhoods are more likely to attend underfunded and under-resourced schools, which can negatively impact their academic achievement (Orfield & Lee, 2006). Additionally, racial segregation can create a sense of isolation and marginalization for students of color, leading to feelings of low self-esteem, decreased motivation, and reduced engagement in school. This can further perpetuate the achievement gap by limiting opportunities for academic success and perpetuating the cycle of poverty and inequality (Ogbu, 2003).

In 1954, Brown versus the Board of Education was a landmark court ruling that declared segregation in education unconstitutional and paved the way for equal academic opportunities for African American students in the United States (Orfield et al., 2012). However, even nine years after this ruling, there were still efforts to prevent African American students from enrolling in institutions of higher education, as evidenced by the actions of the governor of Alabama in trying to block two African American students from enrolling at the University of Alabama (Manojlovic, 2017). This highlights the ongoing resistance to desegregation and equal access to education, even in the face of legal rulings and policies (Logan et al., 2008). It also underscores the need for continued efforts to address the deep-rooted societal and structural barriers that contribute to the persistence of the achievement gap.

The United States' "War on Drugs" a more recent example of policy contributing to

discrepancies between Black and White citizens. According to the 1986 Anti-Drug Abuse Act, crack cocaine possession carried heavier penalties than more expensive powder cocaine possession. As a result, Black Americans are more likely to be found guilty of crack cocaine possession than White people, contributing to the school-to-prison pipeline and leading, in part, to the disproportionately high rates of incarceration among Black people in the United States. According to Vagins and McCurdy (2006), the average federal drug sentences given to Black defendants were 49% greater than those given to White offenders.

The schools-to-prison pipeline is a pervasive issue where students, particularly students of color, are pushed out of school and into the criminal justice system. The phenomenon is driven by a combination of factors, such as zero-tolerance policies, harsh disciplinary practices, and the over-policing of schools (García & Weiss, 2019). Additionally, the achievement gap, which is the persistent and significant disparity in academic achievement between different groups of students, also plays a role in reinforcing the schools-to-prison pipeline (Garcia & Weiss, 2019).

Students who struggle academically are more likely to be labeled as "troublemakers" and subjected to disciplinary measures, such as suspension and expulsion (Losen & Skiba, 2010). This negative labeling can lead to a disengagement from school and eventually dropping out, which can increase the likelihood of becoming involved in the criminal justice system (Balfanz & Byrnes, 2012). Students who are not able to attain an education are more likely to engage in criminal behavior, which can lead to interactions with law enforcement, further reinforcing the schools-to-prison pipeline and perpetuating the achievement gap (Balfanz & Byrnes, 2012). Ignoring such topics as these denies students part of their history and only increases the likelihood of race becoming an important topic (Howard, 2010).

The concentration of students in ethnically and economically similar schools may lead to a potential reduction in academic achievement. Specifically, the disadvantaged Black children attending schools in segregated high-poverty communities often reside at a considerable distance from middle-class neighborhoods (Rothstein, 2014). Multigenerational segregated poverty is a characteristic of many African American children today, and living in such high-poverty communities for several generations is an extra barrier to achievement (Rothstein, 2014). Children in underprivileged areas are more likely to be exposed to crime and violence, and they experience higher levels of stress that hinder their ability to study (Buka et al., 2001; Burdick-Will et al., 2010; Farah et al., 2006).

Past segregation policies can still be seen in today's classrooms. For example, in 1991, Black children typically attended schools where 35% of their classmates were White and, by 2011, that number had dropped to 28% (Orfield & Frankenberg, 2014; Orfield & Lee, 2006). Black students typically attended schools where 43% of their classmates had low incomes in 1988 and, by 2006, that number had increased to 59% (Orfield, 2009). Classes comprised of lower income students tend to be overcrowded and have fewer support systems. Therefore, teachers must place a greater emphasis on maintaining order and less on instruction, potentially compromising the academic achievement of all students (Hanushek & Rivkin, 2006).

Public Charter Schools

Public schools that operate as schools of choice are called public charter schools. Public charter schools represent an alternative educational option for elementary and secondary education children. For children in kindergarten through twelfth grade, public charter schools and traditional public schools offer free education and rely on money from the municipal, state, or federal governments. Both take part in the state's accountability and testing systems (National

Charter School Research Project, 2007).

In Minnesota, the first public charter school opened its doors in 1991. Bluffview Montessori School in Winona received the first charter, but City Academy in St. Paul opened its doors on September 7, 1992, to become the first operational public charter school (Minnesota Association of Charter Schools, 2023). Public charter schools offered a new educational strategy intended to improve student performance. The public charter school movement has strongly emphasized recruiting parents of underachieving, low-income students to enroll their children. Legislators directly impacted educational policies by ensuring that funds were available to educate low-income families, which was crucial for establishing public charter schools (Vergari, 2007). Charter schools produced smaller class sizes, greater flexibility, more time for one-on-one instruction, and improved student opportunities (Koonce & Harper, 2005).

Ember Reichgott Junge, a former state senator from Minnesota, was the inspiration behind the state's and country's first public charter school statute (Junge, 2014). Junge aimed to increase possibilities for K-12 public education by allowing entities other than local school districts to provide more flexible options outside the current framework. Chartering refers to the process of granting a public charter to a school. It is neither a building nor a school. Instead, a different organization has permitted that organization to deliver public education in the way that best meets the needs of those children (Junge, 2014). In exchange for independence, public charter school managers agree to be accountable under their performance contract (Junge, 2014). Public charters must adhere to their performance standards, or the school may close (Junge, 2014). Also, political consideration of cultural understanding and well-developed policies helped public charter school families (Loveless & Jasin, 1998).

Public charter schools across the nation tend to be more racially and ethnically diverse

than traditional public schools. Public charter schools historically serve proportionately more students of color and more students from low-income communities than traditional public schools (Xu, 2022). In the past 15 years, public charter schools have consistently had a higher portion of students of color (59.3%) compared to traditional public schools across the nation (53.4%; Xu, 2022).

The diversity of public charter schools compared to traditional public schools is an important factor to consider when evaluating their impact on student outcomes. Research has shown that students who attend racially and ethnically diverse schools have higher academic achievement and are more likely to develop positive attitudes towards people of different backgrounds (Gurin et al., 2002). Moreover, attending diverse schools can help reduce prejudice and improve intergroup relations, both of which are important for creating a more equitable society (Page-Gould & Mendoza-Denton, 2013).

Overall, understanding the racial and ethnic diversity of public charter schools is essential for evaluating their impact on students and society as a whole. While there is ongoing debate about the role of public charter schools in promoting or hindering integration, it is clear that these schools serve a disproportionate number of students of color and low-income students, and this diversity should be taken into account when evaluating their effectiveness.

Public charter schools are overwhelmingly located in urban communities where students of color are the majority student demographic group (National Alliance for Public Charter Schools, 2012). Public charter schools have the potential to reduce the educational achievement gap because their greatest gains arise from students with the lowest levels of achievement and growth (Center for Research on Education Outcomes, 2009, 2013); however, public charter schools tend to have insufficient access to curricular and co-curricular resources compared to

traditional public schools due to long standing funding inequality in public education, which may diminish their impact (Chapman & Donnor, 2015).

The question of whether public charter schools are a new form of segregation has been a topic of debate in the field of education. Some critics argue that public charter schools can exacerbate racial and ethnic segregation by drawing students away from traditional public schools (Frankenberg, Siegel-Hawley, & Wang, 2010). However, others argue that public charter schools can promote integration by providing families with more educational options and allowing students to attend schools outside of their assigned district (Welner & Carter, 2013).

Overall, the evidence on whether public charter schools are a new form of segregation is mixed. While some studies suggest that public charter schools can exacerbate segregation, other studies suggest that public charter schools can promote integration. It is important for policymakers to consider the evidence when making decisions about public charter school policy. However, it is also important to recognize that segregation is a complex issue that cannot be fully addressed by any one policy or approach (Frankenberg et al., 2010).

According to data from the 2020-2021 academic year, Minnesota public charter schools enrolled more English language learners (21% versus 7%), low-income students (50% versus 30%), and students of color (61% versus 34%) than the state average. Public charter schools serve around 1% fewer students who need special education services. In comparison to Minneapolis Public Schools (MPS), public charter schools in Minneapolis enroll more low-income children (67% vs 53% for MPS), English language learners (25% versus 18% for MPS), and students of color (71% versus 63% for MPS; Center for School Change, 2021). Public charter schools offer opportunities for students to break away from the standardized methods of traditional education. Public charter schools also offer an alternative educational experience that

allows student-centered instruction (Junge, 2000). Although there are differences within public charter schools, the model has the potential to produce results not seen within traditional public schools.

The design of each public charter school differs. For example, some public charter schools are run by large educational management groups, while others are independent organizations. Public charters may be transformed versions of existing public schools and may vary by how long they have existed. Some public charter schools are brand new, and some public charter schools have been open for many years. Public charter schools can be approved by colleges, localities, or nonprofit organizations, while many approvals are by school districts and state boards of education (National Charter School Research Project, 2007).

There are many types of public charter schools. STEAM public charter schools intentionally blend science, technology, engineering, the arts, and math (STEAM), as well as the practices that go along with them, to create a learning environment that is centered on the needs of the students (Alessi, 2018). In this environment, students investigate problems, come up with engineering solutions, and build evidence-based explanations of phenomena that occur in the real world (Alessi, 2018). In project-based public charter schools, student projects are viewed through the lens of design thinking. Like the scientific method, design thinking is a tried-and-true approach to investigation and experimentation (Alessi, 2018). At dual language or language immersion public charter schools, students learn all subjects in English for a portion of the day and all subjects in the target language for the remainder (Alessi, 2018). By situating the school inside a stimulating learning environment, such as a museum, place-based public charter schools engage pupils in the subject matter (Alessi, 2018).

Additionally, Montessori-style education, which has long been popular in preschools, is

now offered in elementary, middle, and high schools. It is a method of instruction in which every student might be engaged in individual work on various projects (Alessi, 2018). In environmentally-focused public charter schools, core skills are taught through the perspective of learning about the natural world and environmental challenges in classes and in nature (Alessi, 2018).

Online courses given by certified teachers are offered to students via virtual public charter schools. Virtual public charter schools provide students with specialized, individualized study plans that let them work at their own pace, spending more time on concepts or subjects that are difficult, and moving rapidly onto more difficult topics when they are prepared (Chen, 2023). College preparatory public charter schools place students on a road to success in a global workforce where it is assumed that everyone will attend college (Yednak, 2022).

As of 2019, America had 7,486 public charter schools with a total enrollment of over three million students. Additionally, 56% of public charter schools reside in urban areas (National Charter School Resource Center, 2022). Since the pandemic, America has seen a 7% increase in enrollment in public charter schools. This number has remained since its initial increase (Langreo, 2022). Meanwhile, a recent National Alliance for Public Charter Schools analysis examined enrollment statistics in 41 states and the District of Columbia; public schools suffered enrollment losses. The analysis found that at least 39 states experienced varying degrees of growth in public charter enrollment, ranging from less than 1% in Louisiana to almost 78% in Oklahoma. During the 2020-21 school year, public charters saw their overall enrollment rise by 7%, or close to 240,000 pupils, the highest growth in five years. This number has plateaued and remained stable since its initial increase (Langreo, 2022). Conversely, public school enrollment fell by 1.4 million students, or roughly 3.3%, from the 2019-20 school year to the current one

(National Alliance for Public Charter Schools, 2022).

The fact that state lawmakers continue to recognize that parents want more options for their children's education due to the pandemic may be why pro-public charter school legislation passed more frequently than expected in 2022 (Ziebarth, 2022). Proposed anti-public charter legislation was successfully resisted by California, Delaware, and Illinois (Ziebarth, 2022). Instead, more financing for public charter schools was given to states like Florida, Washington, New Mexico, Missouri, Massachusetts, Tennessee, and Colorado (Zeibarth, 2022). In addition, Kentucky passed a bill for permanent funding after passing its first public charter school law in 2017 (Zeibarth, 2022).

Comparing and Contrasting Public Charter Schools and Traditional Public Schools

There are many similarities between public charter schools and traditional public schools. Despite these similarities, there are numerous distinctions between the two (National Charter School Resource Center, 2022). Traditional public schools' teaching environment provide benefits, but they also present considerable obstacles. Traditional public schools frequently have full enrollments, which result in bigger class sizes and occasionally crowded learning environments. Smaller class sizes than those found in regular public schools are a predominant characteristic of public charter schools (National Charter School Resource Center, 2022). Smaller class sizes aim to create a close-knit and more attentive atmosphere (Strike, 2010). As a result, public charter school classes are frequently smaller overall, allowing for more individualized attention for each student (Carbral, 2019).

However, since some public charter schools cannot afford specialist roles, the investment in smaller class sizes makes it difficult to provide special education programming services for students (Bulkley & Fisler, 2003). Public charter schools receive $7,796 less per student on

average, which results in a funding disparity of 33% (DeAngelis et al., 2021). Finne (2018) suggested this means charters need to spend their money more wisely. Without the expense of private schools or the need to relocate, public charter schools provide a way for parents to send their children to a school that may be a better fit.

Teachers in traditional public schools must also follow government-approved curricula and have less control over what they teach and how they teach it due to stricter restrictions and a greater emphasis on testing (American University School of Education, 2020). Traditional public school teachers may become discouraged due to these restrictions on their professional liberties, which many perceive as a lack of respect for their expertise and judgment (American University School of Education, 2020). Traditional public school restrictions can also make the classroom less enjoyable and creative, lowering teachers' morale and students' achievement (American University School of Education, 2020). Conversely, teachers in public charter schools realized that they worked in a setting where they were underpaid and more misbehavior was prevalent. Teachers left certain public charter schools due to the lack of perks and the poorer caliber of children (Roch & Sai, 2017).

While traditional public schools and public charter schools must answer to governing bodies, public charter schools are not subject to the exact regulatory requirements as traditional public schools. For example, traditional public schools and public charter schools must follow the same regulations regarding state testing, nondiscrimination, health and safety, and the length of the school year. However, beyond that, public charter schools run independently under agreements with the institutions that gave each of them a unique charter (American University School of Education, 2020). Junge (2014) wrote that public charters exchange bureaucracy for accountability and regulation for results.

Public charter school academics are also varied. The foundation of public charter schools was the idea that creative teachers may continuously adjust to the requirements of their students without being constrained by the rules of traditional public schools (Junge, 2012). However, compared to traditional public schools, administrators of public charter schools frequently struggled to adequately oversee all the responsibilities involved in opening new institutions and meeting the needs of their students. These issues may put overworked teachers in a position where they are unhappy with their positions, swamped with administrative duties, and forced to handle demanding workloads (Roch & Sai, 2017).

Changes in Students' Educational Needs

The modern education model was established around the 1920s and has kept the same traditional structure (Neufeld, 2015). It took until the 20th century for school attendance to become customary. Only 14% of Americans over 25 earned their high school diplomas in 1910. The percentage of students who graduated from high school in 1970 was only 55%, and 90% of Americans who were 25 years of age or older in 2017 had a high school diploma (Kober et al., 2020).

Public schools in the early 20th century were not for all students. Non-White populations were excluded from schools. When these communities had access to public education, they were frequently underserved or forced by law or custom to attend separate schools. For example, most southern states passed legislation banning the instruction of African Americans in reading (Kober et al., 2020). The purpose for students who did attend school was to generally prepare for factory jobs (Kober et al., 2020).

Over the years, the purpose of education has evolved from preparing students to become efficient factory workers to equipping them with the necessary skills to succeed in a rapidly

changing world. According to Friedman and Manyika (2019), in today's world, where information is freely available, the focus of education should shift away from facts and information to skills that cannot be automated. The authors suggested that education should focus on fostering skills such as critical thinking, problem-solving, creativity, and empathy, which are essential for the 21st century workforce.

In today's workforce, right-brain skills such as creativity, imagination, and problem-solving are becoming more essential than ever before, as left-brain skills like analytical thinking and logic have become automated (Pink, 2006). This shift in focus has led to a need for alternative education and non-traditional settings that focus on personalization, interdisciplinary learning, and student-centered instruction, which have shown promise in reducing the achievement gap (Neufeld, 2015). However, addressing the achievement gap is not as simple as implementing more elaborate and demanding versions of existing initiatives (Brown, 2020; Farkas, 2020). Instead, schools need to be flexible in their delivery of education, providing educators and leaders with the freedom to meet the instructional needs of their students (Ubben et al., 2016). By adopting a flexible and personalized approach to education, schools can help students develop the critical right-brain skills that are increasingly valued in today's workforce, while also closing the achievement gap and promoting equity in education (Owens, 2019).

American education is ripe for change (Ward, 2023). COVID-19 caused major disruptions to the way that education was delivered. History has repeatedly proved that disruptions, although inconvenient at first, can lead to progress (Christenson et al., 2008). Shopping, home deliveries, entertainment, and even healthcare have improved because of the COVID pandemic (Ward, 2023). Although the pandemic was inconvenient and disruptive, schools need to do the same and use the experience as an opportunity to improve (Ward, 2023).

Disruptive innovations (such as the pandemic) can cause improvements over time that otherwise would not have occurred (Christenson et al., 2008). Therefore, the disruptions caused by COVID-19 make an ideal opportunity to examine the outdated traditional education structure.

One of the significant issues with the traditional education structure is that it creates standardization and conformity (Giroux, 2011). However, humans are diverse in talents, abilities, and cultures. Therefore, conformity will ultimately create nonconformists. Individuals who fit into the system will do well, and those who do not are likely to do poorly (Robinson & Aronica, 2015). The traditional public schools' education structure has resulted in a considerable achievement gap between Black and White students; consequently, it is time to examine whether educational systems, such as public charter schools, can help reverse historic trends and policy.

Organization of the Remainder of the Study

American schools are due for revision, and public charter schools may provide the kinds of flexibility, smaller class sizes, and individualized attention for students to help them thrive (Carbral, 2019). The concept that innovative teachers may continuously adapt to their pupils' needs without being restricted by the regulations of regular public schools serves as the cornerstone of public charter schools, providing teachers and educational leaders with more flexibility to reach their learners through experiential learning methods (Carbral, 2019).

In the following sections, Chapter 3 includes this study's research design, procedures, instruments, measures, methodologies, limitations, and ethical considerations. Chapter 4 reveals the findings, and Chapter 5 discusses implications and recommendations for future research.

Chapter 3: Methodology

Introduction

The purpose of this study was to investigate whether Minnesota public charter schools have a significantly different achievement gap between Black and White students than traditional Minnesota public schools. Minnesota has one of the worst disparities between Black and White students on the Minnesota Comprehensive Assessment in reading and math (Gruenwald & Nath, 2017). Public charter schools have existed since 1991 (National Charter School Resource Center, 2022); yet, it has not been explored whether or not public charter schools may have an impact on the achievement gap in Minnesota. Eliminating the longstanding achievement gap between Black and White students will address long-term gaps in socioeconomic status, mental health, and college enrollment (American Psychological Association, 2017; Lynch & Oakford, 2014; Ma et al., 2019).

Research Design

A qualitative, non experimental study was conducted to determine whether Minnesota public charter schools, as opposed to traditional public schools, have been more effective in narrowing the achievement gap between Black and White students. This study compared 535 traditional public schools to 45 public charter schools by utilizing publicly available MCA reading achievement data from the Minnesota Department of Education (2022). The study further compared 526 traditional public schools to 45 public charter schools by utilizing publicly available MCA math achievement data from the Minnesota Department of Education (2022). These data were used to measure the racial achievement gaps between Black and White students in reading and math standardized assessments. Because not all traditional schools had a sufficient sample size to report Black and White students' MCA scores, the number of traditional public

schools varies based upon the MCA test for analysis. No new data were collected because the study used a non-experimental secondary analysis.

Research Questions and Hypotheses

Two research questions were used to frame this study.

RQ1: Is there a statistically significant difference in the MCA reading proficiency achievement gap between Black and White students based upon whether they attend Minnesota public charter schools or Minnesota traditional public schools?

H_o1: There is no significant difference in the achievement gap on MCA reading proficiency between Minnesota public charter schools and Minnesota traditional public schools.

H_a1: There is a significant difference in the achievement gap on MCA reading proficiency between Minnesota public charter schools and Minnesota traditional public schools.

RQ2-Is there a statistically significant difference in the MCA math proficiency achievement gap between Black and White students based upon whether they attend Minnesota public charter schools or Minnesota traditional public schools?

H_o2: There is no significant difference in the achievement gap on MCA math proficiency between Minnesota public charter schools and Minnesota traditional public schools.

H_a2: There is a significant difference in the achievement gap on MCA math proficiency between Minnesota public charter schools and Minnesota traditional public schools.

Sampling Design

The researcher chose a convenient and purposive sample of schools because of the characteristics of the variables under investigation. The Minnesota Department of Education withholds its information from public reporting when student groups do not meet the designated cell size of 10; for instance, not all schools report MCA scores when numbers are too small for

race and ethnicity (Minnesota Department of Education, 2022). Since there are so few Black students in rural Minnesota schools, this study ultimately becomes a study of the difference in achievement gap between traditional public schools and public charter schools in urban and suburban areas.

Table 2

Number of Schools Meeting Criteria by School Type for MCA Reading

	Traditional public schools		Public charter schools	
School Classification	Count	Count Valid N %	Count	Count Valid N %
Elementary Schools	293	57.7%	29	64.4%
Middle Schools	116	22.8%	5	11.1%
Junior High	5	0.90%	6	13.3%
Senior High	75	14.8%	4	8.9%
Combined	5	0.90%	1	2.2%
Area Learning Centers (ALCs)	1	0.20%	0	0.0%
Distance Learning Programs	13	2.6%	0	0.0%

Table 3

Number of Schools Meeting Criteria by School Type for MCA Math

	Traditional public schools		Public charter schools	
School Classification	Count	Count Valid N %	Count	Count Valid N %
Elementary Schools	295	58.8%	29	46.0
Middle Schools	116	23.2%	5	7.9%
Junior High	5	0.9%	17	27.0%
Senior High	66	13.2%	1	1.5%
Combined	5	0.9%	6	9.5%
Area Learning Centers (ALCs)	3	0.5%	4	6.3%
Distance Learning Programs	11	2.2%	1	1.5%

Instrumentation

The MCAs served as the study's instrument. The MCAs are the standardized assessments used by the State of Minnesota to satisfy the federal Every Students Succeeds Act (2015). The data are available to the public to download in an Excel spreadsheet from the Minnesota Department of Education Data Center. The data are organized by multiple rows per school, district, grade level, and school type. The MCAs have undergone validity and reliability testing (Minnesota Department of Education, 2017). These tests gauge students' knowledge and skills per the educational requirements set forth by Minnesota (Minnesota Department of Education, 2019).

The following assessment ratings are available for students in the reading and math assessments:

- Does Not Meet the Achievement Standards
- Partially Meets the Achievement Standards
- Meets the Achievement Standards
- Exceeds the Achievement Standards

When a student achieves a "Meets the Achievement Standards" or "Exceeds the Achievement Standards", they are deemed "proficient" (Minnesota Department of Education, 2014); therefore, this study's "proficiency" designation was applied as the primary designator for the study. To calculate the dependent variable, the researcher used the percent of Black and White students in each school who were proficient in math and reading MCAs.

Variables

This study was a secondary analysis of existing data: the 2022 MCA reading data from 535 traditional public schools and 45 public charter schools and Minnesota Comprehensive

Assessment (MCA) math data from 526 traditional public schools to 45 public charter schools. The dependent variables for this analysis were the Minnesota Comprehensive Assessment proficiency achievement gaps for math and reading for these schools' White and Black students. Minnesota has one of the largest overall disparities between Black and White students in the nation (Gruenwald & Nath, 2017). Disparities in educational achievement rates translate into further discrepancies later in life, as Minnesota has the worst gaps in the nation for Black and White income, home ownership, and enrollment in postsecondary education (Horowitz et al., 2021).

MCA reading tests are taken in third, fourth, fifth, sixth, seventh, eighth, and tenth grades and MCA math tests are taken in third, fourth, fifth, sixth, seventh, eighth, and eleventh grades (Minnesota Department of Education, 2022). The independent variable for the study was whether the school was a traditional public school or public charter school in Minnesota. The type of school was provided by the Minnesota Department of Education, which classifies districts into 11 different types: public operating elementary and secondary independent districts, non-operating common school districts, special school districts, intermediate school districts, integration districts, charter schools, state schools or academies, education districts, miscellaneous cooperative districts, special education and/or vocational cooperative districts, and telecommunications districts. The study included only the schools that had district classifications of public operating elementary and secondary independent districts and charter schools.

Data Collection Procedure

MCA data were disaggregated by year (2022), subject (i.e., mathematics and reading), grade level for reading (i.e., third, fourth, fifth, sixth, seventh, eighth, and tenth), grade level for math (i.e., third, fourth, fifth, sixth, seventh, eighth, and eleventh) and Black and White student

groups for schools that met the required cell size. If a student group consists of fewer than 10 students, data are not provided in reports on the MDE website (Minnesota Department of Education, 2022). If a student received a score of Meets the Achievement Standards or Exceeds the Achievement Standards, they were classified as proficient.

Data Analysis

Data analysis will examine the average proficiency results of all grades on the reading and math MCA exams. White students' proficiency rating minus Black student proficiency rating on MCA math and reading were calculated for each of the traditional public schools and the public charter schools for MCA tests that were administered in 2022. The mean proficiency gaps were then calculated to represent the overall proficiency gap between Black and White students on MCA math and reading tests across all grade levels.

Two separate independent *t*-test models were used to analyze the data. This study examined whether the mean differences between Black and White students' math and reading MCA scores (the educational achievement gap) were statistically different between those who attended traditional public schools and those who attended public charter schools. The average racial achievement gaps in proficiency for White and Black students in the schools served as the dependent variables. The type of school evaluated, public charter or traditional public schools, was the independent variable. A Cohen's *d* value was calculated to measure the effect size of the differences between traditional public schools' and public charter schools' Black-White student educational achievement gap.

The purpose of a *t*-test analysis, the main indicator for the study, is to inform the researcher whether mean differences are statistically significant ($p < 0.05$). A *t*-test is a valuable tool for comparing two comparable populations with a single difference. In addition, a *t*-test can

quantify the statistical significance of a difference between two populations, which is frequently used to assess a program's effectiveness (Siegle, 2022). Public schools, both charter and traditional schools, were compared for this study.

Cohen's *d* is a practical application to measure the effect size of a *t*-test. The most significant finding of empirical investigations is the effect size, which emphasize and convey the conclusions' real-world relevance. Effect sizes are helpful since they make cumulative science easier. The sample size for follow-up research or comparing the effects of several studies can be determined using effect sizes (Lakens, 2013). The effect size was calculated using Cohen's *d* test for each analysis. Effect sizes are frequently described as being small ($d = 0.2$), medium ($d = 0.5$), and high ($d = 0.8$) based on suggested benchmarks. First, the mean difference in the achievement gap in reading and math in public charter and traditional public schools was calculated. Then, the result was divided by the combined standard deviation to yield Cohen's *d* (Lakens, 2013).

Limitations of Methodology

The first limitation is the unidentified number of students excluded from the results because of personally identifiable information. Besides a student's name or student identification number, personally identifiable information can also refer to individual combinations of demographic data like gender, age, and race/ethnicity that, because of the limited number, may allow an individual to be identified. The data have been de-identified and designated as available to the public after personally identifiable information is successfully removed. De-identified data cannot individually identify any student contained in a single report, from information combined from numerous reports, or the comparison of MDE reports with publicly available data (Minnesota Department of Education, 2022). The limitation resulted in much fewer schools in

the sample than are in Minnesota; for instance, Minnesota has 1,377 traditional public schools and 214 public charter schools, and over half of each school type was eliminated from the final sample because schools were unable to report either White or Black students' MCA proficiency in reading or math.

In its public reports, MDE does not provide information on specific students. Instead, groups of students in a particular grade at a specific school are reported. This process is referred to as summary data or aggregate reporting. Additionally, MDE withholds its information from public reporting when a student organization is limited to prevent us from accidentally disclosing personally identifiable information (PII) about specific students. The term for this is primary suppression. Data are typically not published in reports on the MDE website if a student group has fewer than 10 students (Minnesota Department of Education, 2022). Reporting on other BIPOC racial groups such as Hispanic, American Indian, Asian, Pacific Islander, and Middle Eastern significantly reduces the number of qualifying schools. In order for the analysis to work, subgroups have to match in each school to get a mean value representing the gap. For example in public charter schools, only 19 schools reported for American Indian students. In this scenario the overall public charter school sample would drop to 19, which is too small for a final analysis.

The second limitation is students who opt out of taking the MCA. Prior to the COVID-19 pandemic, an average of 98% of students participated in MCA exams; however, in 2021, only 77% of students in Minnesota participated in the MCAs (Heier, 2021). In 2022, 3% of students did not participate in the MCAs (Minnesota Department of Education, 2022). Participation in the MCAs is a parent/guardian or students' choice. Missing data from opting out of state examinations can positively or negatively impact teacher evaluations and school performance. The results of an assessment may indicate that a teacher or school needs to improve if a

sufficient number of high-achieving students opt out of participation (Beaver et al., 2014). It is impossible to determine how many opt-outs it would take to move the accountability scale from proficient to needing improvement because it depends on other aspects, including the teacher or school baseline level of effectiveness (Beaver et al., 2014). Opting out of assessments deprives the accountability system of information because of the emphasis on the significance of standardized test results in school accountability. Denying the system access to the data leads to incorrect or unreliable assumptions about the competence of instructors and institutions (Rosell, 2021).

A third limitation is the limited time frame of the study. Results from the 2022 MCA were used in the study. More longitudinal studies over multiple years would help aid in trends and outcomes.

A fourth limitation is the MCA. Over the years, state-mandated tests have come under increased scrutiny, with many challenging their validity, usefulness, and value for students' education (Center on Standards and Assessments Implementation, 2016). Also, since standardized tests are frequently used to evaluate student performance and guide educational initiatives, test takers may experience stress as a result of their importance (Heissel et al., 2019). During the week of high-stakes standardized testing, cortisol levels in students often increase by 15% (Heissel et al., 2019). Heissel et al. also discovered that students from communities with higher poverty rates experience larger cortisol surges. A similar increase or reduction in cortisol is linked to a 0.4 standard deviation decline in test results (Heissel et al., 2019).

Other possible indicators may be studied to determine growth and advancement in addition to MCA tests, which are not the only significant academic measure currently in use. As a result, it is feasible that alternate growth and achievement indicators would produce different

findings.

Ethical Considerations

The researcher obtained Collaborative Institutional Training Initiative (CITI) certification (Appendix A). According to the CITI framework, researchers should continuously be aware of the study's consequences and how they may affect the institution, families, and children. Therefore, no identifying information is provided in the study's findings to reduce potential harm to districts, schools, and students. The Minnesota Report Card site identifies schools and districts by name; however, students' names are not identified.

The Belmont Report mentioned ethical guidelines for researchers (1979), including recommendations for researchers on how to safeguard participants' welfare. The Belmont Report also emphasized the significance of getting participants' agreement. Participant agreement is gathered on the Minnesota Report Card website of the Minnesota Department of Education, which is used for public statistics. No identifiable data from the 2022 MCA scores are publicly available on the Minnesota Department of Education website (Minnesota Department of Education, 2019). Therefore, confidentiality was protected in this study. Due to the methods used for data analysis, permission for specific data is not required. The researcher retained an expert quantitative methodologist to avoid influencing the conclusions (Creswell, 2018). When writing the findings, it was crucial to neither suppress, misrepresent, or manufacture findings to meet the researcher's or audience's demands (Creswell, 2018).

Research must be conducted ethically. The researcher completed CITI's social science research ethics course (Appendix A). Additionally, Bethel University acquired IRB permission before this study's completion, which was received by the researcher on April 4th, 2023 (Appendix B)

Chapter 4: Results

Introduction

The goal of this study was to determine whether the achievement gap between Black and White students differs significantly between Minnesota public charter schools and traditional Minnesota public schools. Two separate independent *t*-test models were used to analyze the data. This study examined whether the mean differences between Black and White students' math and reading MCA scores (the educational achievement gap) were statistically different between those who attended traditional public schools and those who attended public charter schools. A Cohen's *d* value was calculated to measure the effect size of the differences between traditional public schools' and public charter schools' Black-White student achievement gap. This chapter contains a discussion of the descriptive and inferential analyses results.

Discussion of the Sample

The participants in this study consisted of school districts that underwent the MCA in the year 2022. The MCA reading tests were administered to students in grades three, four, five, six, seven, eight, and ten, while the MCA math tests were conducted in grades three, four, five, six, seven, eight, and eleven (Minnesota Department of Education, 2022). The research employed a secondary analysis approach utilizing existing data, specifically the 2022 MCA reading data from 535 traditional public schools and 45 public charter schools, as well as the MCA math data from 526 traditional public schools and 45 public charter schools. The categorization of schools was provided by the Minnesota Department of Education, which classifies districts into eleven distinct types encompassing public operating elementary and secondary independent districts, non-operating common school districts, special school districts, intermediate school districts, integration districts, charter schools, state schools or academies, education districts,

miscellaneous cooperative districts, special education and/or vocational cooperative districts, and telecommunications districts. The study solely included charter schools and public operating elementary and secondary independent districts as eligible schools for analysis.

Research Questions and Hypotheses

Two research questions framed this study.

RQ1: Is there a statistically significant difference in the MCA reading proficiency achievement gap between Black and White students based upon whether they attend Minnesota public charter schools or Minnesota traditional public schools?

H_o1: There is no significant difference in the achievement gap on MCA reading proficiency between Minnesota public charter schools and Minnesota traditional public schools.

H_a1: There is a significant difference in the achievement gap on MCA reading proficiency between Minnesota public charter schools and Minnesota traditional public schools.

RQ2: Is there a statistically significant difference in the MCA math proficiency achievement gap between Black and White students based upon whether they attend Minnesota public charter schools or Minnesota traditional public schools?

H_o2: There is no significant difference on the achievement gap in MCA math proficiency between Minnesota public charter schools and Minnesota traditional public schools.

H_a2: There is a significant difference on the achievement gap in MCA math proficiency between Minnesota public charter schools and Minnesota traditional public schools.

Descriptive Statistics

In reviewing the numbers of Black and White students who had reported test results by public charter and traditional public schools, the descriptive statistics demonstrated that public charter schools tended to have smaller ratios in student demographics compared to traditional

public schools. In addition, public charter schools tend to have lower enrollment numbers compared to traditional public schools. The average number of White students who took the MCA math or reading tests in traditional public schools tended to be close to five times the average number of Black students tested in traditional public schools (Table 2). However, the average number of White students who took the MCA math or reading tests in public charter schools tended to be close to double the average number of Black students tested in public charter schools.

Table 4

Number of Black and White Students Who Completed MCAs by School Type

	Charter Schools Reading MCA		Traditional Public Schools Reading MCA		Charter Schools Math MCA		Traditional Public Schools Math MCA	
	mean	*range*	*mean*	*range*	*mean*	*range*	*mean*	*range*
Black Students	44.45	10-397	39.50	10-372	43.56	10-395	38.53	10-370
White Students	85.55	10-676	152.96	10-1,611	83.52	10-663	146.49	10-1,598

Additionally, in reviewing the descriptive statistics for the percent of Black and White students who tested proficient in reading and math, the results suggested that White students tended to have higher rates of proficiency than Black students regardless of whether they attended public charter schools or traditional public schools (Table 3). White students tended to have higher proficiency rates for reading and math at public charter schools and traditional public schools, respectively. Black students tended to have higher proficiency rates for reading and math at public charter schools compared to traditional public schools. The gaps appear to be highest in traditional public schools for math, followed by traditional schools for reading, public charter schools for reading, and public charter schools for math.

Table 5

Number of Black and White Students Who Were Proficient on MCAs by School Type

	Charter Schools Reading MCA		Traditional Public Schools Reading MCA		Charter Schools Math MCA		Traditional Public Schools Math MCA	
	%	*SD*	*%*	*SD*	*%*	*SD*	*%*	*SD*
Black Students	39.70	19.41	35.10	15.45	26.47	21.13	26.26	16.89
White Students	62.20	17.49	61.50	13.31	48.22	23.19	56.08	18.19
Achievement Gap	22.50	18.05	26.40	15.23	21.74	16.86	29.82	14.83

Research Question One

The first research question was, "Is there a statistically significant difference on the MCA reading proficiency achievement gap between Black and White students based upon whether they attend Minnesota public charter schools or Minnesota traditional public schools?" The researcher used an independent samples *t*-test to answer the question. There are several assumptions of *t*-tests: the data are continuous, the independent variables used independent samples, the data have been randomly sampled, there is homogeneity of variance (e.g., the variability between teachers who did and did not have a mentor was similar) and the distribution is approximately normal (Field, 2009). The dependent variables were continuous in this study, and the schools used in the study were only classified as traditional public schools or public charter schools (so the independent variable had two independent groups). The data were not randomly sampled but were instead provided by all schools in Minnesota. The Levene's (1960) test for homogeneity of variance suggested that the variances were not equal across the groups ($p > 0.05$), which is described below. Therefore, the researcher determined that most assumptions for *t*-tests were met for the first research question, and proper steps were completed when assumptions were not met.

The results of an independent sample *t*-test suggested that there were statistically significant ($p < 0.05$) differences in the MCA reading test achievement gap between public charter schools and traditional public schools. The results of the Levene's (1960) test for equality

of variances was statistically significant ($p = 0.004$), so the results were interpreted for equal variances not assumed. The results suggest that public charter schools had a significantly lower achievement gap compared to traditional public schools, $t(1, 1{,}517) = 2.186$, $p < 0.05$ (Table 4). The effect size of the difference, as measured by Cohen's *d*, suggested the differences were small ($d = 0.252$). Thus, the researcher rejected the null hypothesis.

Table 6

Results of Independent Samples t-Test for MCA Reading Test Proficiency Gap

	Charter Schools		Traditional Public Schools						
	M	*SD*	*M*	*SD*	*95% CI*	*df*	*t*	*p*	*d*
Achievement Gap	22.50	18.05	26.40	15.23	0.87, 6.92	1,517	2.186	0.015	0.252

Research Question Two

The second research question was, "Is there a statistically significant difference in the MCA math proficiency achievement gap between Black and White students based upon whether they attend Minnesota public charter schools or Minnesota traditional public schools?" The researcher used an independent samples *t*-test to answer the question. The dependent variables were continuous in this study and the schools used in the study were only classified as traditional public schools or public charter schools (so the independent variable had two independent groups). The data were not randomly sampled but were instead provided by all schools in Minnesota. The Levene's (1960) test for homogeneity of variance suggested that the variances were not equal across the groups ($p > 0.05$), which is described below. Therefore, the researcher determined that most assumptions for *t*-tests were met for the second research question, and proper steps were completed when assumptions were not met (Field, 2009).

The results of an independent sample *t*-test suggested that there were statistically significant ($p < 0.05$) differences in the MCA math achievement gap between public charter

schools and traditional public schools. The results of the Levene's test for equality of variances were statistically significant ($p < 0.001$), so the results were interpreted for equal variances not assumed. The results suggested that public charter schools had a significantly lower achievement gap compared to traditional public schools, $t(1, 1{,}493) = 4.877$, $p < 0.001$ (Table 5). The effect size of the difference, as measured by Cohen's *d*, suggested the differences are moderate ($d = 0.539$). Thus, the researcher rejected the null hypothesis.

Table 7

Results of Independent Samples t-Test for MCA Math Test Proficiency Gap

	Charter Schools		Traditional Public Schools						
	M	*SD*	*M*	*SD*	*95% CI*	*df*	*t*	*p*	*d*
Achievement Gap	21.74	16.86	29.82	14.83	5.16, 10.99	1,493	4.877	< 0.001	0.539

In summation, the researcher rejected the null hypothesis one as results suggested public charter schools had a significantly lower achievement gap between Black and White students on the MCA reading compared to traditional public schools in 2022. Null hypothesis two is also rejected. The results suggested that public charter schools had a significantly lower achievement gap between Black and White students on the MCA math compared to traditional public schools (Table 6).

Table 8

Overview of Results

Null Hypotheses	*Conclusion*	*Test*	*p*	*Summary*
H_o1: There is no significant difference on the achievement gap on MCA reading proficiency between Minnesota charter schools and Minnesota traditional public schools.	Reject	*t*-test	< 0.05	The researcher rejects null hypothesis one as results suggest charter schools had a significantly lower achievement gap between Black and

				White students on the MCA reading compared to traditional public schools
H_o2: There is no significant difference on the achievement gap on MCA math proficiency between Minnesota charter schools and Minnesota traditional public schools.	Reject	*t*-test	< 0.05	The research rejects null hypothesis two as results suggest charter schools had a significantly lower achievement gap between Black and White Students on the MCA math compared to traditional public schools.

Summary of Findings

The persistent disparity in academic achievement rates between Black and White students is a well-documented issue (Hanushek et al., 2019). It is crucial to investigate whether alternative school models can help address this gap. Thus, the aim of this study was to compare the achievement gap between traditional Minnesota public schools and Minnesota public charter schools. The findings suggested that public charter schools may be more inclusive and diverse than traditional public schools. Despite this, the data indicates that White students consistently outperform Black students, regardless of school type. However, the study also found that public charter schools exhibited significantly lower achievement gap rates between Black and White students in MCA math and reading tests, compared to traditional public schools. These results indicated that public charter schools could be a promising alternative for reducing the achievement gap between Black and White students.

Chapter 5: Discussion, Implications, and Recommendations

Overview of Study

The goal of this study was to determine whether the achievement gap between Black and White students differed significantly between Minnesota public charter schools and traditional Minnesota public schools. The reading and math proficiency gaps between Black and White students in Minnesota are among the greatest in the nation (Gruenwald & Nath, 2017). Despite the fact that public charter schools have been around since 1991 (National Charter School Resource Center, 2022), it has not been determined whether or not they may have an impact on Minnesota's achievement gap. Long-standing disparities in socioeconomic status, mental health, and college enrollment may be addressed through closing the achievement gap between Black and White children (American Psychological Association, 2017; Lynch & Oakford, 2014; Ma et al., 2019).

Research Questions

Two research questions framed this study.

RQ1: Is there a statistically significant difference in the MCA reading proficiency achievement gap between Black and White students based upon whether they attend Minnesota public charter schools or Minnesota traditional public schools?

RQ2: Is there a statistically significant difference in the MCA math proficiency achievement gap between Black and White students based upon whether they attend Minnesota public charter schools or Minnesota traditional public schools?

Hypotheses

There were two null hypotheses and two alternative hypotheses (four total) proposed within the study. Null hypothesis one and two were both rejected.

Null Hypotheses One: There is no significant difference in the achievement gap on MCA reading proficiency between Minnesota public charter schools and Minnesota traditional public schools.

Alternative Hypotheses One: There is a significant difference in the achievement gap on MCA reading proficiency between Minnesota public charter schools and Minnesota traditional public schools.

Null Hypothesis Two: There is no significant difference in the achievement gap on MCA math proficiency between Minnesota public charter schools and Minnesota traditional public schools.

Null Hypothesis Two: There is a significant difference on the achievement gap on MCA math proficiency between Minnesota public charter schools and Minnesota traditional public schools.

Discussion of Results

The data analysis found that Minnesota public charter schools have a significantly smaller achievement gap ($p < 0.05$) between Black and White students on both the MCA reading and math assessments. The effect size of the difference suggested the differences are small ($d = 0.252$) for reading. However, the effect size of the difference suggested the differences are moderate ($d = 0.539$) for math.

While those results are encouraging, the disparities between Black and White students in MCA proficiency rates are still evident in the data. Regardless of whether White students attended public charter schools or traditional public schools, White students had higher proficiency than Black students on both the MCA reading and math assessments. Black students who attended public charter schools showed higher levels of proficiency in the MCA reading

assessment than Black students who attended traditional schools (39.70% compared to 35.10%). However, Black students who attended public charter schools showed relatively even levels of proficiency in the MCA math assessment compared with Black students who attended traditional schools (26.47% compared to 26.26%).

One potential explanation for the lower achievement gap rates observed in public charter schools is their greater autonomy and flexibility in decision-making, allowing them to tailor their educational programs to the specific needs of their student populations (National Charter School Research Project, 2007). Public charter schools are often given more freedom to experiment with innovative instructional practices and curricula that better meet the needs of diverse learners (National Charter School Research Project, 2007). This flexibility may allow public charter schools to offer more individualized attention to struggling students and more advanced instruction to high-achieving students, which could help to reduce the achievement gap between Black and White students. Furthermore, public charter schools may attract teachers who are more committed to addressing issues of equity and diversity in education, which could further contribute to the smaller achievement gaps observed in these schools (Strike, 2010).

It is common for students to start doing better in school when they find topics relevant and rewarding to them (Friedman & Manyika, 2019). Connecting meaning and relationships to one's education is critical for future success (Friedman & Manyika, 2019). Therefore providing a choice such as a specific public charter school may help students find a learning environment unique to one's circumstance. Within the context of education, critical race theory (CRT) criticizes traditional approaches to schooling that may perpetuate racial inequality and marginalization. CRT argues that traditional education systems have historically and systematically disadvantaged students of color, and that race-based inequities continue to exist in

contemporary educational institutions (Ladson-Billings, 1998).

Regarding public charter schools specifically, CRT analyzes the ways in which these schools impact the educational experiences of students of color (Wong, 2019). CRT may question whether public charter schools effectively address the systemic issues that have historically disadvantaged students of color, or whether they simply reproduce existing power structures and educational inequities (Wong, 2019). CRT may examine the ways in which public charter schools prioritize certain forms of knowledge and how this affects the educational outcomes of students from different racial backgrounds (Wong, 2019). Overall, CRT offers a theoretical lens for analyzing the ways in which race and racism intersect with education policy and practice.

Critical race theory is the idea that U.S. systems such as education, housing, criminal justice, and healthcare are embedded with laws, policies, and regulations that produce different outcomes according to race (Ray & Gibbons, 2021). Despite recent legislative efforts to outlaw critical race theory (Ray & Gibbons, 2021), educators should be committed to supporting students in exploring the structures in which all work and live to create a better future for all (Alvarez, 2021). Effective laws should encourage openness, promote free speech, and explore educational opportunities (Copland, 2021). Public charter schools may support the ideas of critical race theory by providing a school choice option that differs from a traditional structure that has shown persistent inequalities and educational outcomes amongst student groups.

Implications for Practice

The results of this study demonstrated that the achievement gap between Black and White students is significantly lower at public charter schools compared to traditional schools. In comparison to the state average, Minnesota public charter schools enrolled more English

language learners (21% versus 7%), low-income children (50% versus 30%), and students of color (61% versus 34%). In comparison to Minneapolis Public Schools (MPS) public charter schools enroll more low-income students (67% versus 53% for MPS), English language learners (25% versus 18% for MPS), and students of color (71% versus 63% for MPS) than MPS (Center for School Transformation, 2021). Although public charter schools are more diverse and differ from one another, the concept can potentially yield outcomes not found in conventional public schools (Hassell, 2011). Districts may use the findings to improve services to underserved groups and close individual achievement gaps by acknowledging that diverse student populations may have better results in non-traditional settings. This would reinforce the benefit that public charter schools provide.

Public charter schools offer the freedom to design innovative learning environments outside of the typical schools' departmental structure (Christianson, 2008). There has been an ongoing need in education for creative schools to be established outside of traditional districts (Christianson, 2008). Finding educational models that fulfill the needs of certain students could be solved through public charter schools. All students in a particular geographic area are targeted by traditional schools, yet not every student has the same set of circumstances in their life (Christiansen, 2008). The need for creative schools has only increased as student diversity has increased (Byrd, 2020; Howard & Navarro, 2016).

Test score gaps imply that traditional school models have become increasingly rigid and cannot accommodate various students (Christiansen, 2008). Public charter schools have the potential to match student needs with the appropriate school type regardless of geographic location (Charlton, 2021). Districts should view public charter schools as an opportunity to create appropriate options for a student's specific situation (Christiansen, 2008). Achievement

results of charter schools may influence districts to create school choice options, such as magnet schools, of their own. A magnet school, according to the U.S. Department of Education (2018), is a public elementary school, public secondary school, public elementary education center, or public secondary education center that provides a unique curriculum that draws large numbers of students from various racial backgrounds. In order to desegregate racially segregated schools or to lessen racial isolation in a district or consortia of districts, magnet schools draw students across traditional school boundaries with innovative curricula. Innovative, theme-based curriculum used in magnet schools may emphasize particular disciplines, like the visual and performing arts or STEM subjects. They may also use instructional approaches, such dual language, the Montessori method, or International Baccalaureate programs (U.S. Department of Education, 2018).

When the early 1900s saw the priority of universal education, geographic categorization of schools made sense (Kober et al., 2020). Children had to be sent to schools that were close to home because there were not many cars or public transportation options (Christiansen, 2008). Nonetheless, many schools continue to operate under the implicit assumption that students are best served within a given geographic region (Christiansen, 2008); however, this study suggests the idea that public charter schools have the potential to match students' needs with the appropriate school type regardless of geographic location. Thus, families should be allowed access and transportation to a public charter school that meets the students' individual needs.

This study highlights the limitations of the conventional school model in accommodating various students. The test score gaps imply that the traditional public school model has become increasingly rigid and cannot adequately serve the needs of all students, which is especially true for students from historically marginalized groups who continue to experience persistent

achievement gaps.

Not everyone is a good fit for public charter schools. Instead, they are intended for particular groups of students who have not done well in traditional schools (Christiensen, 2008). One of the few strategies for school reform is differentiation. Legislatures should not put effort into a single educational model that is designed for all students (Office of Legislative Auditor, 2010). Policymakers can use the findings of this study to inform decisions and improve educational services for underserved groups. They can work with school districts to develop targeted interventions and programs that address the specific needs of marginalized student groups.

The results of this study are also meaningful for hiring future teachers. One of the significant challenges facing school districts is the lack of available teacher candidates. People do not want to enter an obsolete system of education (Akhtar, 2020). As a result, fewer people are enrolling in university education preparatory courses. Since 2010, the amount of people training to become teachers has dropped by 33%. In some states, enrollment in teacher preparation programs has dropped by over 50%. As of 2020, 108,000 to 307,000 teaching openings were available in the United States (Akhtar, 2020). However, 44% of teachers leave the profession within the first five years (Brown, 2020). Students in urban and poorer neighborhoods that are more culturally and racially diverse are the worst off and have the highest shortages (Darling-Hamond, 1998). In addition, students from culturally and racially diverse schools are more likely to have underqualified and out-of-field field teachers (Howard, 2010).

Due to the incredibly bureaucratic nature of its governing structure, critics of American public education claim that the country is unable to effectively teach all students. Layers of rules weighed down by paperwork and regulations are attached to the majority of federal government

financing; as a result, federal programs are challenging to implement or change (Kohler & Lewis, 2002). Since 1980, American public education has undergone reform after reform, with few lasting for an extended period of time and little to show for the effort other than frustration and a lack of clarity in the reforms' goals (Kohler & Lewis, 2002). Lack of respect and loss of hope that the system will change is the leading cause of frustration and exhaustion amongst teachers (Walker, 2022). District and political officials need to deal with this situation to stop the exodus of teachers leaving the profession.

Offering different school options may help meet the demands associated with teacher shortages by offering a relevant rewarding career, closing the achievement gap, and creating a needed resurgence in education (West, 2016). Based on these findings, it cannot be definitively concluded that public charter schools are superior to traditional public schools in educating students regardless of their race, but public charter schools provide a hopeful opportunity for students and teachers.

Recommendations for Future Research

This study's findings support the effect of practices occurring in Minnesota public charter schools compared to traditional schools in regard to the educational achievement gap between Black and White students. The present study analyzed the academic performance of Black and White students in reading and math at public charter schools and traditional public schools. The results showed that Black students scored on average 4% higher in reading on the MCA at public charter schools, while they performed about the same in math on the MCA at both types of schools. Conversely, White students scored about the same on the reading MCA at public charter schools, but lower on the math MCA compared to traditional public schools. Based on these findings, it cannot be definitively concluded that public charter schools are superior to traditional

public schools in educating students regardless of their race.

The study aimed to examine the effectiveness of public charter schools in reducing the achievement gap between Black and White students in reading and math. The results indicated that while public charter schools may be more effective at closing the achievement gap in reading, the gaps still persist in both reading and math. White students performed worse on the math MCA at public charter schools, while Black students performed the same on the math MCA in charter schools as in traditional public schools. Overall, public charter schools may be better at reading than math, but the gaps remained over 20%, indicating the need for further improvement and indicating that public charter schools are not a panacea for reducing the achievement gap.

Further research is necessary to explore the reasons students attending charter schools performed higher than students attending traditional schools on the reading MCA but lower on the math MCA. Such research could identify the factors that contribute to the effectiveness of public charter schools in improving academic outcomes and reducing achievement gaps, particularly among students from diverse backgrounds. Strategies could include a review of curriculum, observing instructional practices, and interviewing teachers. In addition, researchers can explore the underlying factors that contribute to the positive effects of public charter schools. For instance, they can examine the teaching methods and curriculum used in these schools, the level of parental involvement, and the support provided to students. These types of data can help researchers to ascertain the best practices that can be adopted in traditional schools to improve the educational outcomes of all students.

While public charter schools have the potential to reduce the achievement gap, the present study highlights that the gaps still persist in both reading and math. Within the results

was a large degree of variance as indicated by the standard deviation. A potential further study would examine the cause of large degree of variance within public charter schools. Instruction type and classroom format may provide information on the cause of the variance. Also looking at high and low achieving students and comparing school models may provide insights into which school model may be more effective for different levels of students.

Disaggregating MCA data by subgroups such socioeconomic status, different racial and ethnic groups, special education, and English learners should occur in future studies. Data disaggregation enables a more thorough investigation. Researchers can expand on this study by conducting a follow-up study that focuses on the impact of public charter schools on specific subgroups, such as students from different racial and ethnic backgrounds, those with special needs, or those from low-income families. The study can be designed to include a larger sample size and a more diverse set of participants to increase the generalizability of the findings.

Subgroups should also include special education students, which can be denied access to public charter schools in Wisconsin, but cannot be denied in Minnesota. Some Minnesota public charter schools may be comprised of mostly special education students, which means achievement scores may be impacted. This example also demonstrates how state laws should be examined. State law might influence the outcomes by the way states establish public charter schools in MN versus how public charter schools are established in other states. The variance in state law might lead to different outcomes and is an opportunity for further research.

This study also analyzed data at a given point in time (2021-2022). A continued longitudinal study over several years may provide trend data. Since 2021-2022 was the first full year of school post COVID-19, further analysis should continue to provide trend data on the impact of COVID-19 on educational outcomes. Such a study can track the progress of students

over several years, comparing their academic achievement before, during, and after the pandemic. This study may identify any lasting effects of the pandemic on educational outcomes and call school districts to address them.

Longitudinal studies can identify the factors that contributed to the differential impact of the pandemic on students' academic achievement. For example, researchers can investigate how access to technology, parental involvement, and school resources influenced students' academic success during the pandemic. Such information can be used to develop targeted interventions to support students who were most affected by the pandemic. Researchers can also collect additional longitudinal data on other relevant factors that may affect educational outcomes, such as changes in school policies, funding, and teacher turnover.

Researchers can investigate the long-term effects of public charter schools on students' academic and socio-economic outcomes such as the post-secondary education and employment outcomes of public charter school graduates compared to those of traditional school graduates. These approaches would enable researchers to examine the impact of these factors on students' academic achievement over time.

A qualitative study could offer valuable insights into the dynamics of public charter schools and traditional public schools that are not captured by standardized test scores (Frankenberg et al., 2010). Researchers employ qualitative methods such as observations, interviews, document analyses, and focus groups to understand the experiences of students, teachers, and administrators in these schools, enabling them to identify factors contributing to the differences in educational outcomes (Frankenberg et al., 2010; Creswell & Creswell, 2018). These interviews also explore support levels, quality of instruction, and available resources to identify areas for improvement (Creswell & Creswell, 2018). Overall, qualitative methods help

researchers identify key factors that contribute to the success of both public charter schools and traditional public schools, facilitating the development of strategies to enhance educational outcomes for all students.

Furthermore, a mixed-methods approach that combines qualitative and quantitative methods can provide a more comprehensive understanding of the dynamics of public charter schools and traditional public schools. Such an approach can triangulate findings from different sources and to identify areas where more research is needed. For example, researchers can use quantitative methods to identify patterns in test scores and qualitative methods to explore the factors that contribute to these patterns (Creswell & Creswell, 2018).

Public charter schools are diverse in nature, with different models and structures that can impact their effectiveness in reducing the achievement gap (National Charter School Research Project, 2007). Some public charter schools are designed to serve the less affluent, while others may focus on more advantaged students (National Charter School Research Project, 2007). Moreover, some public charter schools may have a supportive local community, while others may face opposition from school districts and teacher unions (National Charter School Research Project, 2007). These differences in public charter school models may impact their ability to close the achievement gap.

In addition, public charter schools differ in the amount of funding they receive, which can influence the quality of education and resources available to students. Betts and Hill (2006) found that public charter schools received, on average, 25% less funding than traditional public schools. This disparity in funding can impact the types of programs and resources available to students, potentially affecting academic outcomes. Given the diversity among public charter schools, it is essential to conduct research that focuses on individual models. A study that

concentrates on a particular type of public charter school may not necessarily apply to all public charter schools. Therefore, further research that examines the achievement gap within individual public charter school models would be beneficial in identifying effective strategies for closing the achievement gap.

Concluding Comments

The data analysis found that Minnesota public charter schools have a significantly smaller achievement gap between Black and White students on both the MCA reading and math. The findings of this study show that students can successfully attend public charter schools and avoid the standardized methods used in traditional education. Although each public charter school is unique, the idea has the potential to produce results not seen in traditional public schools.

Students have unique needs, and public charter schools may give students the individualized attention, flexibility, and smaller class sizes they need to succeed (Carbral, 2019). Public charter schools are built on the idea that creative educators can continually adapt to the needs of their students without being constrained by the rules of traditional public schools, giving educators and instructional leaders more freedom to engage students (Junge, 2014).

Districts should not consider public charter schools as rivals, rather as an option that may work well for specific student demographics (Christensen, 2008). Not everyone is a suitable fit for public charter schools. They are instead designed to potentially benefit certain groups of children who have struggled in traditional schools (Christensen, 2008). The findings of this study demonstrate the potential effectiveness of public charter schools and a legitimate choice for families.

References

Adamson, F., & Darling-Hammond, L. (2012). Funding disparities and the inequitable distribution of teachers: Evaluating sources and solutions. *Education Policy Analysis Archives, 20*(37). https://epaa.asu.edu/ojs/article/view/1053

Akhtar, A. (2020). *The number of Americans training to become teachers has dropped by a third since 2010, and it's creating a critical educator shortage that will affect every state.* Business Insider. https://www.businessinsider.com/one-third-fewer-people-are-training-to-become-teachers

Albrecht, D. (2021). COVID-19 in rural America: Impacts of politics and disadvantage. *Rural Sociology, 87*(1), 94–118

Alessi, V. (2018). *6 types of charter schools: Reinventing the way kids learn.* California Charter School Association. https://info.ccsa.org/blog/6-types-of-public-schools-reinventing-the-ways-kids-learn

Alvarez, B. (2021). *We need to teach the truth about systemic racism, say educators.* NEA Today.

American Psychological Association. (2017). *Education and socioeconomic status.* https://www.apa.org/pi/ses/resources/publications/education

American Psychological Association. (2021). *U.S. adults report highest stress level since early days of the COVID-19 pandemic.* https://www.apa.org/news/press/releases/2021/02/adults-stress-pandemic#:~:text=The%20most%20common%20were%20feelings,elevated%20levels%20for%20many%20Americans

American University School of Education. (2020). *Charter school vs. public school: Differences*

in teaching environments. https://soeonline.american.edu/blog/charter-school-vs-public-school/

Balfanz, R., & Byrnes, V. (2012). *The importance of being in school: A report on absenteeism in America's public schools.* Johns Hopkins University Center for Social Organization of Schools. https://ies.ed.gov/ncee/edlabs/regions/west/relwestFiles/pdf/508_ChronicAbsenteeism_NatlSummary_Balfanz_Byrnes_2012.pdf

Banales, J., Marchand, A., Skinner, O., Anyiwo, N., Rowley, S., & Kurtz-Costes, B. (2019). Black adolescents' critical reflection development: Parents' racial socialization and attributions about race achievement gaps. *Journal of Research on Adolescence, 20*(s2), 403-417. doi:10.1111./jora.12485

Barton, T. (2020). *Improving self efficacy through service learning.* Serve Learn. https://servelearn.co/blog/improving-self-efficacy-through-service-learning/

Basch, C. E. (2011). Healthier students are better learners: High-quality, strategically planned, and effectively coordinated school health programs must be a fundamental mission of schools to help close the achievement gap. *Journal of School Health, 81*(10), 650-662. https://doi.org/10.1111/j.1746-1561.2011.00640.x

Beaver, J. K., Westmass, L., & Sludden, J. (2014). *The potential effects of opting out of state tests in Pennsylvania*. RFA.

Belmont Report. (1979). *The Belmont report: Ethical principles and guidelines for the protection of human subjects of research.* hhs.gov/ohrp/humansubjects/guidance/belmont.html

Bessel, V. M. D. (2014). *The body keeps the score: Brain, mind, and body in the healing of*

trauma. Penguin Random House.

Betts, J., & Hill, P. (2006). *Key issues in studying charter schools and achievement: A review and suggestions for national guidelines.* National Charter School Research Project. https://files.eric.ed.gov/fulltext/ED495843.pdf

Blazar, D., & Schueler, B. (2022). Why do school districts matter? An interdisciplinary framework and review. *EdWorkingPapers, 22*(581). https://doi.org/10.26300/58M4-FS65

Borter, G. (2021). What 'critical race theory' means and why it's igniting debate. *Reuters.* https://www.reuters.com/legal/government/what-critical-race-theory-means-why-its-igniting-debate-2021-09-21/

Brown, F. (2004a). The first serious implementation of Brown: The 1964 civil rights act and beyond. *Journal of Negro Education, 73*(3), 182-190.

Brown, F. (2004b) The road to Brown, its leaders, and the future. *Journal of Education & Urban Society, 36*(3), 255-265.

Brown, G. (2020). *Why new teachers are burning out early.* Rewire. https://www.rewire.org/new-teachers-burning-out-early/

Brown, K. M., Benkovitz, J., Muttillo, A. J., & Urban, T. (2011). Leading schools of excellence and equity: Documenting effective strategies in closing achievement gaps. *Teachers College Record, 113*(1), 57-96. https://epaa.asu.edu/ojs/article/view/772

Buka, S. L., Stichick, T. L., Birdthistle, I., & Earls, F. J. (2001). *Youth exposure to violence: Prevalence, risks, and consequences, 71(3),* 298-310. https://doi: 10.1037/0002-9432.71.3.298. American Journal of Orthopsychiatry.

Byrd, M. (2020). Capitalizing on differences: Keys to unlocking the achievement gap.

Multicultural Learning and Teaching, 15(2), 1-10. https://doi: 10.1515/mlt-2019- 0003

Cabral, C. (2019). *What is a charter school? Is one right for you?* Prep Scholar. https://blog.prepscholar.com/what-is-a-charter-school-definition

Center for Research on Education Outcomes. (2009). *Multiple choice: Charter school performance in 16 states.* Stanford University. https://ies.ed.gov/ncee/wwc/Study/67286

Center for Research on Education Outcomes. (2013). *National charter school study.* Stanford University.

Center for School Change. (2021). *Newest (2021) Minnesota charter and district school demographics report.* Word Press

Center on Education and the Workforce. (2022). *America's divided recovery.* Georgetown University.

Center on Standards and Assessments Implementation. (2016). *A review of statewide assessment opt-outs. CSAI report.* Center on Standards and Assessments Implementation

Chapman, T. K., & Donor, J. K. (2015). Critical race theory and the proliferation of U.S. charter schools. *Equity and Excellence in Education, 48*(1), 137-157. https://doi.org/10.1080/10665684.2015.991670

Charlton, C. (2021). *How charters provide a flexible learning environment.* Metro Parent. https://www.metroparent.com/sponsored-content/flexible-learning-environment-gvsu-charter-schools/

Chen, G. (2023). *Virtual charter schools: Pros and cons of the growing trend.* Public School Review. https://www.publicschoolreview.com/blog/virtual-charter-schools-pros-and-cons-of-the-growing-trend#:~:text=Virtual%20charter%20schools%20provide%20students,the%202008%2D0

9%20school%20year.

Christensen, C. M., Horn, M. B., & Johnson, C. W. (2008). *Disrupting class: How disruptive innovation will change the way the world learns*. McGraw-Hill.

Clift, V. (1986). *Educating the American negro.* Prentice-Hall, Inc.

Clotfelter, C. T., Ladd, H. F., & Vigdor, J. (2005). Who teaches whom? Race and the distribution of novice teachers. *Economics of Education Review, 24*(4), 377-392.

Collins, J. (2005). *Good to great and the social sectors: A monograph to accompany good to great.* Harper Collins.

Colgren, C., & Sappington, N. (2015). Closing the achievement gap means transformation. *NCPEA Education Leadership Review of Doctoral Research, 2(1).*

Comer, J. (2005). The rewards of parent participation. *Educational Leadership, 62*(6), 38-42.

Copland, J. (2021). *How to regulate critical race theory in schools: A primer and model legislation.* Manhattan Institute.

Cowen, J. (2017). Oversight or overregulation? Debating school choice accountability. *Brookings.* https://www.brookings.edu/blog/brown-center-chalkboard/2017/01/12/oversight-or-overregulation-debating-school-choice-accountability/

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage.

Crowley, M. (2018). Education in a world of compliance. *Maelstrom. https://crowleym.com/2018/03/22/education-in-a-world-of-compliance/*

Dagget, B. (2014). *Addressing current and future challenges in education.* International Center for Leadership in Education.

DeAngelis, C., Wolf, P., Syftestad, C., Maloney, L., & May, J. (2021). *Making it count: The productivity of public charter schools in seven U.S. cities.* Department of Education Reform University of Arkansas.

Dewey, J. (1938). *Experience and education*. Collier-MacMillan Canada Ltd.

Dewey, J. (1927). *The public and its problems*. H. Holt.

Elias, M. J., White, G., & Stepney, C. (2014). Surmounting the challenges of improving academic performance: Closing the achievement gap through social-emotional and character development. *Journal of Urban Learning, Teaching, and Research, 10,* 14–24.

Farkas, G. (2020). *Achievement gaps and multi-tiered systems of supports in California*. Policy Analysis for California Education (PACE).

Federal Interagency Forum on Child and Family Statistics. (2019). *America's children: Key national indicators of well-being, 2019.* National Center for Health Statistics. https://www.childstats.gov/pdf/ac2019/ac_19.pdf

Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). SAGE.

Fildes, K. (2019). *Experiential charter schools: A multi case study.* Western Connecticut State University. https://repository.wcsu.edu/educationdis/86

Frankenberg, E., Siegel-Hawley, G., & Wang, J. (2010). Choice without equity: Charter school segregation. *Educational Policy Analysis Archives, 18*(1), 1-43.

Freedberg, L. (2019). *Poverty levels in schools key determinant of achievement gaps, not racial or ethnic composition, study finds.* Ed Source. https://edsource.org/2019/poverty-levels-in-schools-key-determinant-of-achievement-gaps-not-racial-or-ethnic-composition-study-finds/617821

Friedman, T., & Manyika, J. (2019). *The world's gone from flat, to fast, to deep* [Video file].

YouTube. https://www.youtube.com/watch?v=V_yyo5kNtag

Fullan, M. (2020). *Leading in a culture of change*. Jossey-Bass.

Gallagher, S., & Brown, C. (2020). *How experiential learning can improve educational and workforce equity.* EdSurge. https://www.edsurge.com/news/2020-12-17-how-experiential-learning-can-improve-educational-and-workforce-equity

Garcia, D. (2008). Academic and racial segregation in charter schools: Do parents sort students into specialized charter schools? *Education and Urban Society, 40*(5), 590-612.

García, E., & Weiss, E. (2019). *Equity and social justice in education: A practitioner's perspective.* Teachers College Press.

Giroux, H. A. (2011). *On critical pedagogy.* Bloomsbury Publishing.

Goldhaber, D., Quince, V., & Theobald, R. (2016). *Has it always been this way? Tracing the evolution of teacher quality gaps in U.S. public schools (*Working paper 171). National Center for Analysis of Longitudinal Data in Education Research (CALDER).

Grissom, J. A., & Redding, C. (2016). Discretion and disproportionality: Explaining the underrepresentation of high-achieving students of color in gifted programs. *AERA Open, 2*(1), 1-25.

Government Accountability Office. (2022). *K-12 education: Student population has significantly diversified, but many schools remain divided along racial, ethnic, and economic lines.* https://www.gao.gov/assets/gao-22-104737.pdf

Graham, M. A. (2007). Art, ecology, and art education: Locating art education in a critical place based pedagogy. *Studies in Art Education, 48*(4), 375-391.

Grunewald, R., & Batbold, D., (2013). T*he economic impact of closing the achievement gap: A*

theoretical construct. Federal Reserve Bank of Minneapolis.

Grunewald, R., & Nath, A. (2019). *A statewide crisis: Minnesota's education achievement gaps.* Federal Reserve Bank of Minneapolis. https://www.minneapolisfed.org/policy/education-achievement-gaps/executive-brief/

Gurin, P., Dey, E. L., Hurtado, S., & Gurin, G. (2002). Diversity and higher education: Theory and impact on educational outcomes. *Harvard Educational Review, 72*(3), 330-366.

Hamilton, J. (2014, August 6). *Scientists say child's play help build a better brain.* MPR News. https://www.npr.org/sections/ed/2014/08/06/336361277/scientists-say-childs-play-helps-build-a-better-brain

Hammond-Darling, L. (1998). *Unequal opportunity: Race and Education.* Brookings Institution Press.

Hanushek, E. A., Kain, J. F., Rivkin, S. G., & Branch, G. F. (2017). Charter schools and segregation: An empirical investigation. *Journal of Policy Analysis and Management, 36*(1), 31-57. https://doi.org/10.1002/pam.21945

Hanushek, E. A., Talpey, L. M., Peterson, P. E., & Woessman, L. (2019). The achievement gap fails to close. *Education Next, 19*(3), *8-17*

Hassel, B. C. (2011). The charter school advantage: 7 practices that build stronger schools and communities. *Education Next, 11*(3), *50-57.*

Hawkins, B. (2014, July 17). *Ember Reichgott Junge confronts seven myths and misconceptions about charter schools.* Minn Post. https://www.minnpost.com/learning-curve/2014/07/ember-reichgott-junge-confronts-seven-myths-and-misconceptions-about-charter/

Heier, B. (2021, August 27). *Minnesota student test scores drop in 2021, MAPS remains above*

state average. KEYC. https://www.keyc.com/2021/08/27/minnesota-student-test-scores-drop-2021-maps-remains-above-state-average/

Heissel, J., Adam, E., Doleac, J., Figlio, D., & Meer, J. (2019). *Test-related stress and student scores on high-stakes exams.* National Bureau of Economic Research. https://www.nber.org/digest/mar19/test-related-stress-and-student-scores-high-stakes-exams#:~:text=Such%20a%20rise%20or%20fall,taking%20may%20diminish%20their%20scores

Hildebrand, D., (2021). *John Dewey*. The Stanford encyclopedia of philosophy. https://plato.stanford.edu/archives/win2021/entries/dewey

Horowitz, B., Kim, M., Starling, L., & Tchourumoff, A. (2021). *Systemic racism haunts homeownership in Minnesota.* Federal Reserve Bank of Minneapolis

Howard, C. (2010). *Why race and culture matter in schools: Closing the achievement gap in America's classrooms.* Teachers College Press.

Johnston, H. (2011). *Closing the gaps*. [Research brief]. Education Partnerships, Inc.

Junge, D. (2012). *Zero change of passage: The pioneering charter school story.* Beaver's Pond Press.

Junge, E. (2014). *How the pioneering charter school story can transform your future.* Houghton Mifflin Harcourt.

Kober, N., Rentner, D., & Ferguson, M. (2020). *History and evolution of public education in the US.* Center on Education Policy. https://eric.ed.gov/?id=ED606970

Koehler, P. (2002). *Criticism of public education: Inequality of opportunity, highly bureaucratic systems, achievement-based outcomes, school choice, reform after reform.* U.S. Department of Commerce. https://education.stateuniversity.com/pages/2341/Public-

Education-Criticism.htm

Koonce, D. A., & Harper, Jr., W. (2005). Engaging African American parents in the schools: A community-based consultation model. *Journal of Educational and Psychological Consultation, 16*(2), 55-74.

Krasnoff, B. (2019). *A practitioner's guide to educating traumatized children*. Education Northwest. https://educationnorthwest.org/sites/default/files/resources/educating-traumatized-children.pdf

Ladson-Billings, G. (1998). Just what is critical race theory and what's it doing in a nice field like education? *International Journal of Qualitative Studies in Education, 11*(1), 7-24. https://doi.org/10.1080/095183998236863

Ladson-Billings, G. J. (2005). Is the team all right? Diversity and teacher education. *Journal of Teacher Education, 56*(3), 229-234.

Lakens, D. (2013). *Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs.* National Library of Medicine. https://pubmed.ncbi.nlm.nih.gov/24324449/

Langreo, L. (2022, November 30). *Charter school enrollment holds steady after big early pandemic growth.* Education Week. https://www.edweek.org/policy-politics/charter-school-enrollment-holds-steady-after-big-early-pandemic-growth/2022/11

Lencioni, P. (2006). *Silos, politics, and turf wars: A leadership fable about destroying the barriers that turn colleagues into competitors*. Jossey-Bass.

Levene, H. (1960). Robust tests for equality of variances. In I. Olkin (Ed.), *Contributions to probability and statistics* (pp. 278-292). Stanford University Press.

Logan, J., Oakley, D., & Stowell, J. (2008). School segregation in metropolitan regions. The

impacts of policy choices on public education. *American Journal of Sociology, 113*(6), 1611-1644.

Losen, D. J., & Skiba, R. J. (2010). *Suspended education: Urban middle schools in crisis.* The Civil Rights Project at Harvard University.

Loveless, T., & Jasin, C. (1998). Starting from scratch: political and organizational. *Educational Administration Quarterly, 34*(1), 9-30.

Lynch, R., & Oakford P. (2014). *The economic benefits of closing educational achievement gaps: Promoting growth and strengthening the nation by improving the educational outcomes of children of color.* CAP. https://www.americanprogress.org/article/the-economic-benefits-of-closing-educational-achievement-gaps/

Ma, J., Pender, M., & Welch, M. (2019). *Education pays 2019: The benefits of higher education for individuals and society.* College Board. https://research.collegeboard.org/media/pdf/education-pays-2019-full-report.pdf

Manoijlovic, B. (2017). Betraying Brown: Rule 3535, school re- segregation in the Twin Cities, and the chance to change course. *Law and Inequity, A Journal of Theory and Practice 35*(2), 419. http://scholarship.law.umn.edu/lawineq

Matheny, K., Thompson, M., Townley-Flores, C., & Reardon S. (2022). *Uneven progress: Recent trends in academic performance among U.S. school districts.* Stanford Center for Education Policy Analysis. https://cepa.stanford.edu/sites/default/files/wp22-02-v102022.pdf

Metzler, M., Merrick, M. T., Klevens J., Ports, K. A., & Ford, D. C. (2017). Adverse childhood experiences and life opportunities: shifting the narrative. *Child Youth Services Review, 72,* 141-149. https//doi: 10.1016/j.childyouth.2016.10.021

Minnesota Department of Education. (2017). *Every Student Succeeds Act: Minnesota State Plan Executive Summary.* https://education.mn.gov/mdeprod/idcplg?IdcService=GET_FILE&dDocName=mde072430&RevisionSelectionMethod=latestReleased&Rendition=primary

Minnesota Department of Education. (2018a). *Technical manual for Minnesota standards-based and English language proficiency accountability assessments.* https://https://education.mn.gov/MDE/dse/test/mn/Tech/

Minnesota Department of Education. (2018b). *Parent fact sheet.* https://education.mn.gov/MDE/fam/tests/

Minnesota Department of Education. (2018c). *Minnesota report card*. https://rc.education.state.mn.us

Minnesota Department of Education. (2023). *Statewide longitudinal education system*. www.sleds.mn.ed.gov

Modan, N. (2022). *Report: Charter school enrollment grew 7% during pandemic.* K-12 Dive.

Mostellar, F. (2019). The case for smaller classes...and for evaluating what works in the schoolroom. *Harvard Magazine*. https://www.harvardmagazine.com/2019/08/case-for-smaller-classes

National Association of Secondary School Principals. (2005). *Creating a culture of literacy: A guide for middle and high school principals*. https://www.nassp.org/wp-content/uploads/2020/05/Creating-a-Culture-of-Literacy-Guide.pdf

National Charter School Research Project. (2007). *Inside charter schools: A systematic look at our nation's charter school*. https://files.eric.ed.gov/fulltext/ED495842.pdf

National Charter School Resource Center. (2022). *What is a charter school: A brief history of*

charter schools in America. https://www.schoolchoicefacts.org/?gclid=Cj0KCQiA0oagBhDHARIsAI-BbgeTzvPuytQ9RK8QBnQr3MzXplYnOZ3024aVDpgwd6BPHs9ANLBoguEaAqs9EALw_wcB#programs

Neufeld, A. (2015). Successful alternatives to traditional school structure: A literature review. *BU Journal of Graduation Studies in Education, 7*, 85-93.

Ogbu, J. U. (2003). *Black American students in an affluent suburb: A study of academic disengagement.* Lawrence Erlbaum Associates. https://psycnet.apa.org/record/2003-04692-000

Orfield, G., Kuscera, J., & Siegel-Hawley, G. (2012). *E pluribus separation? Deepening double segregation for more students.* The Civil Rights project. https://civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/mlk-national/e-pluribus...separation-deepening-double-segregation-for-more-students

Orfield, G., Ee, J., Frankenber, E., & Siegal-Hawley, G. (2016). *Brown at 62: School segregation by race, poverty and state.* UCLA Civil Rights Project. https://escholarship.org/uc/item/5ds6k0rd

Orfield, G., & Lee, C. (2007). *Historic reversals, accelerating resegregation, and the need for new integration strategies.* UCLA Civil Rights Project. https://civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/historic-reversals-accelerating-resegregation-and-the-need-for-new-integration-strategies-1

Owens, R. G. (2019). Developing the whole person in the 21st century: An examination of student-centered learning environments and their effect on holistic student development.

International Journal of Teaching and Learning in Higher Education, 31(1), 91-103.

Owens, J. (2021). *Why critical race theory matters in policy-making now more than ever.* New America. https://www.newamerica.org/education-policy/edcentral/why-critical-race-theory-matters-in-policy-making-now-more-than-ever/

Page-Gould, E., & Mendoza-Denton, R. (2013). The advantages and challenges of diversifying higher education. *Perspectives on Psychological Science, 8*(5), 520-526.

Pegg, M. (2022). *D is for Dewey: His approach to education.* The Positive Encourager.

Pierce, D., & Gill, B. (2018). The effects of charter schools on district finances. *Education Next, 18*(2).

Pink, D. (2006). *A whole new mind: Why right-brainers will rule the future.* Riverhead.

Porter, A. (2022). *Rethinking the achievement gap.* Penn Graduate School of Education. https://www.gse.upenn.edu/news/rethinking-achievement-gap

Powers, J. M. (2007). *The relevance of critical race theory to educational theory and practice. Journal of Philosophy of Education, 41*(1), 151–166. https://doi.org/10.1111/j.1467-9752.2007.00546.x

Ray, R., & Gibbons, A. (2021). *Why are states banning critical race theory?* Brookings Institution Press.

Reeves, D. B. (2018, November 19). *Educational leadership with Douglas Reeves* [Video]. https://www.youtube.com/watch/v=Dis2rTPLldc&feature=emb

Robinson, K., & Aronica, L. (2015). *Creative schools: the grassroots revolution that's transforming education.* Vikings.

Roch, C., & Sai, N. (2017). *Charter school teacher job satisfaction. Education Policy, 3*1(7), 951- 991. https://doi.org/10.1177/0895904815625281

Rosell, P. (2021). *Opting out in Minnesota: Examining the variables associated with opting out of the Minnesota comprehensive assessment.* Bethel University. https://spark.bethel.edu/etd/703/

Rodenbush, K. (2015). *The effects of trauma on behavior in the classroom*. http://www.montereycoe.org/Assets/selpa/Files/Presentation-Materials/The%20Effects%20of%Trauma%20onBehavior%20in%20he%20classroom.pdf

Rothstein, R. (2013). Why our schools are segregated. *Educational Leadership, 70*(8), 50–55. http://www.ascd.org/publications/educationalleadership/may13/vol70/num08/Why-Our-Schools-Are-Segregated.aspx

Sawchuck, S. (2021, May 18). *What is critical race theory, and why is it under attack?* Education Week. https://www.edweek.org/leadership/what-is-critical-race-theory-and-why-is-it-under-attack/2021/05

School House Connection. (2021). *Charter schools and students experiencing homelessness: practices and recommendations for success.* The McKinney-Vento Act Report. https://schoolhouseconnection.org/wp-content/uploads/2020/11/Charter-Schools-and-Students-Experiencing-Homelessness-Report-2020.pdf

Slater, L. (2013). *Building high-performing and improving education systems: Teachers*. Education Trust. https://eric.ed.gov/?id=ED54681

Souers, K & Hall, P. (2016). *Fostering resilient learners: Strategies for creating a trauma-sensitive classroom.* ASCD.

Steinberg, P., & Yang, H. (2020). *Teacher effectiveness and improvement in charter and traditional public schools.* Thomas B. Fordham Institute.

https://fordhaminstitute.org/national/research/still-rising-charter-school-enrollment-and-student-achievement-metropolitan-level?gclid=EAIaIQobChMIx-XRwOXP_wIVgQ9lCh3wQQJYEAAYASAAEgLK_vD_BwE

Strike, K., (2010). Charters schools, choice, and distributive justice: What evidence do we need? *Theory and Research in Education, 8*(1), 63–78. https://doi.org/10.1177/147787850935634

Supovits, J. (2023). *Is high-stakes testing working?* Penn Graduate School of Education https://www.gse.upenn.edu/review/feature/supovitz

Banning, L. (Director). (2006). *The History of American Academic Education [Film].* Insight Media.

Theobald, P. (2009). *Education now: How re-thinking America's past can change its future*. Paradigm.

Siegle, D. (2022). *Education research basics.* NEAG School of Education, University of Connecticut. https://researchbasics.education.uconn.edu/

Sleeter, C. E. (2017). Critical race theory and the Whiteness of teacher education. *Urban Education, 52*(2), 155-169. https://doi.org/10.1177/0042085916668957

Tirado, A., & Shneyderman, A. (2020). Student achievement growth in early elementary grades and persistence of the achievement gap. *Miami Dade County Public Schools, 1909,* 1-11.

Ubben, G., Hughes, L., & Norris, C. (2016). *The principal: Creative leadership for excellence in schools.* Pearson.

United Negro College Fund Inc. (2022). *K-12 disparity and facts statistics.* https://uncf.org/pages/k-12-disparity-facts-and-stats

United States Census Bureau. (2018). *Race.*

https://www.census.gov/topics/population/race/about.html

Vagins, D. J., & McCurdy, J. (2006). *Cracks in the system: 20 years of the unjust federal crack cocaine law*. American Civil Liberties Union. https://www.aclu.org/sites/default/files/pdfs/drugpolicy/cracksinsystem_20061025.pdf

Veney, D., & Jacobs, D. (2021). *Voting with their feet: A state-level analysis of public charter school and district public school enrollment trends.* National Alliance for Public Charter Schools. https://www.publiccharters.org/our-work/publications/voting-their-feet-state-level-analysis-public-charter-school-and-district

Vergari, S. (2007). *The politics of charter schools. Educational Policy, 21*(1), 15-39.

Walker, T. (2022). *Beyond burnout: What must be done to tackle the educator shortage.* NEA. https://www.nea.org/advocating-for-change/new-from-nea/beyond-burnout-what-must-be-done-tackle-educator-shortage

Ward, M. (2023). 'Be courageous': Education is ripe for change, and it starts with innovation. *District Administration*. https://districtadministration.com/be-courageous-education-is-ripe-for-change-and-it-starts-with-innovation/

Welner, K. G., & Carter, P. L. (2013). *Closing the opportunity gap: What America must do to give every child an even chance.* Oxford University Press.

Welner, K. G., & Carter, P. L. (2013). Closing charter schools' policy loopholes. *Phi Delta Kappan, 95*(5), 38-43. *https://doi.org/10.1177/003172171309500509*

West, M. R. (2016). *School choice and the future of American democracy.* Routledge.

Williams, M. (2017). John Dewey in the 21st century. *Journal of Inquiry & Action in Education, 9*(1).

Wong, Y. H. (2019). Critical race theory and charter schools: Race, resegregation, and research.

Urban Education, 54(5), 647-671. https://doi.org/10.1177/0042085916689016

Xu, Y. (2022). *Understanding school districts in a charter school context.* National Alliance for Public Charter Schools. https://eric.ed.gov/?id=ED625516

Yednak, C. (2022). *What is a college prep or preparatory school?* Great Schools https://www.greatschools.org/gk/articles/college-prep-school/

Yeh, S. S. (2020). Educational accountability, value-added modeling, and the origin of the achievement gap. *Education and Urban Society, 52*(8), 1181-1203. https://doi.org/10.1177/0013124519896823

Young, S. (2008). *The neurobiology of human social behaviour: An important but neglected topic.* National Library of Medicine. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2527715/

Ziebarth, T. (2022). *Innovation in action: 2022 state legislative highlights for public charter schools.* National Alliance for Public Charter Schools.

Zyngier, D. (2017). How experiential learning in an informal setting promotes class equity and social and economic justice for children from "communities at promise": An Australian perspective. *International Review of Education, 63*(1), 9-28 https://doi 10.1007/sll 159-017-9621 -X

Appendix A

CITI certification

CITI PROGRAM

Completion Date 03-Jan-2021
Expiration Date 03-Jan-2023
Record ID 40134397

This is to certify that:

Dustin Julius

Not valid for renewal of certification through CME.

Has completed the following CITI Program course:

Doctoral students - Basic/Refresher
(Curriculum Group)
Doctoral students - Basic/Refresher
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Bethel University

CITI
Collaborative Institutional Training Initiative
101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Verify at www.citiprogram.org/verify/?w4bd9c8fc-59ec-4a14-bd30-fee3d1510438-40134397

Appendix B

IRB Approval

BETHEL UNIVERSITY

Institutional Review Board
3900 Bethel Drive
PO2322
St. Paul, MN 55112

April 4, 2023

Dustin Julius
Bethel University
St. Paul, MN 55112

Re: Research Project: *Differences in Black and White Students' Achievement Gap between Public Charter Schools and Traditional Schools in Minnesota*

Dear Dustin Julius,

On April 4, 2023, the Bethel University Level Two Institutional Review Board completed the review of your proposed study and approved the above referenced study.

Please note that this approval is limited to the project as described on the most recent Human Subjects Review Form documentation, including email correspondence. Please be reminded that it is the responsibility of the investigator to bring to the attention of the IRB Committee any proposed changes in the project or activity plans, and to report to the IRB Committee any unanticipated problems that may affect the welfare of human subjects. The approval is valid until April 3, 2024.

Sincerely,

Safary Wa-Mbaleka, EdD, PhD
Chairperson, EdD in Leadership Level Two IRB Committee