**Meeting the Needs for Students with Disabilities in Inclusion Classrooms
Co-teaching: Role of Teachers and Equitable Teaching Practices**

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Students with disabilities have been educated in the general education classroom since the 1990s. General education teachers are expected to provide instruction to students with disabilities while working alongside the special education teacher. Providing instruction to students with disabilities in general education classrooms without purposely creating shared expectations and building professional relationships has hurt all students school experience. Forming positive co-teaching relationships takes time and requires planning to address challenges that may arise between co-teachers as well as providing instruction for all students in the class. This study uses Improvement Science to understand teachers' perceptions of co-teaching in inclusion classrooms and support them in understanding and applying co-teaching models. Three primary themes emerged: (a) the importance of planning for co-teaching, (b) the variation in instructional strategies employed in inclusion classrooms, and (c) the variation in student and teachers' perceptions of co-teaching. In this study, I also found that multiple strategies that teachers use for students with disabilities were also used for students without disabilities.

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1.0 Naming and Framing the Problem

1.1 Broader Problem Area

According to federal law students who get special education services should learn as much as possible in the same classrooms as other students. This is known as the *least restrictive environment* (LRE). Individuals with Disabilities Education Act (IDEA) is a law that makes available free appropriate public education to eligible children with disabilities throughout the nation and ensures special education and related services to those children outlines the requirements for the least restrictive environment. Schools must ensure that special classes, separate schooling, or other removals of students with disabilities from the regular educational environment occur only if the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily (IDEA, 2019). When students who receive special education services are placed in general education classrooms, teachers have an obligation to provide instruction to meet their needs just the same as students without disabilities. However, not all teachers provide effective instruction to students with disabilities. And given the coincidence and overrepresentation of Black children in special education, this lack of effective teaching impacts disparities between Black and white children. In particular, Black children often receive inferior instruction that is neither high quality nor culturally responsive (Sebastian, 2022).

In my place of practice, for instance, I have noticed two trends that negatively impact Black students and connect to both their over-referral into special education and their mis-instruction in

inclusion classrooms. During my years as a special education teacher, I have witnessed general education teachers who are quick to suggest a student's need for special education as a support or service to "fix" the problem of a student not knowing. This is a school and district culture issue of how teachers view and discuss students. For example, while teaching remotely during the shutdown of schools due to the pandemic, a general education teacher noted the need for special education for an 8th-grade Black boy who appeared not to know basic facts when completing word problems in a one-on-one session. I replied to the general education teacher that special education is not going to help the student learn his basic facts. Further, I have regularly experienced generic approaches to instruction in inclusion classrooms, consisting of whole group direct instruction and paper-pencil assignments for a double block math period (lasting 94 minutes). Whole-group direct instruction does not provide differentiation and, further, is not a culturally responsive approach to teaching. This approach does not meet individual student needs and does not support the needs of students labeled with disabilities. Placing students with disabilities in inclusion classrooms to have access to the general education curriculum sounds good in theory. At my school district when students are labeled with a disability and put in inclusion classes to show that they are being treated equal to others but are not provided with the support and differentiated/individualized instruction that they need, they are not receiving an effective education. My problem of practice focuses on the disparities faced by special education students in inclusive education math classrooms, with a focus on the experiences of Black students.

1.2 Organizational System

1.2.1 Context and Relevant History

Pittsburgh Public Schools (PPS) is the largest of 43 school districts in Allegheny County and the second largest in Pennsylvania. PPS serves approximately 20,000 students and consists of 57 schools:

- K-5 schools: 23

- K-8 schools: 11

- 6-8 Schools: 7

- 6-12 Schools: 5

- 9-12 High Schools: 4

- Special Schools: 7[1]

There are approximately 4,000 employees in the district, and 2,000 teachers, of which nearly 84% are white and approximately 16% are teachers of color. There are 95 native languages spoken by students and approximately 1,000 English Language Learners enrolled in PPS.

Inequities between Black and white students in PPS are apparent, with Black students underrepresented in gifted and overrepresented in special education. For instance, Black students make up 51% of the district's population, but only 17% of those students are enrolled in district's gifted program. In contrast, white students comprise 66% of the gifted program, but make up 32%

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[1] Special schools consist of PPS Gifted Center, PPS online academy, an alternative school for grades 6-12 for credit recovery, 1 school for students with multiple and medical disabilities in grades K-12, 1 school that serves students from age 5 to 21 years old with multiple disabilities, 1 full-time special education center serving grades 3 through 12, and 1 short term alternative school servicing grades 6-12 for students with chronic disruptive behaviors.

of the overall population. These placements not only negatively impact Black students, but also serve to segregate Black and white students both within schools and across the district. Other race categories in PPS include bi-racial: 8%, Hispanic:3%, Asian: 4% and American Indian 0.1%.

PPS has been and is currently tackling years of inequity between white and Black students and among schools within the school district. There are both historical and contemporary issues. In the late 1980s, the Advocates for Black students in the Pittsburgh Public Schools, a grassroots community group organized to respond to the continuing failure of PPS to provide a quality education for Black students. On August 24, 1992, five Black parents filed a discrimination complaint with the Pennsylvania Human Relations Commission (PHRC) against the Pittsburgh Board of Education. The complaint alleged the Board discriminated against Black students by (a) hiring a white superintendent candidate who was less qualified than a Black candidate, (b) suspending and disciplining Black students at a higher rate than white students, (c) distributing class grades disproportionately based on race, (d) maintaining a large academic achievement gap between Black and white students, and (e) excluding Black students from special programs and projects, such as Gifted or Scholars because of their race. After many appeals by the school district, the opinion of the Commonwealth Court four years later on September 23, 1996, stated that the Advocates lacked standing to challenge the school district's hiring of a white superintendent. The Court dismissed one issue and upheld the remaining issues. For three decades, the Advocates, beginning with the administration of Superintendent Dr. Wallace, presented testimony and recommendations to the Board to address the horrendous racial disparities, which continued with all subsequent superintendents.

The Equity Advisory Panel was formed in October 2006 with the responsibility of monitoring, advising, and reporting on the district's progress. The Equity Office's mission

statement is to provide whatever support and accommodations are necessary to ensure all students have access to the same opportunities and give students whatever they need to achieve the outcome. The PHRC Conciliation Agreement/Consent Order signed in 2006 between the Advocates and the Board detailed 94 issues of concerns that the district must remedy within a five-year period ending September 2012. Since there was no substantial progress at the end of the agreement, a Memorandum of Understanding (MOU) was agreed to for an additional two-year period ending August 2014 and was extended through August 2020 due to progress not being met in eliminating racial disparities. A new five-year MOU to rectify the racial disparities that have resulted in immense opportunity gaps for Black students in PPS was approved on August 24, 2022, the 30th anniversary of the original MOU. PPS is still battling the same inequities from more than 30 years ago to provide Black students with an equitable education.

The district's desired outcomes for students are to increase proficiency in literacy for all students; increase proficiency in math for all students; ensure all students are equipped with skills to succeed in college, career, and life; and eliminate racial disparity in achievement levels. Students' individual performance in English Language Arts (ELA) and Mathematics are measured on the Pennsylvania System of School Assessment (PSSA) in grades 3-8. From 2016 to 2019:

- less than 50% of students in the district scored proficient or advanced in ELA,

- less than 34% of Black students in the district scored proficient or advanced in ELA,

- less than 25% of students with IEPs scored proficient or advanced,

- math scores for the district remained stagnant at 28%,

- less than 17% of Black students in the district scored proficient or advanced in Math, and

- less than 19% of students with IEPs scored proficient or advanced.

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The 2019-2020 PSSA was canceled in March 2020 due to the school closures of COVID-19. Therefore, in September 2021 students were administered the PSSA for their previous grade level. The PSSAs continued with the regular testing cycle in the Spring 2021-2022 school year. In September 2021,

- 38% of the students in the district scored proficient or advanced in ELA,

- 14% scored proficient or advanced in math,

- 22% of Black students scored proficient or advanced in ELA, and

- 4% of Black students scored proficient or advanced in math.

   In the Spring of 2022,

- 41% of the students in the district scored proficient or advanced in ELA,

- 21% scored proficient or advanced in math, and

- Black students scored 27% in ELA and 8% in math.

1.2.2 Relevant Organizational Policies

1.2.2.1 Teacher Evaluation

Even though less than 50% of students scored proficient/advanced in ELA and less than 34% of Black students scored proficient/advanced in math from 2016-2019, teacher ratings remained over 90% proficient or distinguished through these years. Teachers in PPS are evaluated by their school's principal and/or vice principal using the Research-based, Inclusive System of Evaluation (RISE), originally created by Charlotte Danielson. PPS began to use RISE in the 2010-2011 school year to evaluate teachers to ensure that every teacher receives fair support and feedback to better inform their professional growth. Before 2008, teachers received a Satisfactory or Unsatisfactory from a single observation per year. RISE was put in place for teachers to receive

multiple observations to receive the facts of a teacher's practice. The RISE rubric has four domains, 24 components, and 15 power components; but as of August 2022, the power components no longer exist, which are outlined in Appendix A outlines the RISE rubric. In the RISE rubric, teacher performance is identified as either Distinguished, Proficient, Needs Improvement, or Failing. Teachers whose performance is Distinguished, Proficient are classified as satisfactory, and those who performed at the Needs Improvement or Failing level are classified as unsatisfactory. In accordance with state law, teachers who performed at the Needs Improvement or Failing levels are placed on a "performance improvement plan" to aid in improvement. Teachers with two consecutive years of unsatisfactory ratings are subject to dismissal. In 2019-2020, teachers were not rated due to school closures in March 2020 for COVID. There is a discrepancy between teachers' high ratings and students' low-test scores. Each year at least 99% of teachers continue to receive a proficient/distinguish rating while nearly half of students in grades 3-8 continue to score below basic. From the 2017-2018 to 2018-2019 school year, the percentage of third-grade students who scored below basic in reading jumped from 11.7% to 17.9%, which was an increase of more than 6%. In that same year, 62% of Black third graders could not read proficiently.

1.2.2.2 Special Education Designations

The following definitions of Specific Learning Disability (SLD), Emotional Disturbance (ED), and Other Health Impairments (OHI) disability categories are provided under the Individuals with Disabilities Education Act (IDEA). **SLD is defined as** one or more of the basic psychological processes involved in understanding or in using language, spoken, or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical

calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. SLD does not include learning problems that are primarily the result of visual, hearing, or motor disabilities; intellectual disability; emotional disturbance; or environmental, cultural, or economic disadvantage. ED includes schizophrenia. The term does not apply to children who are socially maladjusted unless it is determined that they have an emotional disturbance. ED is a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance:

1. An inability to learn cannot be explained by intellectual, sensory, or health factors.
2. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.
3. Inappropriate types of behavior or feelings under normal circumstances.
4. A general pervasive mood of unhappiness or depression.
5. A tendency to develop physical symptoms or fears associated with personal or school problems.

OHI ("other health impairments") is defined as having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that:

1. is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome; and

2. adversely affects a child's educational performance.

1.2.2.3 Inclusion

In PPS, inclusion classrooms include a special education teacher and a general education teacher co-teaching or a special education teacher who provides push-in and pull-out support to students mostly in Math and/or ELA classrooms. Special education teachers may provide push-in and pull-out support by providing small group instruction or one-on-one support inside of the inclusion classroom for students labeled with a disability and pulling students out of the classroom to provide small group instruction and/or one-on-one support in a different classroom. My Problem of Practice is that PPS inclusion classrooms does not provide equitable supports to Black students in special education who are labeled with a disability. In the inclusion classroom at South Hills Middle School (SHMS), where I currently teach, approximately 64% of students in special education are labeled as having a specific learning disability (SLD), emotionally disturbed (ED), and/or other health impairments (OHI).

1.2.2.4 District-Wide Equity and Achievement Policies

Despite the district's reforms and initiatives throughout the years in PPS to increase student outcomes, the district has not implemented successful strategies to eliminate the over-placing of Black students into special education. During Dr. Hamlet's term as superintendent in 2017, the district launched its "Expect Great Things" strategic plan (2017-2022) intended to enhance and achieve the district's vision, mission, and beliefs. In 2019, PPS announced the next phase in its ongoing efforts to bridge racial equity gaps in the schools. *On Track to Equity: Integrating Equity Throughout PPS* is a comprehensive plan that was designed to achieve one of the long-term

outcomes identified in the strategic plan to reduce racial disparities throughout the district and elevate the achievement levels of Black students. Appendix B shows the strategic plan framework that outlines four strategic themes each with separate objectives and strategic initiatives.

The *On Track to Equity* plan is grouped into seven focus areas, each of which includes action steps designed to promote equity within that topic. These focus areas include board support, instructional support, equity in discipline, reducing the achievement gap, equity in special education and special program access, monitoring, and administrative support. In the MOU, "equity in special education and special program access" means addressing the overrepresentation of Black students in special education and the underrepresentation of Black students in Advanced Placement and Gifted Education. The focus is on providing all students with equitable access to the core curriculum along with opportunities to advance their studies.

The *On Track to Equity* plan addresses one action step for equity in special education placement. Action step 24 states that special education is intended to help children with special needs reach their maximum potential. Students may be identified as needing special education when a multidisciplinary evaluation determines that a student meets eligibility criteria as a student with a disability in need of specially designed instruction. The district has initiated a multi-tiered system of support (MTSS) throughout all schools. If applicable, staff members in the Program for Students with Exceptionalities (PSE) may play an integral role on MTSS teams and lend their expertise by providing the collaborative problem-solving process to address students' academic and behavioral needs. School psychologists continue to play an integral role in the district's MTSS process and support schools in strengthening their teams. PSE has provided intensive training for school psychologists in identifying students who are socially maladjusted versus students who are emotionally disturbed. In addition, two full-time instructional coaches provide teacher support for

a substantial amount of time on an ongoing basis. Coaches collaborate with teachers to address the needs of students and enhance instructional strategies to meet the needs of those students experiencing instructional or behavioral problems. PSE Program Officers are assigned to each school and work closely with administrators to support building-level needs. PSE has identified five (5) target schools with a pattern of referrals that indicate students of color are disproportionately placed in more restrictive environments. PSE meets as a core team in individual buildings to complete monthly Least Restrictive Environment (LRE) data reviews to guide school teams in analyzing current school placements, and review IEPs to ensure students' movement into the least restrictive environment. An action plan has been developed with the Bureau of Special Education to address LRE data. This plan was valid until December 2019.

1.3 Stakeholders

1.3.1 Teachers

I am currently a special education teacher at South Hills Middle School (SHMS) 6-8, which is one of 12 regional sites in PPS for English Language Learners (ELLs) whose second language is English. At regional sites, ELLs are learning English at various levels, and certified teachers with a certification in English as a Second Language provide reading and math instruction. At South Hills Middle School, 8 out of 94 English language learners are in special education. There are 29 white teachers (18 women and 11 men) and 5 Black teachers (4 women and 1 man). I am one of nine special education teachers in the school and one of four learning support teachers in the school. The special education department at SHMS has five white female, two white male, and

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two Black female teachers. Seven general education teachers teach math: six white females and one white male. Six general education teachers teach English Language Arts: two white women, and four white males. SHMS shares a math coach with four other PPS schools and an ELA coach with the PPS high school that is connected to the middle school. There are 400 students enrolled and approximately 28% of those students are labeled with a disability.[2] Approximately 50% of the SHMS student population is ELLs and/or students labeled with a disability. General education teachers and special education teachers are stakeholders as they can affect or are affected by an evaluation process and/or its findings. In an inclusion classroom, the general education teachers and special education teachers are responsible for teaching, providing supports and resources for students with disabilities and must work collaboratively for student success. General education teachers must plan and modify curriculum and instructional outcomes while special education teachers collect data, participate in school team meetings, and monitor IEPs. These roles are interchangeable depending on the needs of students. General education teachers need to be able to provide the appropriate supports for students with disabilities as well as differentiation for all students. General education teachers must be trained alongside special education teachers with an emphasis for improving student success.

1.3.2 Students

Black students and students in special education at SHMS are continuing to underperform in ELA, math, and science. Since PSSAs were canceled due to school closures during the COVID-

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[2] Autistic, Emotional Disturbed, Learning Disabled, Intellectual Disability, Multiple Disabilities, Other Health Impairment (OHI), Hearing Impairment, and/or Vision Impairment

19 pandemic, the students at SHMS completed the PSSAs in September of 2021 for their previous grade level. For example, an 8th grader in September 2021 completed the 7th-grade PSSA. Table 1 shows the PSSA scores for Spring 2019, September 2021, and Spring 2022.

Table 1. PSSA Scores: Proficient/Advanced Scores

PSSA Proficient/Advanced	Spring 2019 Pre-COVID	September 2021	Spring 2022
Math- Total 6-8 students	14%	4%	9%
Math- Black students	4%	3%	6%
ELA- Total 6-8 students	38%	28%	31%
ELA- Black students	28%	18%	21%
Science Total 6-8 students	29%	16%	25%
Science- Black students	19%	2%	22%

Between 2019 and 2022, students scored the highest percentage points during the 2018-2019 school year (Pre-COVID), with the exceptions of Black students scoring 2 percentage points greater in Math in Spring 2022. In September 2021 and Spring 2022, the math percentages for proficient/advanced remained in the single digits for all students. At South Hills Middle School, students scored the greatest percentage points in ELA during Spring 2019 and Spring 2022.

1.3.3 The District

The Bureau of Special Education (BSE) monitors all school districts and charter schools in the state to ensure that they are complying with federal and state special education regulations and are improving the performance outcomes of students with disabilities. All programs are monitored at least once over a six-year cycle. Monitoring is conducted onsite by a team of trained personnel. Following the onsite monitoring, the BSE sends a report of findings to the school district or charter school. If noncompliance has been found, it must be corrected as soon as possible but no later than one year from the report. In January 2022, the Bureau of Special Education conducted an audit and PPS was out of compliance in 14 areas and an improvement plan is required for 4 areas (see Appendix B Tables 2 and 3). With the requirements of the Individuals with Disabilities Education Act, all noncompliance areas must be corrected as soon as possible but no later than one year from the date of the monitoring report.

1.4 Positionality Statement

During my 20 years in PPS as a special education teacher, curriculum writer, English as a Second Language (ESL) teacher, behavior specialist, and high school transition counselor, I have observed the inequities between Black and white students as well as in different schools within the district. As I taught in 10 elementary, middle, and high schools in PPS, I observed how inclusion classrooms do not provide equitable services or support to Black students in special education who are labeled with a disability. As a Black female special education teacher working in PPS, I am looked upon as a "helper," which creates an unhealthy and stressful working relationship with

general education teachers, and students tend to view the general education teacher as having more power than myself. A white, female general education math teacher who I was assigned to co-teach with last year stated during a conversation that I am in the room to keep the students on task and to monitor them. I replied, "I am not a monitor, I am a teacher." This interaction with the general education teacher informed me that she did not know the roles and responsibilities of special education teachers or co-teaching models that can be used to deliver instruction to students in order to maximize learning. As a Black teacher I have been in a constant battle of trying to prove myself to white general education teachers that I am a teacher while advocating for students who look like me.

Working in this district as a special education teacher, I have witnessed numerous Black students being referred and placed in special education. My frustration with placing Black students in special education with the label of SLD (specific learning disabilities), ED (emotional disturbances) and OHI (other health impairments) is that I am not seeing any change in teacher instruction when these students return to the same classroom after they have been placed in special education. Black students are being overrepresented and discarded into special education as a way to place blame on someone else, while undervaluing Black students.

Data demonstrate Black students have been overrepresented in special education since the United States Office of Civil Rights first started to sample school districts in 1968. Disparities in identification are greatest for more subjective disabilities, like specific learning disabilities (SLD), intellectual disabilities (ID), and emotional disturbances (ED). Researchers have suggested that teacher or assessment biases could have greater impacts on these more subjective disabilities, leading to observed disparities. Black students are twice as likely to be labeled as emotionally disturbed and three times as likely to be identified with an ID, compared to their white peers. They

are also disproportionately identified as having an SLD, representing only 16 percent of the student population, but 20 percent of students with SLD, during the 2013–14 school year (National Center for Learning Disabilities, 2020). According to Skiba et al. (2006) little attention has been paid to exploring the contextual variables that create and maintain the conditions leading to unequal placement.

1.5 Understanding the Problem of Practice

While the district tries to find ways to close what it frames as "achievement gaps" between Black and white students, I am focused on what might be required to close opportunity gaps experienced by special education students in general education with a focus on the experiences and outcomes of Black students identified for special education services. Given my roles and spheres of influence, I am interested in examining the role of teachers and teaching in inclusion classrooms. It is not equitable when all students in an inclusion classroom are learning from one curriculum and participating in the same assignments and activities daily. This learning process does not differentiate between the needs of students who are in special education or not. If the general education teacher has not implemented different learning strategies before and after students' classification of a disability, then the teacher is failing students.

As a special education math teacher, my focal subject area is math. According to Gutiérrez (2009), achieving equity in math instruction requires attention to four key dimensions: access, achievement, identity, and power:

- **Access** encompasses students' resources such as high-quality teachers, materials, curriculum, and funding.

- **Achievement** focuses on performance outcomes and whether all students are succeeding in their mastery of academic content.

- **Identity** addresses whether the content is being taught in culturally relevant and responsive ways so that students see themselves in the material.

- **Power** addresses whether students are learning to be critical of their societies and question systems that limit their access to power (pp. 5-6)*.*

The classrooms I am in offer a clear manifestation of an inequitable school system that is not providing opportunities for all students to thrive and succeed; and inclusive classrooms offer a microcosm to both understand and disrupt instructional inequities.

2.0 Review of Supporting Scholarship

The purpose of this review of supporting scholarship is to better understand the literature around the experiences of special education students in U.S. schools, with a focus on the relationships between special education and general education teachers and the connection between these experiences and classroom instructional practices in inclusion classrooms. Through this review, I identify ways teachers and staff can effectively support students in learning. In this literature review, I further examine the root causes of district-identified opportunity and achievement gaps, in particular the over-representation and misidentification of students in special education create the opportunity gap. According to Hung et al. (2019), an achievement gap exists when a group of students significantly outperforms other student groups on average in their educational achievement, which is assessed through standardized test scores and/or grade point averages. The opportunity gap refers to the ways in which race, ethnicity, socioeconomic status, English proficiency, community wealth, familial situations, or other factors contribute to or perpetuate lower educational aspirations, achievement, and attainment for certain groups of students (The Glossary of Education Reform, 2013).

This literature review focuses on the following guiding questions:

1. What current practices between special education and general education teachers that may make a positive or negative impact in students in inclusion classes, which may perpetuate the overrepresentation of Black students in special education specifically labeled with a learning disability?

2. How does the referral system of special education lead to racial disparities?

3. What are successful teaching strategies that reach across student ability levels and the impact of co-teaching on students and teachers?

I use a variety of sources including peer-reviewed journal articles, articles in professional journals, meta-analyses from peer-review journals and dissertations, and website materials from professional associations.

2.1 Special Education and General Education Teachers' Relationships

Historically, teachers have worked in isolation. The biggest change for educators is in deciding to share the role that has traditionally been their own: to share the goals, decisions, classroom instruction, responsibility for students, assessment of student learning, problem solving, and classroom management. To effectively share the role, teachers must begin to think of it as "our" class (Ripley, 1997). Schools need to change the culture of teaching, and one way to do that is to use special education and general education teachers to co-teach in inclusion classrooms. Kilanowski-Press et al. (2010) state that inclusion is not so much a delivery model as it is a frame of mind for a learning community. Liu and Pearson (1999) stated that even though inclusion can be viewed as both a community-oriented philosophy and a service delivery model, unfortunately districts and schools vary greatly in the inclusion models that they implement, making it very difficult to identify best practices. As a result, many general education teachers have become frustrated with inclusion and feel that it is not the best service delivery model.

General education teachers hesitate to effectively engage with special education teachers and/or students in special education. According to Kilanowski-Press et al. (2010), while teachers may seek to design cogent co-instructional plans delivered to both general and special education

students with high fidelity, interpersonal dynamics between the general and special educators responsible for instruction within the same classroom may either facilitate or inhibit instructional aims. Scruggs and colleagues (2007) study on co-teacher roles, relationships, and perceptions found that administrators, teachers, and students perceive the model of co-teaching to be generally beneficial to general education and to some special education students in both social and academic domains. Teachers have identified a number of conditions needed for co-teaching to succeed, including sufficient planning time, compatibility of co-teachers, training, and appropriate student skill level, which many of these needs were linked to administrative support. The special education teacher often played a subordinate role. The general education teachers typically employed whole class, teacher-led instruction with little individualization, whereas special education teachers functioned largely as assistants in support of special education students and other students in need. Tuckman (1965) considers a four-stage process that teachers go through to build effective co-teaching relationships: forming, storming, norming, and performing. "Forming" refers to the initiation of a group and member orientation to the group's purpose. "Storming" involves conflict, which can be emotional and hinder performance, as members notice differences in personalities and perspectives. "Norming" consists of members adopting roles to become more cohesive. Finally, "performing" is achieved when goals are met.

According to Friend et al. (2010) the most frequently mentioned logistical matter for co-teaching is the need for common planning time for co-teachers. A study by Kohler-Evans (2006) surveyed teachers in 15 school districts regarding their co-teaching experiences. The issue they most frequently named as affecting their relationship with their co-teaching partner was common planning time. Another similar finding was found in a study by Murray (2004). Murray conducted a multiyear project with 40 general education teachers in three urban high schools. When the

teachers were asked for items to include in a "dream list" of special educator responsibilities, they noted common planning time on at least a weekly basis as a critical factor. Effective co-teaching allows for all students to receive instruction from the general education curriculum, receive modifications and adaptations when needed, while students with disabilities can be educated with their non-disabled peers. Since minority groups are often overrepresented in students with disabilities populations, pulling all students with disabilities from the general education classrooms, in some cases, may result in segregated classrooms.

School districts have done little to address the specific issues and causes underlying overrepresentation. According to the National Center for Education Statistics, the racial/ethnic distributions of public-school students across the country have shifted. The percentage of public elementary and secondary students who are white non-Hispanic has decreased from 61% in 2000 to 48% in 2017 and is projected to decrease to 44% in 2029. The overall number of Latino, African American, and Asian students in public K-12 classrooms surpassed the number of non-Hispanic whites in the Fall of 2014. Even though the United States public schools are more racially, ethnically, and linguistically diverse and different than ever before, the racial and ethnic demographics of educators remain relatively unchanged or stable (Ford, 2012). According to data from the National Center for Education Statistics, in the 2011-12 school year, the vast majority (82%) of 3.4 million public school teachers were white non-Hispanic, while 7% were Black non-Hispanic, and 8% were Hispanic. The over-representation of referrals and placement of Black students in special education has become a discursive tool for exercising white privilege and racism (Blanchett, 2006). Losen and Orfield (2002) noted that special education is a newly legalized form of structural segregation and racism and has become a mechanism for keeping many Black students from receiving an equitable education in the general education environment.

McIntosh (1989) states white privilege as it exists in the American educational system is defined as any phenomenon that serves to privilege whites while oppressing people of color and promoting white supremacy. These occurrences of white privilege include biased teachers' perceptions and attitudes, curriculum and pedagogical practices geared toward white, middle-class students, biased educational policies, and school funding formulas that contribute to inequity and social constructions of race and disability. An example comes from a 2006 study (Skiba et al., 2006) where teachers were asked, "Why do you think there is disproportionality?" and a white female teacher responded:

> I guess that I don't see it that way because here at our school, we're almost 90% African American and 10% White, so logically more would be referred because we have more African American students. Especially in our district, there are more African American students to pick from, I mean to test. (pp. 19-20)

There are teachers who believe that "picking" Black students to be qualified for special education in a school with a predominately Black student population is not contributing to over-representation. Teachers may seek the need to refer more Black students for special education in a school with predominately Black students when they do not fit the "norm" based on teachers' perceptions.

2.2 Referrals Processes

There is an apparent correlation between the over-representation of Black students in special education and the referral process or lack of a referral process for special education. Ford

(2012) implied that teachers can and do make unwarranted referrals because they often lack behavior management skills and culturally responsive management skills. The field of education needs to examine the pipeline to special education, which often begins with disciplinary practices such as suspension and expulsions. There must be more of a focus on prevention than on intervention. If implemented well, prevention would help many racially, ethnically, and linguistically minoritized students avoid the need for special education (Ford, 2012).

There are different reasons why the proper referral process is not implemented and followed throughout schools in the same district. In my experience, the reasons include the process not being enforced by the administrators, administrators and/or school counselors/social workers not appearing to be knowledgeable about correct procedures to follow, general education teachers skewed knowledge of what special education is and/or lack of participation to form a multi-tiered support services team (MTSS). An MTSS team usually consists of a school administrator, school counselor/social worker, general education teacher, special education teacher, special education supervisor, and school psychologist using the framework of MTSS.

In recent years a shift has been made toward emphasizing multitiered systems of support that integrate both academic and behavioral supports (Briesch et al., 2020). MTSS provides all students with opportunities to succeed both academically and behaviorally in school. MTSS focuses on providing high-quality instruction and interventions matched with student needs across domains and monitoring progress frequently to make decisions about changes in instruction or goals. Inclusion is a common practice that can be leveraged to support an MTSS framework. In inclusive settings, the general education teacher and special education teacher work closely together to create instructional plans that are rigorous and purposeful and meet the needs of all students. The goal of this collaboration is to intentionally design, develop, and deliver instruction

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and support matched to student needs, which may or may not include accessing special education services.

A continuum of supports for staff and student services exists across three tiers and is undergirded by high-quality professional learning, cultural responsivity, partnership, and meaningful involvement with families, and dynamic decision-making that rests on the use of reliable and valid data sources:

- Tier 1 (Universal): Provide preventive, proactive, and universal practices, and support to enhance academic, social-emotional, and behavioral outcomes with all students (school climate, comprehensive mental health, social-emotional learning).

- Tier 2 (Secondary): Provide targeted interventions to support students who require more intervention and support than is typically provided at Tier 1 (Universal). Interventions and support should be aimed at the causal roots of factors adversely impacting learning.

- Tier 3 (Tertiary): Requires the most intensive level of individualized intervention for students with the most significant, high-intensity support needs (assessment based). Interventions and support should be aimed at the causal roots of factors adversely impacting learning.

Systematic approaches of response to intervention (RTI) and positive behavioral interventions and supports (PBIS) are integrated to form MTSS. RTI is a preventive system approach to improving school-wide and individual achievement through high-quality instruction and additional tiered support provided in response to student needs. It includes collaborative

teaming across general and special education. Decisions in RTI are based on data from validated screening and progress monitoring tools.

Positive behavioral intervention and supports (PBIS) is a proactive, multi-tiered approach to discipline that promotes appropriate student behavior and increased learning. PBIS provides direction and a decision-making framework for developing a comprehensive system of behavior support tailored to the individual program and school needs and reflects a three-tiered approach:

- Tier 1 (Universal): Provides a system of support to all students in a school, based on preventative practices which emphasize teaching and reinforcing expected student behaviors.

- Tier 2 (Secondary): Provides targeted interventions and support to support students who require more intervention than is typically provided at Tier 1 (Universal).

- Tier 3 (Tertiary): Requires the most intensive individualized level of intervention for students with the most significant social-emotional and behavioral support needs.

The Pennsylvania Student Assistance Program (SAP) is a systematic team process used to mobilize school resources to remove barriers to learning. According to the Pennsylvania Public School Code, schools in Pennsylvania are required to establish and maintain SAP for all students K-12. There are four phases to the SAP process: referral, team planning, intervention and recommendations, and support and follow-up. SAP is designed to assist in identifying issues including alcohol, tobacco, and other drugs, as well as mental health issues that pose a barrier to a student's success. The primary goal of the SAP is to help students overcome these barriers so that they may achieve, advance, and remain in school. At SHMS there is an SAP team to help and

provide services to students. At my place of practice, SAP is not utilized effectively to help students with behavior, academics, and/or counseling services. First, teachers complete a request for student assistance form to the school social worker explaining the concerns so the student can be placed into the behavior or academic team meeting. Once the social worker decides whether it is a behavior or academic concern, a meeting about this student is scheduled, then the teachers are responsible for completing a two-page referral form collectively before that meeting. SAP meetings usually take place twice a month after school for 30 minutes, which is not enough time for team planning discussions to occur as most times there are at least two students on the agenda to discuss. When the team decides on interventions and teachers are given suggestions and told to collect data on goals of significant academic and/or behavior issues, some teachers become visibly upset and have disagreements about the feasibility and methods (electronic or paper-and-pencil) for collecting data. As an SAP team member, I have been present as teachers and staff blame the students and/or parents instead of using the limited amount of time we have to capture what the students' behaviors are throughout the school day and to generate solutions and recommendations. During many SAP meetings, teachers verbally express the need for students to be placed in special education at the alternative school Clayton without data to support the need of these placements. For example, a student being discussed at an SAP team meeting because of work refusal and negative interactions with peers and during the meeting, the social worker stood up and said, "Who thinks he should be evaluated? Raise your hands?" Making this statement in an SAP meeting is morally and ethically unacceptable and not the standard or effective process of an SAP meeting.

In my role as a special education teacher, I often see teachers refer students to special education when they are not making gains in a limited amount of time. Teachers often expect all students to meet proficiency on grade-level standards when taught in a short time period regardless

of whether they learned the prerequisites. Skiba et al. (2006) stated that special education is perceived by many teachers as the only resource available for helping students who are not succeeding. A white female teacher who was part of a study conducted by Skiba et al. (2006) stated,

> We are thinking of sending them on to middle school and they can't read yet. It is scary, let's get these kids tested, let's see what we can do. If we can give them a label, at least we can get them help as we let go. (p. 19)

There are teachers who consistently refer students and are uneducated about special education and who believe that giving them a label will make them able to learn. In order for students to learn they need to be taught different strategies, and this requires teachers to communicate and build relationships with students to adapt instruction. A Black female teacher who was part of the same study stated, "You have to tailor your instruction to meet the needs of your kids" (p. 16) and a white female teacher stated, "There are so many different ways to work with children, and the assessments in the books don't work for it all, so I have to be creative. It takes a lot of work" (p. 16). When schools and districts do not actively work to disrupt the deficit narratives that teachers may have about low-performing students and students who come from minoritized subgroups or disadvantaged backgrounds, especially in urban settings, the potential of inclusive education to enhance the equity of educational experiences for all students is greatly reduced (Harris, 2012).

2.3 Effective Instructional Methods

As a special education teacher, I am aware of teachers' biased perceptions and attitudes negatively affecting students' classroom experiences, which results in poor student outcomes. I have noticed general education teachers who teach students with learning disabilities expect them to perform below basic before initiating contact with these students. Teachers often state, "That's the best they can do" without changing their instruction. Teachers need to be better prepared to address the needs of diverse students. Gay (2000) states how teacher education candidates continue to exit their programs with many of their prior negative perceptions of "Blackness" and their prejudice, racism, and sense of entitlement regarding White privilege intact and completely unchallenged. These negative perceptions of Black students and of their "Blackness" are likely to become evident in the learning environment and to affect the extent to which teachers believe these students can or will learn and their decisions to refer or not refer them to special education. Hofstede (2001) states that to ignore, discount, or in any way adopt the philosophy that cultural differences do not exist, and do not matter is to do a grave disservice to the millions of students who are not white. Every individual and every group have a culture, and culture affects one's work with students.

Teachers need to be able to recognize differences within students' learning abilities as well as their cultures. Teachers need to understand the Black culture and at the same time realize that all Black people do not share the same norms, beliefs, and attitudes, which these assumptions lead to stereotyping. Failure to acknowledge these differences within cultures often leads to judgments on student behavior and "inability" to complete work, which therefore leads to over-representation.

General education teachers in addition to school counselors, social workers, and school psychologists have a false understanding that students labeled with a learning disability will receive additional support than those without a label of a disability. Wilson (1991) conducted a survey to assess the perceptions of 503 Iowa support services, which included psychologists, social workers, and special education consultants regarding classification and programming issues concerning students with learning disabilities. The results indicated that support services practitioners from varying disciplines had identical views on issues concerning the current delivery system. These views suggested that the educational needs of students with learning disabilities and low-achieving students without a label of learning disability are similar. The participants were also asked to note their views on the validity of labeling students with a learning disability. Sixty-one percent of the participants agreed that too many students were being labeled with a learning disability and 45% agreed that many students were labeled as having a learning disability to obtain services, even though they did not have a disability. The support service professionals believed that better regular education instruction will prevent many students from being classified as learning disabled.

The study conducted by Wilson (1991) did not define "low achieving" students unlike the study by Woodward and Brown (2006) identified "low achieving" students on the basis of their performance on tests, by their placement in remedial classes, and were at risk for special education services in math. The purpose of this study was to examine the effects of two kinds of curricula on middle school students at risk for special education in mathematics. Results of this study indicated that students in the intervention group who used materials designed according to instructional principles described in the special education literature achieved higher academic outcomes and had more positive attitudes toward math than did students in the comparison group. The students

in the intervention group achieved a higher level of success despite the comparison group having 25 minutes more of math instruction per day. Teachers in the intervention group used instructional principles validated through special education research, such as distributed practice, extensive use of visual models, and high expectations. Teachers in the intervention group used the *Connected Mathematics Program,* which emphasized problem-solving, and students were often required to read lengthy descriptions of problems as an integral part of the activity. Students worked in pairs and/or small groups on challenging problems for a significant portion of the instructional period and were required to explain their thinking verbally or in writing. Instructional principles from special education math literature are applicable to students who are not labeled with a disability.

The interventions listed above for students labeled as "low achievers" are the same used for students labeled with a learning disability. Since the same strategies exist it would be ethically right to terminate labeling students when research has shown that students can make progress when and if effective instruction is implemented strategically. Students in special education receive an Individualized Education Plan (IEP), which includes specially designed instruction to meet their learning needs. From my experience in writing and reading IEPs, the majority of the specially designed instruction is the same for students with learning disabilities. Some common specially designed instruction include redirection, directions read out loud, directions repeated, seated away from distractions, modeling, modified tests, checking for understanding, verbal re-direction, chunking of assignments, repeated practice of the new skill, and scaffolding. The specially designed instruction listed above is also used for students without IEPs. General education teachers fail to realize that students labeled with learning disabilities are not going to another class. The majority of these students come back to the same classroom with the same teacher after they have been stamped with a label. If the general education has not implemented different learning

strategies before and after students' classification of a learning disability, then the teacher is failing students. A different approach in the general education classroom is needed to improve the learning outcomes of all students with varying abilities.

Students with disabilities are expected to achieve the same success as other learners and there is an increased emphasis on educating them in the general education setting. Co-teaching has received widespread attention due to the increasing number of students who come to school with a variety of problems making them learners at risk (Cook, 2004). Co-teaching generally was justified in terms of beliefs about the best ways to ensure that students with disabilities interacted with peers. Its implementation rested largely on a philosophical foundation based on the special education legislative mandate to educate students in the least restrictive environment (Friend et al., 2010). During my years as a special education teacher, I have never seen a co-teaching model occur and have three years of experience of attempted co-teaching experience. Inclusion classrooms have special education teachers "push in" and/or "pull out" in reading and math classes or the general education and special education teacher will co-teach. Special education teachers push into reading and/or math classes to support students with Individualized Education Plans (IEP) and at times may pull students from the large inclusion setting to provide more individualized support and tailored instruction to meet students' needs. As described in Friend et al. (2010), co-teachers can use a variety of models to determine how to provide appropriate instruction for students. The general education teacher usually serves as the content expert while the special education teacher provides expertise in adapting curriculum and differentiating instruction.

The six co-teaching models are:

i) **One teach - one observes**: While one teacher instructs the whole class, the other teacher observes student engagement

ii) **One teach - one assist**: One teacher takes the lead for instruction and the other teacher supports or enhances instruction providing unobtrusive assistance to students as needed

iii) **Station teaching**: Each station is focused on one topic, and students rotate through each station. Each teacher facilitates an activity. The stations must be independent of one another.

iv) **Parallel teaching**: The class is divided into two heterogeneous groups and each teacher teaches the same content simultaneously

v) **Alternative teaching**: One teacher provides instruction to most of the class and the other teacher provides instruction to a small group of students.

vi) **Team teaching**: Both teachers equally present content and actively engage in whole-group teaching. (Friend et al., 2010, p. 12)

Cook (2004) explains the uses of the co-teaching models listed above and how the models can be used in the classrooms. When using the one-teach-one assist model teachers should decide in advance what types of information are to be gathered during the observation and should agree on a system for gathering the data. Afterward, the teachers should analyze the information together. Observations should be a deliberate part of the lesson, not just teachers' incidental checks of student activity. While one teacher is teaching the other teacher can keep informal notes on

individual students such as how well do the students understand the steps to follow in two-step equations, which students initiate discussions and ask questions during class, which students begin/do not begin work promptly and/or is a student's inattentive behavior less, about the same, or greater than that of other students in the class? In station teaching, teachers are dividing the content and students, and should be used when content is complex but not hierarchical. Station teaching can be used in math to teach a new process while reviewing applications of other concepts already presented. Parallel teaching is used when a lower adult-student ratio is needed to improve instructional efficiency, and foster student participation in discussions and/or for activities such as drill and practice, re-teaching, and test review. When using parallel teaching students can be strategically placed in two groups. When situations arise in which a small group needs to work with one teacher while the larger group works with the other teacher, alternative teaching can be used. During alternative teaching, the large group completes the planned lesson while the small group either completes an alternative lesson or the same lesson taught at a different level or for a different purpose. During team teaching both teachers speak freely during large-group instruction and move among all the students in the class. Instruction becomes a conversation, not turn-taking. Team teaching can be used in situations in which the teachers have considerable experience and a high sense of comfort. The team-teaching model can be used in a math class as the steps in a math process are taught, one explains while the other does a "Think Aloud" activity, or one teacher talks while the other demonstrates notetaking on the board or an overhead projector.

Cook and McDuffie-Landrum (2020) suggest five steps for teachers to consider when implementing instruction for students' access to the general education curriculum and successful outcomes related to individual student learning needs.

i) **Identify learning goals and student needs**: Co-teachers determine the class learning goals and identify learning needs by examining the grade level standards in the content they are planning for. Teachers can then "unwrap" a standard to identify specific skills needed to move students toward the leather learning target. Unwrapping the standards can help teachers identify the sequential lessons that are aligned with the larger learning goal. Teachers can identify the individual needs of students by reviewing IEPs, formative assessments, and observational data.

ii) **Select an effective practice for targeted intervention**: Selecting practices for students with disabilities that have been shown by credible research to improve specific outcomes, teachers can be more confident that the practice will improve student outcomes when implemented with fidelity.

iii) **Selecting a co-teaching model for targeted intervention**: Once effective practices have been identified, co-teachers need to determine how they will integrate these practices into the co-taught inclusion setting using the various co-teaching models. There are questions co-teachers need to consider when considering co-teaching models to prevent students with disabilities from being excluded from peers when specialized instruction is provided. Questions to consider include whole group or small group, teachers' confidence level in teaching content, and separating students into smaller groups.

iv) **Determine roles**: After determining the co-teaching model, teachers must determine their role in planning and implementing effective practice as well as the timing of the lessons and rotations and/or groups. If a station teaching model is chosen, teachers must decide how many stations there will be, the focus of each station, who will teach each station, and the option of an independent station.

v) **Implement the practice**: Co-teachers can implement effective practice to provide instruction to students after the co-teaching model and instructional roles are established. Many effective practices will need to be implemented regularly throughout the school year to maximize their impact on student outcomes. Before implementation, teachers will also need to consider how to collect progress monitoring data that will help teachers decide whether the practices are actually improving student outcomes. Progress monitoring is used to track students' performance on their goals. Teachers can use progress monitoring for individual students and/or the whole class. Before giving a summative assessment, such as a unit test, teachers must track formative assessment data on a consistent basis, so adjustments or grouping can be made for improving the targeted outcomes of teaching and learning. Teachers can decide on a tool to collect formative data, such as a checklist to track student progress.

Co-teaching is one way to deliver services to students with disabilities as part of a philosophy of inclusive practice. As a result, it shares many benefits with other inclusion strategies, including a reduction in stigma for students with special needs, an increased understanding and respect for students with special needs on the part of other students, and the development of a sense of heterogeneously based classroom community (Cook, 2004). In many effective co-taught classrooms, it is hard for an outside observer to recognize who in the room is the special educator and who is the general educator. In a co-taught classroom, students with and without disabilities can access specially designed instruction and benefit from the collaboration and expertise of the co-teachers. In addition, it is often difficult to distinguish which students have IEPs and which ones do not. The delivery of instruction is fluid and seamless, even though students with IEPs are receiving the supports defined on their service grids. Since the same teachers are supporting discrete skill instruction through the IEP and standards-based instruction through the tier 1

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curriculum, there is a clearer tie between the two, thereby creating a more integrated experience for students. In addition, students who need accommodations get those regardless of their service plan, and modifications are not provided exclusively to students with IEPs. Groupings are often mixed based on discrete skills that align with standards and are flexible depending upon which skill is being supported (Rodriguez & Novak, n.d). From my experience with co-teaching, it is important to remember not to separate groups into students with IEPs and students without IEPs. Also, using appropriate and a variety of co-teaching models makes the class a more inclusive environment. For example, using the one-teach, one-assist model for a 47-minute class period will not be effective because the teacher who is assisting will be viewed by students as the "helper" rather than the teacher. Although the one-teach, one-assist model can be used if the general education leads the class in a 15-minute discussion and activity explaining the purpose and history behind the Pythagorean theorem, while the special education teacher monitors, observes, write notes on the board, redirects students back on task and checking for students understanding while actively walking around the classroom. The one-teach, one-assist model is used in this example because the special education teacher does not feel confident explaining the background content. After the 15-minute introductory then both teachers can move into the team-teaching model of the vocabulary, formulas, and examples for teaching the Pythagorean theorem.

3.0 Theory of Improvement

My theory of improvement focuses on increasing achievement of Black students in special education who are being taught in inclusion classrooms. Connected to the literature above on overrepresentation of Black students in special education and disparities in instructional practices and inclusive classroom, my approach to addressing my problem of practice focuses on understanding and improving the instruction in co-taught inclusion classrooms.

According to the Improvement Science Handbook (Continuous Learning, n.d.), a driver diagram takes your best understanding of how a system functions in practice and puts down on paper your best ideas for improving it and consolidating all thinking into a working theory of improvement. The driver diagram will turn my understanding of the problem into a theory of changes. Building the theory of changes will offer a clear starting point to begin the improvement efforts and suggest data to collect to verify the progress. The visual driver diagram below is defined in three parts: aim, drivers, and change idea. The aim answering the overarching question, "What am I trying to accomplish?" The aim is the most detailed written and specifically tailored statement of the problem. Primary drivers are the high-leverage areas I believe play an essential role in influencing my aim and are broad categories for thinking about the factors that can get me to my aim. Secondary drivers are more fine-tuned and consist of the sub-factors that influence each of the broader primary drivers. Secondary drivers are more closely related to existing everyday practice. Change ideas are actions tied to secondary drivers to be implemented on a day-to-day or week-to-week basis. The change ideas are small changes or tweaks to classroom practice, materials, or other things that can be tested over a short period of time.
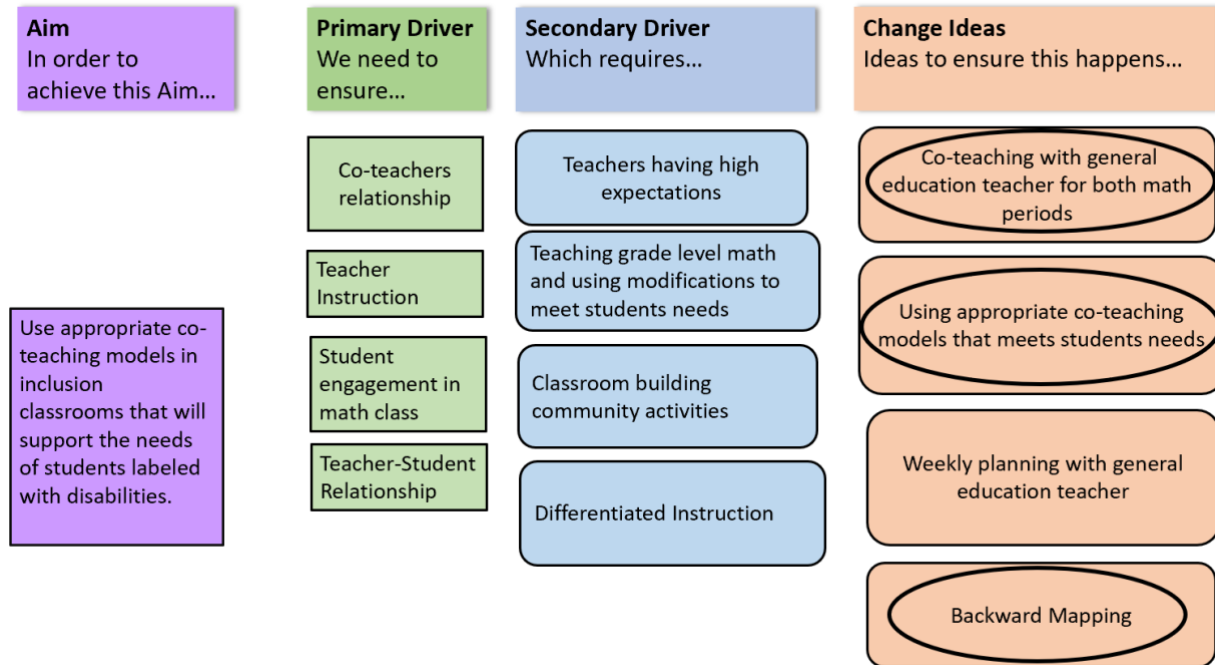
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Aim
In order to achieve this Aim...

Use appropriate co-teaching models in inclusion classrooms that will support the needs of students labeled with disabilities.

Primary Driver
We need to ensure...

Co-teachers relationship

Teacher Instruction

Student engagement in math class

Teacher-Student Relationship

Secondary Driver
Which requires...

Teachers having high expectations

Teaching grade level math and using modifications to meet students needs

Classroom building community activities

Differentiated Instruction

Change Ideas
Ideas to ensure this happens...

Co-teaching with general education teacher for both math periods

Using appropriate co-teaching models that meets students needs

Weekly planning with general education teacher

Backward Mapping

Figure 1. Driver Diagram

The above figure illustrates the driver diagram illustrating the focus of my project. The primary drivers are co-teachers' relationships, teacher instruction, student engagement, and teacher-student relationships. Important ways to impact change to increase academic achievement is for teachers to build relationships with each other and with students by knowing their strengths, areas of needs, learning styles, and what motivates them to perform. The delivery of instruction will have an impact on students' engagement and what students learn in class. Since students have a variety of learning styles the delivery of instruction needs to be for the class, groups, and individual students.

The secondary drivers are teachers having high expectations, teaching grade-level math, classroom community-building activities, and differentiated instruction. Having high expectations and teaching grade-level math using modifications when needed helps students gain confidence and affects their academic motivation. Students are more likely to be more engaged in the

classroom if they can relate to or build connections with their peers and teachers. Classroom community building allows co-teachers to learn about students' backgrounds, strengths, and areas of need that may not be related to a content area. Community-building activities and differentiated instruction help to build positive relationships with students and reduce frustration levels when working in class as well as help to fill in the gaps in learning. Having high expectations and teaching grade-level math using modifications when needed helps students gain confidence and affects their academic motivation.

3.1 Change Ideas

There are two change ideas: co-teaching both math periods with general education teachers, and weekly planning with general education teachers.

3.1.1 Co-Teaching Both Math Periods with General Education Teachers

This school year I am co-teaching with two general education teachers for two math periods, whereas the previous year I was assigned to co-teach for only one of the double block math periods. Cook and Friend (1995) define co-teaching as both teachers teaching the entire class time to a group of students in a single physical space. Co-teaching in one classroom for the double period block allows for both teachers to share instructional responsibility and accountability for student learning. Being present in the classroom during the double block period helps both teachers to meet students' needs in the room using the strengths of both teachers with different expertise in teaching and reduces the stigma of students labeled with

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ta disability. Co-teaching with a general education teacher during the double block period gives me the opportunity to be an integral part in the teaching and learning process, build a relationship with students and families, and teach students with and without disabilities, which I have never encountered in my years of teaching.

3.1.2 Weekly Planning with General Education Teachers

From my experience co-teaching with a general education teacher has not been beneficial for students when teachers do not plan together, and the special education teacher is not in the classroom to teach both math periods. When a special education teacher and general education teacher are placed in an inclusion classroom together without planning the general education teacher becomes the teacher and the special education teacher becomes the assistant and acts as a student as he/she is trying to follow the lesson instead of co-facilitating, which disrupts the learning process for students. One of Cook and McDuffie-Landrum's (2020) steps for implementing instruction is determining roles. Both teachers must determine their role in planning as well as identify when and where planning will take place. Both teachers can plan for student outcomes and learning goals, timing for activities, students' strengths and areas of needs and students' misconceptions. Using planning time effectively helps to improve instruction and is also beneficial before and during the school year to learn about the co-teacher's preferred style, preferences, and strengths, while building a professional and personal relationship. Without planning the inclusion classroom becomes two teachers in a room versus two teachers co-teaching. The two change ideas used in this study for co-teaching are using appropriate co-teaching models and backwards mapping.

The first change idea, using appropriate co-teaching models, involves co-teachers deciding on the appropriate co-teaching models during planning. My co-teachers and I have taught some students from last year who were assigned to our classes this year and identified the pros and cons of teaching a double period block of math. From my experience in teaching math, whole group instruction is not effective as students become bored, students' individual needs are not being met and off-task disruptive and non-disruptive discipline issues arise. The models of co-teaching my co-teachers and I are using to deliver instruction are one-teach one-assist, team teaching and station teaching. The one-teach one-assist and team teaching will occur during the whole group warm up. Using the one-teach one-assist, as one teacher introduces the skill the other teacher is collecting data and providing an entry level for students to participate in the warmup with one-on-one assistance. In my experience this year at times, team teaching occurs when not planned which creates those "aha" moments in the classroom and makes teaching more authentic rather than rehearsed. My co-teachers and I are also using team teaching during the warmup as one teacher speaks and the other teacher models or demonstrates a concept using the Elmo. During the warm-up we take turns leading and clarifying misconceptions. Station teaching provides differentiated instruction and allows my co-teacher and I to teach small groups a specific skill and students can participate in an activity that is independent from the other stations. The station teaching model allows for students with disabilities to learn and be included in the general education curriculum with the needed modifications and supports. The same modifications and supports will enhance the learning of all students.

With the second change idea, backward mapping, my co-teachers and I determine student outcomes first and then plan for students to meet those goals. I often see teachers start with planning lessons and afterward determining the student outcomes and the focus is on teaching

content instead of student learning. Backward design helps teachers create lessons that are focused on the learning rather than the process teaching. The goal of backward mapping is to take on the issues teachers know that students will have while keeping the students at the forefront of teaching and learning. Using backward mapping teachers need to answer the question, "Having learned key content, what will students be able to do with it?" (McTighe & Wiggins, 2013, p. 27). Teachers need to set the stage for learning and not just doing. There should be a plan for what learners should be able to accomplish with learned content. In a backward mapping approach teachers define learning outcomes, determine the acceptable evidence creating culminating assessments tasks, then creating lessons and activities that will result in the evidence of understanding.

3.2 Inquiry Questions

This inquiry was guided by two overarching questions:

1. What are successful teaching strategies that reach across student ability levels and how can co-teaching strategies impact student learning?

2. What instructional strategies are used in inclusion classrooms and how do teachers' instructional strategies differ when teaching students with a disability.

I addressed these questions using pre- and post-surveys, and co-teachers' questionnaires (discussed further below).

3.3 Measures & Analyses

To understand and change teacher practice to increase student achievement, my focus was on co-teaching practices in inclusion classrooms and how teachers and students perceive co-teaching. This study included pre- and post-surveys from teachers who co-teach math and ELA and 7th and 8th grade students in inclusion classrooms. I gathered information on demographics, instructional strategies, perceptions of co-teaching from teachers and students. Some questions from the pre- and post-survey required short responses for teachers and students to give personalized responses.

3.4 Intervention

I co-taught with two general education math teachers for double block periods (a total of 94 minutes). I shared a classroom with one 7th-grade general education math teacher for two periods and one 8th-grade math teacher for four periods. At the end of the 2021-2022 school year, I met several times with my general education co-teachers and math coach to build a rapport, getting to know each other personally and professionally, and establishing a common planning time, classroom environment, and management. In May and June of 2022, my co-teachers and I completed a coteaching template to discuss details of sharing a classroom, instruction and classroom management, instructional noise level, procedures, and planning days/times that work for us. We used a variety of co-teaching methods, including station teaching, team teaching, and one teach-one assists. Team teaching and station teaching were used daily with both grade levels. Team teaching as used with both grade levels at the beginning of the class for the 10–15-minute

warm-up. In the 1st and 2nd-period 7th-grade math class, the students worked on a skills-based warm-up that consist of different skills each day. The *7th Grade Math Minutes* consisted of 10 problems varying in level of difficulty and provided students with practice in each key area of 7th-grade content. Students worked on the warm-up independently and were permitted to use a calculator. After the 10-minute timer, a student was chosen to facilitate the warm-up at the front of the class. My co-teacher and I addressed misconceptions and taught how to use the calculator when solving problems. There were three groups in the 7th-grade class: two teacher-led groups, which focus on eligible content, and one independent group. The students in the independent group worked on IXL. IXL is an online program that is used to enrich, extend, and remediate students' learning. IXL is aligned with the Pennsylvania standards, supports differentiated instruction, and provides video tutorials and step-by-step explanations. Students rotated through each station after 20-25 minutes. In addition to IXL, one group in the 7th-grade class uses ALEKS for accelerated learning. ALEKS is an artificially intelligent learning and assessment system used for math and other subjects. ALEKS uses adaptive testing to assess what a student already knows and creates an individualized study plan, called the Learning Pie or MyPie feature. Student navigation is focused on the pie chart representing each student's knowledge. After determining students' precise knowledge of a subject, ALEKS helps the student work on the topics they are ready to learn and helps students master course topics through a continuous cycle of mastery, knowledge retention, and positive feedback.

The co-teaching 8th-grade class was during periods 3, 4, 6, and 7. Team teaching, station teaching, and one teach-one assist were the three co-teaching models used in both 8th-grade classes. Team teaching and one teach-one assist were used at the start of class for 10-20 minutes during the warm-up. The warm-up consisted of various topics for each day: Monday, PSSA Prep

questions; Tuesday, vocabulary; Wednesday, community building activity; Thursday, skills review from PSSA Prep questions from Monday; Friday, skills activity "Which one does not belong and Why?"

There were three groups in the 8th-grade classes: two teacher-led groups, which focused on eligible content, and one independent group. The students in the independent group worked on IXL. The IXL assignments are assigned to differentiate to students' levels based on the eligible content from the teacher-led groups, IEP goals for those students in special education, accelerated skills for those students who have mastered or are on grade level skills, and modified to a skill that is below grade level based on students' level of understanding.

3.4.1 Pre-Work

On October 17th, my co-teacher and I started data chats on Tuesdays and Thursdays to speak with students individually about their performance and behavior in math class. Data chats also gave students an opportunity to build trust with the teachers and express their needs in math. During each data chat, the teacher and student reviewed math test scores, PSSA data, CDT data, and areas of struggle when completing IXL assignment. Data chats were also an opportunity for students to set short-term and long-term goals for the school year with the teachers, who could support by reminding students of their goals and how to achieve those goals. While one teacher was having a data conference, the other teacher as providing one-on-one assistance with IXL assignments.

3.4.2 Data and Methods

I collected data from both teachers and students as we implemented a variety of co-teaching methods in the math inclusion classrooms described above. Teachers completed a pre-survey prior to the beginning of co-teaching (Pre-Survey Teacher Perceptions of Co-teaching). In addition, throughout the co-teaching process I used a self-reflection journal to track the changes of the co-teaching practice and assess areas for improvement. Teachers also completed a post survey by January 2023 (Post Survey Teacher Perceptions of Co-teaching).

From students I collected exit slips, module tests, PSSA scores from the previous school year, and the district unit assessments. Exit slips were given to assess students' knowledge of concepts taught and to determine whether instruction needed to be changed or adjusted. If students did not score well on the exit slips, then a lesson was re-taught and/or a different instructional strategy was used before administering a unit test. Module tests were used to assess students' understanding of the eligible concepts taught and if they can independently solve conceptual, procedural, and word problems. PSSA scores from last school year were used to determine students' strengths and areas of need from math components. The district unit assessment was used as a formative evaluation to assess students' mastery of the multiple skills taught. Interim and quarter one grades were both used in 8th-grade math to capture students understanding of what they learned. Students' grades for both 8th-grade classes were based on their weekly IXL assignments and module tests. My 8th-grade co-teacher and I decided to use equitable grading to assess what students know. Our equitable grading system focused on grading students based on what they learned rather on the learning process. For example, students earned grades on a test, project or summative assessment of a skill/s or concept/s. Students were not grading based on their

participation in class, attendance, homework or activities and/or tasks completed while learning. Students' grades for the 7th-grade class were based on participation, IXL assignments, module tests, and exit slips. The 7th-grade co-teacher was not receptive to the equitable grading guidelines that my co-teacher and I used for our 8th-grade students.

Student pre-surveys were administered on September 27, 2022, and the post-survey was administered on December 22, 2022. The student surveys captured students' perceptions about math class, instruction, and engagement in math class and opinions of having two teachers in the classroom. Teacher pre-surveys were administered between September 27 to November 8, 2022. Teacher surveys captured their perceptions of the co-teaching process and opinions of placement for students in special education. I completed the pre- and post-survey and documented my experiences throughout the intervention.

3.4.3 Data Analysis

I gathered and analyzed both quantitative and qualitative data to understand the impact on both teacher experience and student outcomes. Teachers and students took pre- and post-surveys, and I kept a journal of the co-planning process. Two co-teachers who I taught with took a questionnaire of their co-teaching experience. The teacher and student surveys consisted of a 4-point Likert scale with an option for open-ended responses. The analysis of the student data compared their perceptions of learning math and having two teachers in the classroom. I used the student pre- and post-surveys to learn about the needs, issues, and perceptions of students before implementing new strategies to support students. The analysis of the teacher data compared teacher perceptions of co-teaching, planning, growth of delivering instruction, and supporting diverse students in math class.

I had weekly meetings with my general education co-teachers to discuss co-teaching models, instruction, and interventions to use in the classroom. I used a self-reflection journal to track interventions used for student progress, assess areas for improvement and make changes to support students and our delivery of instruction. The teacher surveys, student surveys, and journal reflections answered the inquiry questions noted previously: What are successful teaching strategies that reach across student ability levels, and how can co-teaching strategies impact student learning? What instructional strategies are used in inclusion classrooms and how do teachers' instructional strategies differ when teaching students with a disability?

4.0 Data and Findings

The purpose of this study was to examine co-teaching practices in inclusion classrooms with the goal of better understanding of how co-teaching can be leveraged to support special education students to mitigate disparities. This study used quantitative and qualitative methods to measure students and teachers' perceptions of co-teaching.

I administered surveys to students in the 7th and 8th classes that I co-taught with a general education teacher and both Math and English Language Arts teachers who co-teach. The pre- and post-surveys were administered between September and December of 2022. Data from the teacher pre- and post-surveys were used to identify themes of how teachers viewed co-teaching models and the effectiveness of co-teaching. Similarly, the data from the student pre- and post-surveys were used to identify themes of how students viewed having two teachers in the classroom and if co-teaching was beneficial for their learning. Other forms of data in this study were "Getting to Know You-Co-Teachers Expectations" outlook of co-teaching document, which was completed the week of May 16, 2022, journaling of planning with co-teachers, "Co-Teaching Questionnaire" reflection document and an auto-ethnographical of my experiences and perspectives as a Black women special education teacher.

4.1 Student Data

I administered two anonymous electronic surveys to the 7th and 8th grade students in my co-taught classes. The pre-survey was administered on October 4, 2022, and the post-survey was

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administered on December 22, 2022. Forty-eight students were present to complete the pre-survey and 42 students were present to complete the post-survey. The pre- and post-surveys consisted of Likert scale questions with ratings of Strongly Agree, Somewhat Agree, Somewhat Disagree, and Strongly Disagree. The pre- and post-student surveys also included open-ended responses for students to explain their reasoning.

4.2 Student Pre-Survey

Table 2 shows the demographic data of students who completed the pre-survey. Sixteen 7th graders and thirty-two 8th graders were present to complete the survey on October 4, 2022. The students ages ranges between 12 and 15 years old. The race with highest percentage rate is Black with 36%. Forty-two students reported that they had been taught in a co-taught classroom prior to this classroom. Forty-two students strongly agreed or somewhat agreed that at the beginning of the school year they always see both teachers making decisions together. Fifteen students strongly agreed that at the beginning of the year both teachers presented new material to the class, 24 students somewhat agreed, 5 students somewhat disagreed, and 4 students strongly disagreed. Twenty-two students responded as always seeing both teachers making decisions together, 20 students responded usually, 4 students responded sometimes, and 2 students responded never.

Table 2. Student Age and Demographic Information

Age	12 years old	13 years old	14 years old	15 years old
7th Grade	7	7	2	0
8th Grade	0	19	11	2

Race	Black	Bi-racial	Latinx/Hispanic	Asian	White	Other
7th Grade	6	2	0	1	5	2
8th Grade	12	5	2	2	8	3
Total	36% (18)	14% (7)	4% (2)	8% (3)	26% (13)	12% (5)

Figure 2 shows data from students of how teachers presented themselves at the beginning of the school year with regards to teaching, answering questions and discipline. Twenty students strongly agreed that at the beginning of the school year both teachers presented themselves as equals, 27 students somewhat agreed, and 1 student strongly disagreed. The majority of the students who offered explanations commented on both teachers teaching and working together. In short answer responses, students noted co-teaching through comments such as:

- They work together to get things done;

- In regards to teaching they will both explain to us how the current thing we are learning works and they will sometimes split the class into groups so they can each teach us something, and they always are open to questions;

- They both got the same amount of power in the room and they both take turns teaching; and

- Well, they are actually teaching and making sure everyone is where their supposed to be.

At the beginning of the school year both teachers presented themselves as equal partners with regard to teaching, answering questions and discipline.
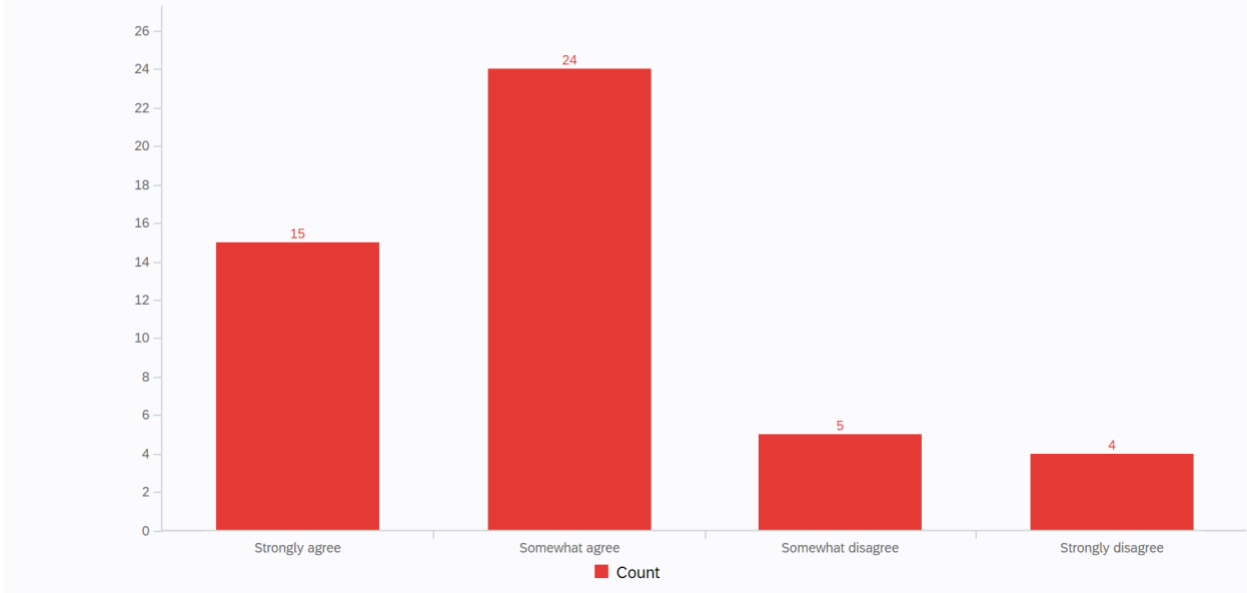

Figure 2. Student Perceptions of Co-Teaching

In the pre-survey students were asked, "Which academic subject do you prefer the most and why?" These questions are relevant to the study because the focus class is math, and the responses gave insight into students' perceptions of different academic classes. Figure 3 shows data of the academic subjects' students prefer the most.
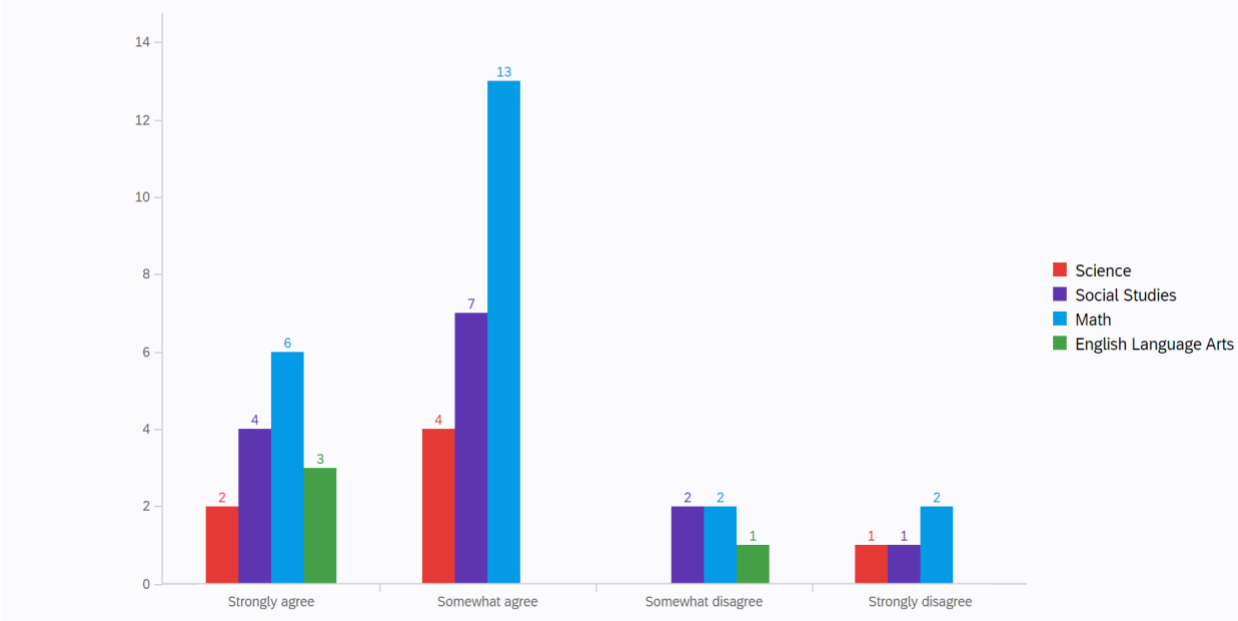
Which academic subject do you prefer the most?

Figure 3. Students' Preferred Academic Subjects

Six students strongly preferred math and 13 students somewhat preferred math. Students' open-ended responses of preferring math are related to needing math in everyday life. For instance, one student noted, "It's important- I need to know how to add, taxes, money and more." Two others similarly wrote, "Because I understand it more and there's always more you need to learn about it" and "It's kind of an easy class and you need it in everyday life."

Figure 4 shows data of the academic subjects' students prefer the least. Two students strongly preferred math the least and 8 students somewhat preferred math the least. Two common responses indicated that their preference of the course depended on the teacher and further that they felt math was difficult. As one student noted, "so many numbers."
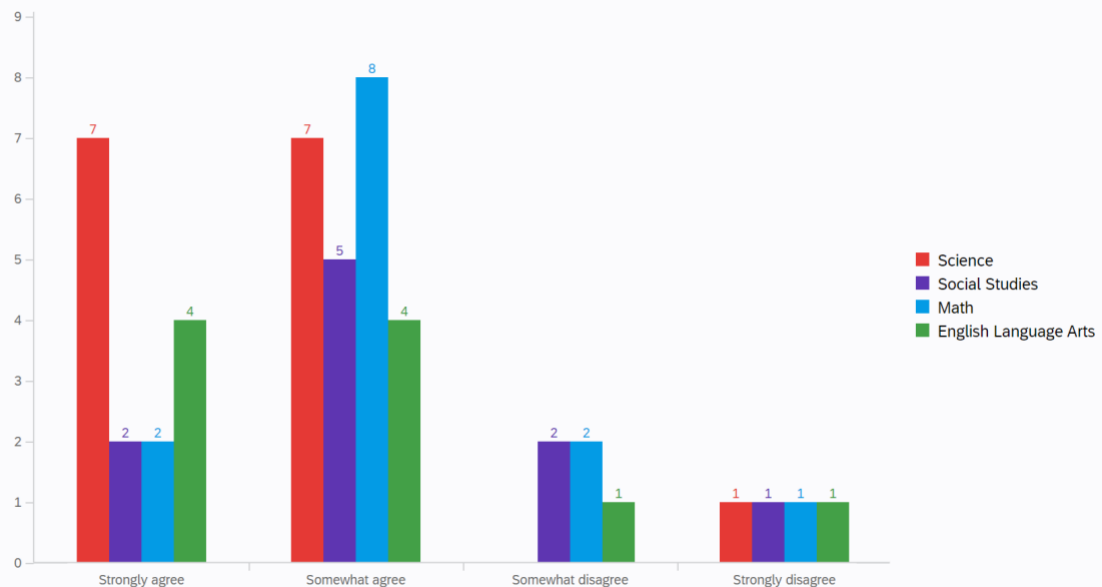
Figure 4. Students' Least Preferred Academic Subject

Finally, students indicated how they felt they would learn with co-teachers and how they felt they best learned. Forty-six students strongly agreed or somewhat agreed that they will get more help from having two teachers in the classroom and 41 students strongly agreed or somewhat agreed that they would learn more from having two teachers in the classroom. Thirty-nine students strongly or somewhat agreed that they learn best when working in groups, 38 students strongly or somewhat agreed that they learn best working with a partner, and 33 students strongly or somewhat agreed that they learn best when they work alone.

4.3 Student Post-Survey

Forty-two students completed the post survey: 15 seventh graders and 27 eighth graders. Forty students strongly agreed or somewhat agreed that both teachers present themselves as equal

partners and 41 students strongly agreed or somewhat agreed that they both see teachers in the class making decisions together. Thirty-two students prefer to have two teachers in the classroom.

Students had a variety of responses to the question, "Why do you think this class has two teachers?" Some of the students' responses stated there are two teachers to help students learn better. For instance, students wrote,

- So that while one teaches the other can supervise and switch between roles to get more work done;

- So we can learn to do the same stuff but in different ways;

- To help students do their work properly and to help the other teacher; and

- It is great because I can get more help with two teachers.

Other students' responses were related to the management of the class with two teachers. For example, students responded to the open-ended question in the following ways:

- One is because there are so many kids that need help, and they can get help faster and two because there are kids that need two teachers to focus;

- It's easier to manage the kids, better monitor and control student activity and learning paths;

- Because with one teacher people might act a fool and do things they are not allowed to but with two teachers one will most likely see the person; and

- I think this class has two teachers in it because we have smart kids in here and maybe one can't handle all the kids.

Students' responses were also related to both teachers helping each other. In this area, students noted things such as

- To help students do their work properly and to help the other teacher;

- Because they have each other to help out one another; and

- So that while one can teach the other can supervise and switch between roles to get more work done.

In general, student responses indicated a variety of potential benefits for individual students, the teachers themselves, and the overall dynamics of the classroom to the co-teaching model.

In considering their own learning and interaction with peers, 12 students responded that they feel extremely comfortable asking their peers for help in the co-taught classroom, 22 responded feeling somewhat comfortable, 7 responded somewhat comfortable and 1 student responded extremely uncomfortable asking peers for help. Eighteen students responded that they feel extremely comfortable or somewhat comfortable asking both teachers for help in the co-taught classroom, while five students responded feeling somewhat uncomfortable and one student responded extremely uncomfortable asking both teachers for help. Ten students strongly agreed that they are successful in the math class since they have two teachers, 26 students somewhat agreed, and 6 students somewhat disagreed. Ten students strongly agreed that they prefer to have two teachers in the classroom, 22 students somewhat agreed, 7 somewhat disagreed and 3 students strongly disagreed. Twenty students strongly agreed that both teachers know what they need to be successful in math class, 17 somewhat agreed, and 5 students somewhat disagreed.

4.4 Co-Teachers' Surveys

A pre-survey and post survey were anonymously electronically administered to nine special education teachers and general education teachers who co-teach math or English Language Arts. The pre-survey was administered on September 27, 2022, and the post-survey was

administered on January 4, 2023. Of the possible pool of eligible teachers, one teacher did not complete the pre-survey, and four teachers did not complete the post survey. Including my responses to the pre- and post-surveys, nine teachers completed the pre-survey and six teachers completed the post-survey. The pre- and post-surveys consisted of Likert scale questions with ratings of Strongly Agree, Somewhat Agree, Somewhat Disagree and Strongly Disagree. The post-survey also consisted of open-ended responses for teachers to explain their reasoning.

4.4.1 Co-Teachers' Pre-Survey

Table 3 shows the number of years general education teachers and special education teachers have been teaching and number of years of co-teaching experience. One special education teacher and one general education teacher indicated that this was their first-year co-teaching. Three out of four special education teachers taught six out of seven periods and four out of five general education teachers taught four or five periods a day.

Table 3. Teacher Respondent Experience

	# of years teaching	# of years co-teaching	# of teaching periods a day	Formal training in co-teaching	Formal training teaching students with disabilities
Special education teacher 1	19	1st year	6	no	yes
Special education teacher 2	19	More than 3 years	4	yes	yes
Special education teacher 3	18	More than 3 years	6	yes	yes
Special education teacher 4	18	More than 3 years	6	no	yes
General education teacher 1	19	More than 3 years	4	no	no
General education teacher 2	30	1st year	5	no	yes
General education teacher 3	21	More than 3 years	6	no	no
General education teacher 4	31	More than 3 years	4	no	no
General education teacher 5	21	3 years	5	yes	yes

In the pre-survey teachers were asked, "In my class the needs of students in special education compares to the needs of students who are not in special education." Two teachers strongly agreed, five teachers somewhat agreed, and two teachers somewhat disagreed. In the pre-survey teachers responded if they see increased student engagement when teaching in a co-taught environment. Five teachers strongly agreed, three teachers somewhat agreed, and one teacher strongly disagreed. When asked if co-teaching provides improved academic performance for ALL students, six teachers strongly agreed, and three teachers somewhat agreed. In the pre-survey, teachers were asked if you could change one thing about your co-teaching experience so far this year, which would you request? Four teachers selected avoiding scheduling conflicts during co-teaching class time so both teachers are consistently present in the room. Two teachers selected planning time, two teachers selected sharing roles and responsibilities and one teacher chose implementing co-teaching models.

Table 4 shows the percentage of students with an IEP for each of the nine teachers' co-taught classes (Gifted IEPs are not included.)

Table 4. Percentage of Students With Individualized Education Plans (IEP) in Each Teacher's Class

	Class 1	Class 2	Class 3	Class 4
Teacher 1	55%	81%	48%	
Teacher 2	65%	65%	20%	
Teacher 3	48%	43%		
Teacher 4	55%	81%	48%	
Teacher 5	79%	50%		
Teacher 6	45%	47%	77%	45%
Teacher 7	50%	52%		
Teacher 8	50%	50%		
Teacher 9	47%	50%	55%	

Table 5 shows the placement that teachers selected for students with disabilities to receive instruction.

Table 5. Teachers' Perceptions of Best Placement for Students Identified for Special Education

Survey question: For students labeled with a learning disability, emotionally disturbed and/or other health impairments (OHI), where is the best placement to receive instruction to be most successful?	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree
Resource room- students in special education are taught by a special education teacher	0% (0)	11.1% (1)	22.2% (2)	66.7% (6)
Push in/Pull out- students in special education are taught by a general education teacher and the special education teacher will come into the classroom AND pull students out into a separate classroom to provide assistance	11.1% (1)	33.3% (3)	44.4% (4)	11.1% (1)
Inclusion classroom co-taught by a special education teacher and a general education teacher	66.7% (6)	33.3% (3)	0% (0)	0% (0)

Figure 5 shows teachers' familiarity with and implementation of different models of co-teaching models. The three co-teaching models that at least one teacher is unfamiliar with are alternative teaching, one teach one assist, and one teach one observe. Most teachers are currently implementing station teaching in their classrooms.
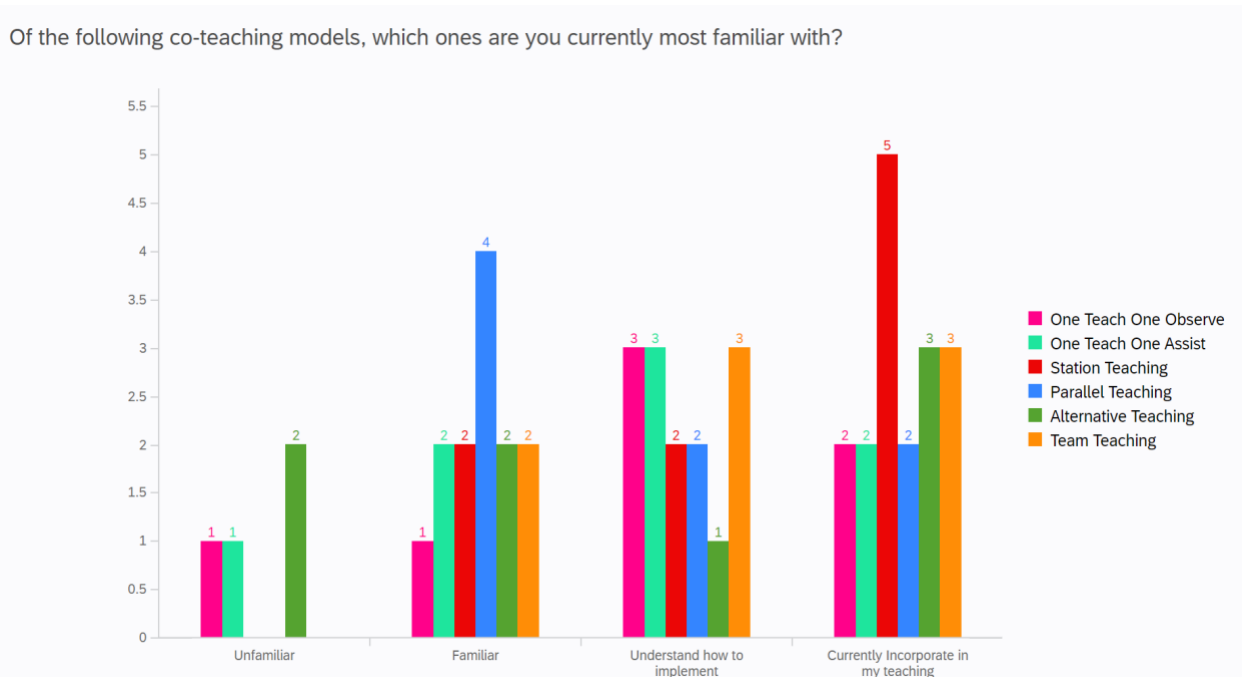

Figure 5. Teacher Familiarity With Different Co-Teaching Models

4.4.1.1 Co-Teachers' Pre-Survey Open-Ended Responses

Teachers who responded to the pre-survey responded to what they perceived to be the most challenging aspect of implementing co-teaching to be this school year. Two teachers stated planning time, three teachers stated sharing roles and responsibilities, one teacher stated maintaining successful relationships between co-teachers and three teachers stated avoiding scheduling conflicts during co-teaching time so that both co-teachers are consistently in the room.

Most of the teachers expand on the challenges of planning time in their open-ended responses. For instance, Teacher 1 noted the ways they fit in planning time stating, "We make it work, plan before school at lunch, between classes and over texts at night."

Teacher 2, Teacher 3, and Teacher 6 had more frustrated responses noting respectively of planning time,

- This is by far the most challenging aspect of co-teaching. There simply isn't enough time to plan and meet."

- I teach six out of seven periods a day with two co-teachers. There is not enough time during the day to plan for engaging lessons and effective co-teaching. And simply,

- Schedules did not match up.

Teacher 4 focused on the challenges implementing co-teaching models in their open-ended response, "Implementing co-teaching models has been the most challenging because general education teachers are reluctant to put in the time and effort needed to create something new."

4.4.2 Co-Teachers' Post-Survey

In the post-survey, teachers were asked "What has been the most challenging aspect of implementing co-teaching?" and the results slightly changed. In the pre-survey, two teachers stated

planning time while in the post-survey five teachers stated planning time. Following planning supports teachers were asked how often did in depth planning occur between you and your co-teacher/s? One teacher responded daily, two teachers responded once a week, one teacher responded monthly, and two teachers selected other given reasons as "in depth planning began 2nd quarter once a week" and "in depth planning with 7th grade general education teacher did not occur. In depth planning with 8th grade general education teacher occurred at least once a week."

Table 6 shows when co-teacher/s find time to plan together. Teachers chose from 8 categories for when they find time to plan together which are during common planning time that is not a prep period, during a prep period, during lunch, before school, after school, on the weekends, via emails/texts/phone calls, and/or discussion informally before or after class. All teachers plan informally before and/or after class. Teachers plan via texts/phone calls as five teachers never have time to plan during a common planning time that is not a prep period.

Table 6. When Teachers Plan Together

	Always	Often	Sometimes	Never
During common planning time that is NOT a prep period	0% (0)	16.7% (1)	0% (0)	83.3% (5)
During Prep Period	50% (3)	16.7% (1)	16.7% (1)	16.7% (1)
During lunch	16.7% (1)	16.7% (1)	33.3% (2)	33.3% (2)
Before school	16.7% (1)	16.7% (1)	33.3% (2)	33.3% (2)
After school	0% (0)	16.7% (1)	66.7% (4)	16.7% (1)
On the weekends	0% (0)	0% (0)	0% (0)	100% (6)
Via texts/phone calls	16.7% (1)	50% (3)	16.7% (1)	16.7% (1)
Discussions informally before/after class	33.3% (2)	33.3% (2)	33.3% (2)	0% (0)

Teachers were asked if they believe students are more engaged in co-taught classrooms and to describe the engagement or disengagement. Two teachers strongly agreed, and three teachers somewhat agreed that students are more engaged in co-taught classrooms and one teacher strongly disagreed. One teacher who strongly agreed stated, "More students are given more attention in smaller groups. You are able to meet student needs, keep them engaged, and bring them into lessons at their level where they are able to access the learning, stay engaged, and feel comfortable advocating for themselves." The other teacher stated, "There is a smaller teacher to student ratio." A teacher that somewhat agreed stated, "Co-teaching allows for small-group teaching. This provides more accountability for students and more prompt feedback. Student motivation and the level of difficulty still provides a challenge, but we are able to address students' needs." Two other statements from teachers that somewhat agreed are, "When coteaching is implemented with fidelity student engagement is increased," and "Small group instruction-students have the opportunity to receive one on one help from teacher or peer, in small groups students can receive immediate feedback and more likely to ask questions if they don't understand." "I don't see a difference in the teaching models as far as student engagement is concerned" is a statement from the teacher that strongly disagreed. Co-taught classrooms are beneficial to students when teachers believe that co-teaching can enhance student engagement as well provide individual and small group attention.

Teachers were asked if they believe co-teaching benefits students with disabilities. Five teachers strongly agreed. One teacher somewhat disagreed. One teacher that strongly agreed stated, "Effective co-teaching allows for high expectations for all students, students with and without disabilities are able to work and learn together in the same room and also receive peer assistance." Another teacher that strongly agreed stated, "Coteaching benefits students with and without

disabilities because it encourages collaboration to support individual and groups of students'

academic and behavior needs." The one teacher that somewhat disagreed stated, "I see this as

somewhat of a distraction for students and it doesn't always reap benefits." Teachers were asked

if they believe co-teaching benefits students without disabilities. Four teachers strongly agreed,

one teacher somewhat agreed, and one teacher somewhat disagreed. Teachers were asked if they

believe co-teaching benefits students labeled as "gifted." Three teachers strongly agreed, two

teachers somewhat agreed, and one teacher somewhat disagreed. Student outcomes can be

positively or negatively impacted by teachers' beliefs of co-teaching in inclusion classrooms.

Figure 6 shows teachers' responses to which co-teaching models were implemented

during class time. The six co-teaching models are one-teach one-assist, one-teach one-observe,

station teaching, alternate teaching and team teaching. Two teachers responded that they always

use the co-teaching model station teaching. Station teaching was the only co-teaching model

reported as "Always" used in the classroom. Two teachers responded that they often use the co-

teaching models one-teach one-assist, one-teach one-observe, station teaching, team teaching and

one teacher responded using the alternate teaching co-teaching model often. Two teachers

responded that they sometimes use the co-teaching models one-teach one-assist and one teach

one-observe in the classroom. One teacher responded using the co-teaching model station

teaching sometimes. Four teachers responded sometimes using the co-teaching model alternate

teaching and three teachers responded sometimes using the team-teaching co-teaching model.

One teacher responded never using the co-teaching models station teaching, alternative teaching

and team teaching, while two teachers responded never using the co-teaching models one-teach

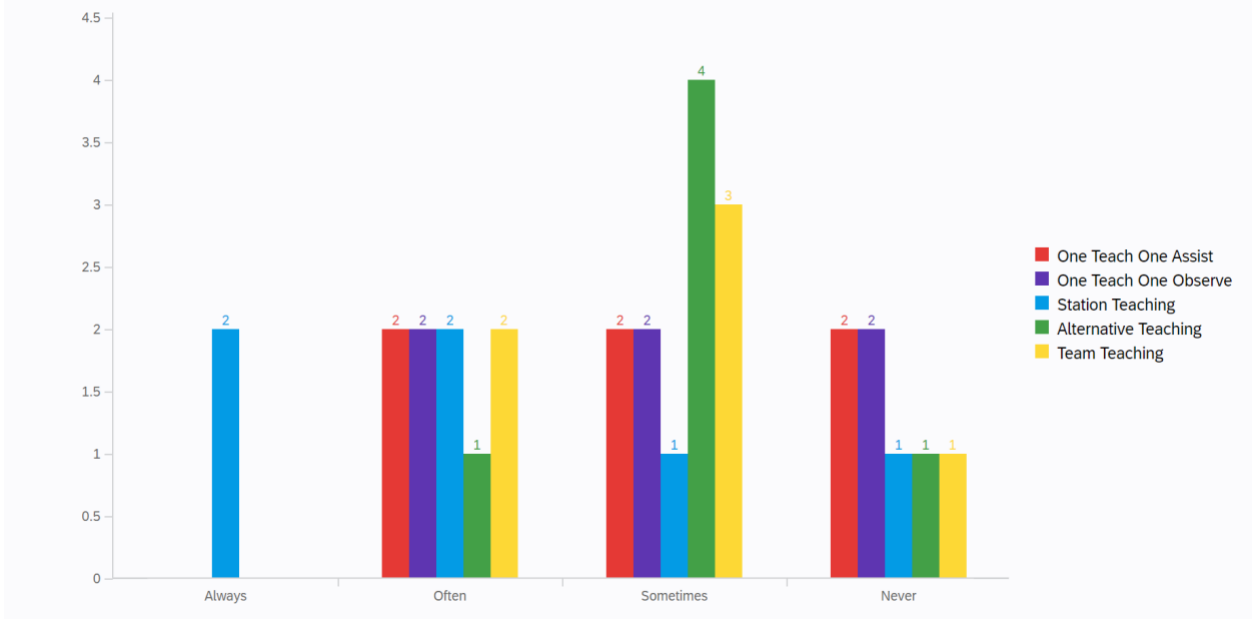one-assist and one-teach, one-observe.

Figure 6. Co-Teaching Models Implemented

Table 7 below shows teachers responses to supports provided in the classroom to students with and without disabilities.

Table 7. Teacher Supports Provided to Students With and Without Disabilities

		Always	Often	Sometimes	Never
1	Extended time on assignments/tests with disabilities	5	1	0	0
	Extended time on assignments/tests without disabilities	4	2	0	0
2	Review/repeated directions with disabilities	5	1	0	0
	Review/repeated directions without disabilities	4	2	0	0
3	Chunking of assignments with disabilities	3	1	1	1
	Chunking of assignments without disabilities	3	2	0	1
4	Modeling with disabilities	4	1	1	0
	Modeling without disabilities	4	2	0	0
5*	Scaffolding with disabilities	4	2	0	0
	Scaffolding without disabilities	4	2	0	0
6*	Verbal directions with disabilities	5	1	0	0
	Verbal directions without disabilities	5	1	0	0
7	Simplified directions with disabilities	4	1	1	0
	Simplified directions without disabilities	3	2	1	0
8	Use of manipulatives/anchor charts/graphic organizers with disabilities	2	3	1	0
	Use of manipulatives/anchor charts/graphic organizers without disabilities	1	4	1	0
9*	Checks for understanding with disabilities	4	2	0	0
	Checks for understanding without disabilities	4	2	0	0
10	Peer assistance with disabilities	1	5	0	0
	Peer assistance without disabilities	3	3	0	0
11	One on one with teacher with disabilities	2	4	0	0
	One on one with teacher without disabilities	1	5	0	0
12*	Modified assignments/tests with disabilities	3	3	0	0
	Modified assignments/tests without disabilities	3	3	0	0
13	Opportunity for movements/breaks with disabilities	4	1	1	0
	Opportunity for movements/breaks with disabilities	2	1	3	0
14	Use of headphones to block noise with disabilities	0	1	4	1
	Use of headphones to block noise without disabilities	0	0	2	4
15*	Open book/open notes for tests with disabilities	3	2	1	0
	Open book/open notes for tests without disabilities	3	2	1	0

16	Positive reinforcement with disabilities	4	2	0	0
	Positive reinforcement without disabilities	5	1	0	0
17	Individual behavior charts/sheet with disabilities	0	1	5	0
	Individual behavior charts/sheet with disabilities	0	1	1	4
18	Classroom positive behavior support system with disabilities	2	1	3	0
	Classroom positive behavior support system without disabilities	2	3	0	1
19	Schoolwide positive behavior support system with disabilities	3	1	2	0
	Schoolwide positive behavior support system without disabilities	3	2	1	0

As illustrated in Table 7, teachers surveyed using the same supports for students with and without disabilities. The five supports are open book/open notes for tests, modified assignments/tests, checks for understanding, scaffolding, and providing verbal directions. The data shows that 10 supports given to students with and without disabilities were similarly provided by teachers. The 10 supports are schoolwide positive behavior support system, positive reinforcement, one on one with teacher, use of manipulatives/anchor charts/graphic organizer, simplified directions, chunking of assignments, modeling, review/repeated directions, and extended time on assignments. Teachers responded differently to four supports that are provided to students with and without disabilities. The four supports are classroom positive behavior support system, opportunity for movements/breaks, use of headphones to block noise, and peer assistance. Two teachers responded that they always use classroom positive behavior support system for students with disabilities and two teachers responded that they always use classroom positive behavior support system without students without disabilities. One teacher responded often using classroom positive behavior support system for students with disabilities and three teachers responded often using classroom positive behavior support system for students without disabilities.

One teacher responded never using classroom positive behavior support system for students without disabilities.

Teachers were asked if given the opportunity would you co-teach again. "Why or why not?" Five teachers responded "yes" and one teacher responded "no." One teacher who responded yes stated, "I feel like I am a better teacher with my co-teacher. Our differences enhance the education of our students." Other teacher that responded yes stated, "It is best for students based on my teaching experience, having a thought partner to brainstorm ideas for learning, differentiated instruction and engaging lessons/activities and two teachers in the room is better than one," and "I enjoy working with students with IEPs and coteaching. Most struggling learners hate math and I love having the opportunity to help them become confident in the subject area and in themselves." The one teacher that responded no stated, "I don't know that it impacts student learning in a significant way." Based on the responses, most teachers believe co-teaching has a positive impact on students and two teachers collaborating can increase engagement, and small group teaching.

4.5 Focal Cases: Things to Consider with Co-Teaching

In May of 2022, the principal and assistant principal worked alongside the math coach to introduce and implement co-teaching expectations for the following school year. The *Getting to Know You-Co-Teachers Expectations* was presented to the special education teachers and general education teacher who were co-teaching. The *Getting to Know You-Co-Teachers Expectations* consisted of questions for co-teachers to brainstorm, share ideas and get to know each other before the planning and teaching process. While completing the *Getting to Know You-Co-Teachers Expectations* with my 7th grade co-teacher I learned that her pet peeves are negativity and

complaining. My co-teacher stated that she does not arrive to school early and does not stay late unless there are mandated meetings. I knew this would pose a challenge for planning as I teach 6 out of 7 periods. She currently uses station teaching with three group rotations, which are independent- IXL/Study Island and two small groups, consisting of a higher level and a lower-level group.

My 7th grade co-teacher and I decided to start the class with a 10-minute warm up. After the review of the warm-up, the first rotation of groups will start. Students used a binder in class for organization for warmups, classwork, data, and resources. Practicing in groups, using the same daily routines, and being consistent with rotations allowed for students to know the expectations, while receiving immediate feedback, student teacher conferences, verbal praise, and positive reinforcement. We both had a small group of students for at least 25 minutes while a group of students worked independently on IXL activities/lessons. The activities/lessons in the small group with the teacher varied based on students' needs. South Hills Middle School uses PAWS matrix (polite, accountable, wise, safe) for earning school-wide points. Students were able to earn points to participate in school-wide activities by using polite language, completing tasks, following directions, putting in effort and exhibiting safe behavior. My 7th grade co-teacher and I decided to do an end of the month incentive for students who received at least 80% of PBIS points during the double-period math class.

During the completion of this *Getting to Know You-Co-Teachers Expectations*, my 7th grade co-teacher and I decided that we would plan during Professional Learning Community (PLC) time. At the beginning of the 2022-2023 school year, the PLC was no longer an option for us to plan together since other meetings took precedent and PLC was no longer in existence. We decided to plan weekly during our 5th period prep period. At the beginning of the school year our

scheduled planning did not occur because my 7th grade co-teacher was used as a substitute for music class for the first report period.

My 8th grade co-teacher and I decided to use the *Getting to Know You-Co-Teachers Expectations* to plan for the 2022-2023 school year. Before discussing our expectations, we realized and discussed that students may have more difficulty time with math class because it is the only class that they have that is a double period (94 minutes), with the same two teachers in the same classroom. Students are located in one classroom for 94 minutes compared to their other 5 periods in one classroom for 47 minutes. We also anticipated that students may also have difficulty working in a class where the expectation is to work in groups as well as independently on a daily basis. My co-teacher and I also discussed how students may react negatively to our grading for equity policy, which is grading students on what they learned instead of using points to reward or punish students for their learning. For students and us to have a less stressful 94-minute math class, my co-teacher and I decided to incorporate team-building warmups at least once a week. Other warmups consisted of paper-and-pencil math skills to collect data on prior knowledge, and skills taught throughout the week, math games such as Challenge 24 and word plexars, which are word-based puzzles that describe a word or phrase without actually spelling it out.

While completing *the Getting to Know You-Co-Teachers Expectations* my 8th grade co-teacher's pet peeves are when we (teachers) focus more on testing and not on actual student learning, students pestering and teasing each other and students disrespecting classroom materials. My 8th grade co-teacher arrives to school early but likes to get independent work done. She stays late every day and would like to have a set time one day after school for us to make sure the following week's lesson plan is complete. We decided that there would be a calculator caddy and

students' materials on the small student table as students enter class. When entering the room each student got their assigned calculator, binder, and warm-up folder and immediately started warm up. My 8th grade co-teacher and I decided to have a quiet corner located in the room for students who may need time alone for various reasons or if a student may need to work independently on an assignment or test. The students were assigned to three groups: two small groups and an independent group. The students in the independent group worked on IXL, and both teachers were logged into IXL to view students' live performance.

4.6 Co-Teaching Questionnaire

My two co-teachers completed a co-teaching questionnaire in January 2023. They responded to questions related to their co-teaching experience from August to December 2022. The job duties and responsibilities of what a special education teacher varies depending on the general education teachers' perceptions. My 7th grade co-teacher described a special education teacher who provides academic and behavioral support and modifications for students with IEPs. The 7th grade general education teacher provides a vague interpretation of what a special education teacher does. As a special education teacher, my job is not to "support" students with IEPs, but rather to provide instruction and/or modifications for students with IEPs, but also work alongside with the general education teacher to provide the needed instruction and/or modification for students without IEPs when needed. All teachers are to provide support, not just special education teachers. My 8th grade co-teacher stated that a special education teacher plans lessons, prepares materials, teaches students, handles discipline, but while doing all these things brings their expertise on how to differentiate and meet all students at their level. The 8th grade general

education teacher provides a similar job description of a "teacher" while also referring to the special education teacher's expertise to teach students. I disagree with the 8th grade general education teacher as she stated my role is to handle discipline. All teachers have the responsibility to handle discipline. My focus as a special education teacher is to make it a priority that students with disabilities needs are being met appropriately, while collaborating with all staff, administration, and parents.

4.7 Personal Experiences of Co-Teaching

My two co-teachers reflected on how their personal experiences in learning math (elementary, middle, high school, college) shape their views about teaching mathematics to students with and without disabilities. The 8th grade general education teacher stated that math always came easy to her, and she was never expected to explain her thinking or justify her answers. The 8th grade general education teacher's personal experience she had in college shape your views about teaching mathematics to students with and without disabilities. She remembers having a class that was very difficult for her and did not understand anything that was being taught. Her friend would review the material with me and color-coded diagrams and explained problems in a way that made sense to her. This experience helped her to understand how paralyzing it is to not understand what is being taught. The 7th-grade general education teacher did not specify how her personal experiences in learning math help shape her views about teaching mathematics. She stated, "All students learn in various ways. Some are visual learners, auditory learners. Some are more hands on. Some kids learn with one example, some need many examples or explained a different way." I can relate to my 8th grade co-teacher's experience of having a class that was

difficult and not understanding anything that was being taught. When I was in high school, I did not understand anything that was taught in my elementary functions math class. I passed through by working with two friends in class and copying off of each other's papers. As I teach math now, I regularly think about my moments I experienced in my math classes the entire school year being confused. I work with students one on one and ask them questions to help them, which most of my math teachers never did. I also try to relate math problems to real life situations for students to understand.

If given the opportunity to co-teach again, the 8th grade co-teacher stated, the two things she will keep the same is co-planning and teaching in small groups. Co-planning provides shared ownership. Teaching in small groups provides stronger accountability for students. There are a few things the 8th grade teacher stated that she will do differently, such as hold the time to co-plan sacred and have an agreed upon set system for rewards. The 7th grade co-teacher stated that she will keep small group instruction the same and implement co-teaching models differently. For the 8th grade co-taught class, I will keep the grading for equity, co-teaching models, daily differentiated instruction and including community building activities weekly. For the 7th grade class, I will keep the station teaching co-teaching model the same. For both classes a few things I would do differently are incorporate more community building activities/lessons throughout the month, plan and incorporate culturally relevant lessons and activities.

The 8th grade teacher explained how some things that got in the way of co-teaching, such as coverages and a lack of school systems in place. She stated that coverages were given which left one teacher in the room. She stated, "The group of students being co-taught have a lot of baggage and there are no systems in place in school to address those issues. These issues took time away from planning and would often cause disruptions in class. The 7th grade general education

teacher stated, "teachers being pulled out to cover other classes gets in the way. Also, lack of common planning time being available." Being burnt out from several issues got in the way of co-teaching for me. Teaching six periods while being assigned a 37-minute coverage for homeroom, being assigned a coverage during my co-teaching class because a general education teacher called off, not having a planning period built into the schedule for my co-planning with co-teachers. Students in class having severe trauma issues that affected learning and there were no services in place and unwillingness from student services department to meet the needs of students and families.

4.7.1 Supports and Successes in Co-Teaching

There were some things that helped us co-teach. The 8th grade general education teacher stated that meeting together at the end of last year and working through the co-teaching expectations provided an opportunity to get to know each other better. Also, the shared belief that co-teaching is what is best for students. The 7th grade general education teacher stated, "It is very helpful co teaching to teach in small groups. This kept students more engaged in the learning. This also prevented kids from opting out. Having two teachers allowed us to show multiple ways to teach a skill." My co-teaching partners having math content background, my prior experience of teaching math to students with and without disabilities and believing that co-teaching is best for student success helped my co-teachers and I co-teach.

My 8th grade co-teacher shares a story of a positive experience while co-teaching of a male student with unique and quite demanding needs. She stated that, "together we worked through multiple iterations of what he could do in class. Seeing him succeed and be proud of his work was a result of our team effort." She calls the biggest success story as seeing students succeed because

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they are working at their own level instead of everyone being expected to do the same work is positive. My 7th grade co-teacher stated, "I feel it is all positive. Keeping students engaged while working in small groups is the most positive. I love that it allows kids to feel safe, comfortable, and confident to speak up in a small group when they feel uncomfortable, embarrassed, or invisible in a large class." My 8th grade co-teacher and I share a positive success story of a Black students labeled with a vision impairment and learning disability. My co-teacher and I worked tirelessly to differentiate instruction to best meet his needs for him to be successful after 8th grade. We communicated with the student, his parent and the student's vision itinerant service provider to accommodate his needs for him to feel included and be successful in class. Another success story is working with my 8th grade co-teacher to modify instruction for an 8th grade Black student labeled with a learning disability. This student's math work was modified on a beginning 9th grade level and working on 8th grade content during the 1st semester that is usually taught in the second semester of 8th grade.

4.7.2 Negative Experiences in Co-Teaching

My co-teachers and I also have negative experiences while co-teaching. The 8th grade general education teacher stated, "my negative experience is not a specific situation but a nagging feeling that I am not doing enough in the partnership. I am doing my best but am I focusing my efforts on what is best for both of us?" The 7th grade general education teacher recalls a negative experience when planning for small group instruction and the other teacher is pulled to be somewhere else. The teacher stated, "when I teach a whole large group, I find the students who struggle the most are not engaged at all." My negative experience of co-teaching is when I am pulled from my co-teaching class to cover classes because another general education teacher in the

building is absent. While co-teaching with two teachers I always felt like I was not doing enough to help my co-teaching partners without planning time built into the schedule, IEP meetings and deadlines to complete special education paperwork. Another negative experience is connected to the positive experience regarding the Black student labeled with a learning disability mentioned above. Even though this student is intrinsically motivated, working on a beginning 9th grade level he will always be placed in lower-level math classrooms because of his label of a learning disability.

4.7.3 Impact of Race and Teaching

My co-teachers responded to how race impacts their teaching. The 8th grade general education teacher stated, "Yes. I think race impacts my teaching because I was raised in a white bubble where I did not have to think about if race impacted my life. I am working hard to educate myself but as a white person I need to make a conscious effort to identify how race impacts my classroom/teaching/relationships or how race impacts the students in other classes who then carry this into our class." The 7th grade general education teacher stated, "I truly hope not. I feel I give all students the same level of dignity and respect." Race definitely impacts my teaching on a daily basis. Every time I am in the classroom I am teaching from a Black lens. I bring my life experiences as a Black woman and Black teacher into the classroom, which helps me to think of students as individual learners.

5.0 Discussion

The purpose of this study was to improve co-teaching in inclusion classrooms to engage and improve student achievement. Co-teachers (special education teachers who teach with a general education teacher) completed pre- and post-surveys to gain a better understanding of their perceptions regarding co-teaching. Four special education teachers and six general education teachers co-teach this school year. Ninety percent of the teachers completed the pre-survey and 60% of the teachers completed the post-survey. Approximately 18% of students labeled with a disability in South Hills Middle School are placed in inclusion classrooms. The relationship between special education teachers and general education teachers must be intact to improve student achievement.

5.1 Limitations of the Study

The aim of the study was to examine co-teaching relationships for improving student achievement in inclusion classrooms. One limitation of the study was limited by the non-existence of professional development and/or training needed to implement co-teaching practices effectively and with fidelity in inclusion classrooms. Four general education teachers and two special education teachers responded as having no formal training in teaching students with disabilities. Despite all teachers teaching at least 18 years with six teachers, receiving no formal training in co-teaching is an ineffective practice as general education teachers and special education teachers are expected to work together. Sixty percent of the general education teachers surveyed received no

formal training in teaching students with disabilities is disturbing as these teachers have been teaching students with disabilities in inclusion classrooms and as the number of students enrolled in special education increases.

The second limitation was the abrupt change in administration from the 2021-2022 school year to the 2022-2023 school year. The administration during the 2021-2022 school year ended the school year with set plan for co-teaching for the following school year. Also, the administration during 2021-2022 made expectations to the entire teaching staff of instructional strategies that included group work among students. The expectations, roles and responsibilities were not presented or addressed by the principal who was appointed in August 2022. While teachers may have been implementing co-teaching strategies in the inclusion classroom there were no observations conducted to determine if the co-teaching partnership and/or co-teaching strategies were used for planning and the instructional environment.

The third limitation was the limited planning time for co-teaching to be successful. There are seven periods in a school day: four teachers taught six periods, two teachers taught five periods, and three teachers taught four periods. The school schedule did not allot specific planning time for co-teachers to plan together for inclusion classes. Three out of the four special education teachers were assigned to teach six classes, which left one period to plan with the general education co-teacher. Also, special education teachers are also responsible for completing paperwork for students on their caseloads. The special education paperwork and responsibilities added an extra load to be carried out throughout the school day. Two special education teachers were assigned to co-teach with one general education teacher, one special education teacher was assigned to co-teach with two general education teachers and one special education teacher was assigned to co-teach with three general education teachers. With the burdensome paperwork coupled with co-

teaching with more than one general education teacher provided an inequitable teaching schedule. The schedule did not provide adequate time for co-teachers to collaborate and enhance their practice. Limited and/or no time for co-teachers to plan causes a strain on the co-teachers' relationship and ultimately causes harm to students during the delivery of instruction.

The fourth limitation was the small sample size of the study. One teacher did not participate in the pre-survey and four teachers did not participate in the post-survey. The study design did not capture reasons why teachers did or did not participate in the pre and post surveys.

5.2 Recommendations

Specific systems, structures, and policies need to be in place for effective co-teaching practices in inclusion classrooms. For example, the school administration must believe in, see the value in and enforce co-teaching in inclusion classrooms. Building administration and staff must share the same belief in equitable practices to provide meaningful instruction to all students. Co-teachers must have common planning time to plan for engaging, quality, and differentiated instruction. There needs to be a universal and explicit outline of specific roles and responsibilities for special education and general education teachers that is used consistency. Ongoing and meaningful professional development and training for implementing instructional strategies and differentiated instruction for teaching students with and without disabilities. The research-based practices and strategies must be incorporated into the classroom by co-teachers with evidence to support the implementation. All staff should know and understand the MTSS and SAP process should be implemented with fidelity. The district needs to have a uniform standard, and consistent process for referring students without burdensome repetitive paperwork for making a referral to

discuss students at the team meeting. It is important for the process for MTSS and SAP to be the same for all students being referred.

5.3 Conclusion

Co-teaching can be a positive experience for students as well as teachers. Special education teachers are perceived as "less than" a teacher, meaning special education teachers do not teach, they only assist. This toxic thinking and culture ultimately damages students as a whole and devalues special education teachers. Special education teachers and general education teachers are "teachers." If and when the district and school use all teachers to provide collaborative, effective, and quality instruction in a welcoming school environment, student achievement will increase. But as long as general education teachers continue to believe there are two school systems, one for general education and one for special education and state comments such as "my students," "your students," "my room," and "my classroom," students will continue to fail miserably.

Pittsburgh Public Schools employs special education teachers to develop lesson plans, implement rigorous and culturally relevant curriculum content to students, adapt teaching methods and instructional materials to meet students' varying learning styles, needs and interest while collaboratively working with other teachers among other duties and responsibilities. The district-wide special education professional development is mandated for special education teachers but not general education teachers. This implicitly gives the impression that only special education teachers are responsible for teaching students labeled with a disability. By law, general education teachers must provide education to students labeled with a disability and implement specially designed instruction and positive behavior support plans. Special education professional

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development needs to be mandated for all teachers to develop effective teaching practices and to increase student achievement district wide. Regardless of if co-teaching between a special education teacher and general education is implemented in schools there must be a shared willingness to provide instruction to all students rather than labeling students as "my students" and "your students."

General education teachers are responsible for teaching and providing services to students with disabilities. Some of those services include contributing to and reading IEPs, implementing specially designed instruction in the IEP, communicate with parents and teachers, collaborating with special educators, paraprofessionals, and related services staff and monitoring students' progress. Teaching students with disabilities in inclusion classrooms does not rely solely on the special education teacher. The relationships between general education teachers and special education teachers need improvement and critically examined to ensure success of all students to increase student achievement. When there is not a cohesive team of teachers intentionally focused on teaching all students the end results are low student achievement, low morale and/or frustrated staff members. Not only is there a disconnect between general education teachers and special education, but also a long-standing history of implicit and explicit racism that shows up throughout the district, in schools and in the classrooms. As a special education teacher with two decades of classroom experience in an urban school district I know firsthand how the experiences of implicit and explicit racism affect my physical and emotional state of teaching.

5.4 Reflection: Breaking My Silence as a Black Woman Special Education Teacher

After completing and reflecting on my Dissertation in Practice, I recognize that my experience and identity as a Black woman special education teacher play a significant role and impacts my teaching and thinking in the classroom. In 2021 I noticed a big push to find Black teachers. What does it mean to "find Black teachers"? This phrase assumes that Black teachers are hidden in faraway places and districts have to jump through hoops and run an obstacle course to find them. Black teachers have always been right in front of you. Instead of districts focusing on how they are going to miraculously find these Black teachers they need to research and educate themselves on how to retain the Black teachers that are currently in the district. The question districts need to ask is "What do we need to do to retain the Black teachers we currently have?" When this is done then you will not have to search high and low to "find" Black teachers. As a Black teacher I often say to myself, "What Black teacher in their right mind would want to work in this district or in any school district for that matter?" Making attempts to hire Black teachers without acknowledging, valuing, and validating the Black teachers who already exist in schools is just a means for districts and/or school administration to check a box and meet a quota. Districts continue to devalue Black teachers. Black faces in white spaces do not change policies, systemic racism or the status quo that has existed since school was created in the 1800s to intentionally educate white people in particular white boys.

Teaching is a thankless career, something I did not know or probably would not have believed when I decided to become a teacher when I was four years old. When I attended Head Start my favorite teacher was a Black woman named Ms. Rue. Throughout my years in school my parents reminded me how I would come home from school and boast about Ms. Rue. At that early age I cannot specifically remember the interactions Ms. Rue and I had, but I do remember from

the time I attended Kindergarten I was going to be a teacher. I remember a few teachers who I thought were good and I remember a few teachers who I thought were not so good at teaching. As an elementary student in 1987 and as a high school student between 1994 and 1998, teachers stood in front of the projectors writing on the transparencies talking about math. Currently as a teacher with 20 years of experience I still see my colleagues standing and sitting in front of an elmo (updated version from a projector) talking to students about math for the entire period. One big difference is teachers stand/sit in front of the Elmo projector talking about math for a double period compared to one period in the 1980s and 1990s.

As a Black woman special education teacher, I am met with unreasonable expectations while being underappreciated. My emotional well-being as a Black woman special education teacher has deteriorated throughout the years for different reason, but one reason still remains the same since the beginning of my teaching career is racism. Teaching while Black has been the most stressful, draining, exhausting, anxiety-ridden and depressing time of my life. The looks of disdain that I receive from white staff makes me question how any of these teachers could really be invested in teaching Black children. It does not matter how many degrees I have or number of years I have been teaching, I am looked down upon and seen only as a monitor, helper, and support person. I constantly see the difference in treatment between Black boys and white boys in school and in the classroom. When talking out loud and/or being "disruptive," Black boys will get kicked out of class while white boys repeatedly get told to be quiet. General education teachers refer to students as those "IEP kids" or "those ESL" kids and automatically assume they are all low performing. Just as Black students are stigmatized for being in special education, Black teachers are stigmatized as well. I feel and see it more as a negative experience being a Black special education teacher. General education teachers and administration call us "support teachers" or

"resource teachers." Why not just call us "teachers"? We are labeled and stigmatized just like Black students in special education.

During my years of teaching my burn out season always started in March, with 31 days and no days off is a long, grueling stretch to make it to spring break. Dealing with the ongoing trauma of being a Black woman special education teacher is mentally exhausting and physically excruciating. On a daily basis I have to make split-second decisions in the classroom dealing with students. Before entering the room to teach and during the school day I have to manage my emotions dealing with (a) microaggressions, (b) general education teachers not educated on what a special education teacher does, (c) white teachers' low expectations for Black students, (d) punitive consequences exhibited by school and district administrators that disproportionally affect Black students, (e) overrepresentation of Black students referred to and placed in special education, (f) Black students receiving proficient scores and similar grades as white students but not placed in advanced placement classes, and (g) administrators' incompetence to drive instruction and refusing to hold teachers accountable for not teaching students.

Each year I have witnessed teachers teach the curriculum and not students, racing to finish units in the curriculum as if teaching is a race. A white teacher stated before the PSSAs (Pennsylvania System School Assessment), "I have to get through the eligible content." While we race to get through the eligible content each year no one is learning, as the data shows that more than 50% of third graders are scoring below basic. I have witnessed a white female teacher crying when the math coach presented how to teach in small groups versus whole group for 94 minutes as she states, "This is so hard." Each year white teachers who are teaching Black students repeat the same outdated whole group instruction and use the same resources from previous years and no repercussions for low test scores. A Black female student stated to a white female teacher, "this is

boring" referring to the math content being taught. The white female teacher stated, "Well if you would pay attention, you wouldn't be bored." Ninety-four minutes of whole group lecturing on math is ineffective. Administrators have witnessed this criminal act and each year teachers receive a Proficient/Distinguished rating while the test scores remain stagnant at below basic.

General education teachers state, "I don't teach kids with IEPs" and if a student on their roster has an identification marker of having an IEP (when the identification marker on paper does not identify if it is a Gifted IEP) then general education teacher scurries to get the kid off their roster. All kids with IEPs are grouped in one or two classes with other students who are perceived to be "low-ability learners" because for some reason administration and some teachers think this is the right thing to do. The principal announced that students will be grouped by ability level for the 2023-2024 school year because "it is easier to differentiate instruction." Grouping by ability "tracking" is still happening today even though research shows that tracking is harmful to students. Students with IEPs will remain stuck in low level classes regardless of their strengths in reading or math because of their IEP identification marker. Rather than students being labeled with a disability because for some reason they are not learning I am starting to think that there are teachers who should be labeled with a teaching disability as they are not able to teach students without a scripted curriculum and refuse to while being allowed to not change their teaching practices. As usual, we just place the blame on the students instead of holding teachers accountable.

I have learned throughout my journey in education that a principal and/or administrator does not automatically make you a leader. Just the same as being a teacher does not mean he or she can teach. For some reason, titles mean more to a lot of people in education than actually servicing students. Adults make education about them rather than what is best for students. This is one reason for low test scores. First and foremost, test scores will not change until there is a total

transformation of how we do schooling, which must focus on courageous, uncomfortable conversations on systemic racism, equity and addressing harmful teaching practices that harm Black students. Purchasing new curriculum, programs, and new school reforms will not increase scores either until Black students feel that they are heard, seen, and loved. Continuing to discuss school reform is absurd because school was never formed to educate Black children.

Being a teacher, I have tried many times through the years to just do what is best for students in my room. Each year just doing what is best for students in my room did not work as the majority of adults around me are focused on teaching for the test and scurrying to get to the end of the curriculum. I heard a few teachers who share the same beliefs as I did in the past who say, "all I can do is what is best for my kids in my room." I used to think that too. Saying that to myself is what kept me coming back year after year thinking I was doing the right thing for me and my students. I came to realize that this is not true and we as teachers use this excuse of wrongdoing against students. We say this to make ourselves feel better and to continue the status quo. These are all of our kids. We keep separating my kids from your kids. When we keep saying this, we are contributors to the problem. We are all doing a disservice.

As educators we tend to hide behind the truth with parents and the community. I remember a time when I took it upon myself to pull out five kids who were labeled with a disability to make my own class because the white male general education teacher was not teaching them. Not teaching them means there was no differentiation, no scaffolding, no small groups, and using one curriculum for instruction and moving on to the next skill regardless of mastery. It was allowed by administration because I am assuming they knew he was not teaching. White administrators do not hold their white counterparts accountable; we just blame students.

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As a Black woman special education teacher, I have always been tougher on my Black students in my classroom, even those students who I did not teach. I know from experience that Black students will have to work twice as hard as their white peers and 10 times as hard to prove themselves in society when they have the same if not more credentials and/or experience than their white counterparts. I state this not to discourage Black children but because racism is real. Just because of the color of their skin the odds are already against them. In schools we order, we control and set rules to keep kids in their place. Some people call order and control insanity, but it is very much intentional. The educational system is not broken, it was designed to get the results that it is currently getting. I am tired of hearing "it takes time," and it is sickening to hear my colleagues state, "The older teachers will be retiring soon, then new people will come in and hopefully they will think like us." Since *Brown vs. Board* in 1954 and more than 30 years ago in 1992 when a complaint was filed with the Pennsylvania Human Relations Commission (PHRC) against Pittsburgh Public Schools for inequitable practices against Black students, the phrase, "It's going to take time" is a stalling technique to continue the status quo and to not focus on racism in education. The words "It takes time" seem to come from those who want to focus on additional programs and initiatives to the existing system that have failed Black students, their parents, and communities. These words allow some people to hold on to hope that white people will eventually come around to do what is best for Black students. I do not know why we as Black people think that white people are going to do what is best for Black students. In the words of Malcom X, "Only a fool would let his enemy teach his children." Since *Brown vs Board* we have never been accepted, we have been tolerated. I am leaving for me because this particular place does not deserve me. As a Black woman special education teacher, I will no longer stay in a system and perpetuate the criminal acts of injustice towards Black students and myself.

Appendix A PPS RISE for Teacher Evaluation- 24 Components

Table 1: PPS RISE for Teacher Evaluation- 24 Components	
Domain 1 Planning and Preparation	1a. Demonstrating Knowledge of Content and Pedagogy
	1b. Demonstrating Knowledge of Students
	1c. Setting Instructional Outcomes
	1d. Demonstrating Knowledge of Resources
	1e. Planning Coherent Instruction
	1f. Designing Ongoing Formative Assessments
Domain 2 The Classroom Environment	2a. Creating a Learning Environment of Respect and Rapport
	2b. Establishing a Culture for Learning
	2c. Managing Classroom Procedures

	2d. Managing Student Behavior
	2e. organizing Physical Space
Domain 3 Teaching and Learning	3a. Communicating with Students
	3b. Using Questioning and Discussion Techniques
	3c. Engaging Students in Learning
	3d. Using Assessments to Inform Instruction
	3e. Demonstrating Flexibility and Responsiveness
	3f. Assessment Results and Student Learning
	3g. Implementing Lessons Equitably
Domain 4 Professional Responsibilities	4a. Reflecting on Teaching and Student Learning
	4b. System for Managing Students' Data
	4c. Communicating with Families

	4d. Participating in a Professional Community
	4e. Growing and Developing Professionally
	4f. Showing Professionalism

Appendix B Five-Year District Strategic Plan

5-Year District Strategic Plan

Phase 1: Launch 2017–2018
Phase 2: Launch 2018–2019
Phase 3: Launch 2019–2020
Phase 4: Launch 2020–2021
Phase 5: Launch 2021–2022

Long-term Outcomes:

- Increase proficiency in literacy for all students
- Increase proficiency in math for all students
- Ensure all students are equipped with skills to succeed in college, career, and life
- Eliminate racial disparity in achievement levels of African American students

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Strategic Theme 1
Create a positive and supportive school culture

Objectives:

1. Meet the holistic needs of all students
2. Establish a shared commitment and responsibility for positive relationships with every student, family, and staff member.
3. Create effective family and community partnerships in every school.
4. Decrease the incidence of racial disproportionality in school discipline (behavioral referrals, suspensions, and arrests).

Strategic Initiatives:

Phase 1

1a. Establish a system-wide Multi-Tiered System of Support (MTSS) process, that includes Positive Behavior Interventions and Supports (PBIS) and restorative practices, implemented through high-functioning Student Assistance Program (SAP) teams in every school that are equipped to follow the process with fidelity.
2b. Develop and communicate explicit and consistent expectations for staff interactions with students and families.
3b. Implement a tiered and phased community schools approach.

Phase 2
1b. Embed elements of social-emotional learning into academic instruction.

Phase 3
1c. Develop individual student success plans for all students.
3a. Develop effective partnerships among schools, students, families, and community organizations, utilizing a research-based framework that fosters collaboration for student success.

4a. Provide implicit bias training to central and school-based administrators, school-based student support staff, school police/guards, and board members.

Phase 4
4b. Increase culturally responsive interventions and supports.

Strategic Theme 2
Develop and implement a rigorous, aligned instructional system

Objectives:
1. Establish a rigorous District-wide curriculum and assessment framework that is culturally inclusive.
2. Establish educational pathways that bridge PreK–12 learning with post-secondary education and/or workforce opportunities for all students.
3. Enhance the System of Early Education by integrating early childhood instructional practices, professional learning, and curriculum through third grade.
4. Increase the number of underrepresented populations in gifted education.
5. Design and adopt K–12 Ethnic Studies teaching and learning materials.
   Strategic Initiatives:

Phase 1
1a. Develop and design a common curriculum framework.
1b. Develop a comprehensive assessment system aligned to grade-level expectations.
1c. Implement an instructional system with aligned and equitably distributed resources.

Phase 2
3a.a. Launch and Evaluate Early Learning Pilot.
4a. Launch and Evaluate a Gifted Screener.

Phase 3
2a. Revise Graduation Requirements and Graduate Prole.
2b. Implement Classroom Expectations.
2c. Revise Curriculum Framework and Assessment System.
2d. Revise Course Catalogue.
2e. Create Master Schedule Guidelines.
2f. Create Pupil Progression Plan.
4b. Develop a multi-criteria screener for identifying gifted students.

Phase 4
5a. Create an Ethnic Studies Advisory Committee.

Phase 5
3b. Implement Early Learning Best Practices District-wide.

Strategic Theme 3
Provide appropriate instructional support for teachers and staff

Objectives:

1. Impact student outcomes by increasing teacher knowledge through a cohesive system of instructional support.
2. Ensure incoming teachers receive site-based mentoring through the New Teacher Induction Program.
3. Increase teacher capacity to implement instruction more equitably through research-based pedagogical strategies
   Strategic Initiatives:
   Phase 1

1b. Align instructional support efforts to ensure collaboration between school administrators and staff around the school's professional development focus.

Phase 2
1a. Ensure that all professional development for teachers and staff follows research-based and culturally relevant practices.
1c. Provide differentiated instructional support that is based on data and deployed through school-based, district-wide, and online learning opportunities.
1d. Ensure that supervisory and support staff who engage in instructional conversations with teachers receive differentiated learning opportunities to be effective in their roles.
2a. Train and develop teacher mentors as a part of the Instructional Teacher Leader (ITL) Certification Program.

Phase 3
3a. Implement a common understanding of the Culturally Relevant Pedagogy (CRP) in theory and practice.
3b. Provide a common language and examples of 3G critical attributes.

Phase 4
1c. Provide differentiated instructional support that is based on data and deployed through school-based, district-wide, and online learning opportunities.
1d. Design a system that supports individual professional learning plans for teachers

Strategic Theme 4
Foster a culture of high performance for all employees
Objectives:
1. Attract and retain high-performing staff who hold high expectations for all students.
2. Enhance District-wide systems that promote shared accountability, high expectations, and continuous growth for all employees.
Strategic Initiatives:
Phase 1
1a. Develop and broaden teacher pipeline and recruitment efforts to yield a diverse, culturally competent, and effective workforce.
1b. Develop a rigorous selection and hiring process that ensures the most effective workforce.

Phase 2

2b. Review and modify performance management systems to maximize impact on professional growth and student outcomes.

Phase 3
1c. Promote retention and reduce the negative effect of turnover.
2a. Create comprehensive professional learning environments to both facilitate role-specific learning and enable employees to grow and develop.

Table 2: Areas Out of Compliance
Positive Behavior Support Policy
Child Find (Annual Public Notice and General Dissemination Materials)
Confidentiality
Exclusions: Suspensions and Expulsions (Procedural Requirements)
Facilities Used for Special Education
Least Restrictive Environment (LRE)
Provision of Extended School Year Services
Provision of Related Service Including Psychological Counseling
Caseload and Age Range Requirements
Parent Training
Public School Enrollment
Personnel Training
Summary of Academic Achievement and Functional Performance/Procedural Safeguard Requirements for Graduation
SPP/APR Indicator 13 (Transition)

Table 3: Improvement Plan Required
Dropout Rates (SPP) State Performance Plan
Least Restrictive Environment (LRE) (SPP)
Participation in District-Wide Assessment
Public School Enrollment

Appendix C Pre-Survey Student Perceptions

Q1 Age

    ○ 12

    ○ 13

    ○ 14

    ○ 15

Q2 Grade

    ○ 7th

    ○ 8th

Q3 Gender

    ○ Female

    ○ Male

    ○ Non-binary

    ○ Prefer not to say

Q4 I identify as

☐ Bi-racial

☐ Black/African American

☐ Latinx/Hispanic

☐ White

☐ African descent

☐ Asian

☐ Other _____

Q5 Which academic subject do you prefer the most and **WHY**?

○ Science _____

○ Social Studies _____

○ Math _____

○ English Language Arts _____

Q6 Which academic subject do you prefer the least and WHY?

○ Science _____

○ Social Studies _____

○ Math _____

○ English Language Arts _____

Q7 Have you ever been taught in a co-taught classroom prior to this classroom? (2 teachers teaching in the same classroom)

○ No

○ Yes

Q8 I believe I will get more help from having two teachers in the classroom.

○ Strongly Agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q9 I believe I will learn more from having two teachers in the classroom.

○ Strongly Agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q10 I think I am good at math.

○ Strongly Agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q11 I like learning math.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q12 I feel confident in learning math.

    ○ Strongly agree

    ○ Somewhat agree

    ○ Somewhat disagree

    ○ Strongly disagree

Q13 I learn best when working in groups.

    ○ Strongly agree

    ○ Somewhat agree

    ○ Somewhat disagree

    ○ Strongly disagree

Q14 I learn best when working with a partner.

    ○ Strongly agree

    ○ Somewhat agree

    ○ Somewhat disagree

    ○ Strongly disagree

Q15 I learn best when I work by myself.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q16 I believe math is important throughout life.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q17 At the beginning of the school year both teachers presented themselves as equal partners with regard to teaching, answering questions and discipline.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q18 Explain how both teachers did OR did not present themselves as equal partners in regard to teaching, answering questions and discipline.

_____

Q19 At the beginning of the school year both teachers presented new material to the class.

○ Always

○ Usually

○ Sometimes

○ Never

Q20 At the beginning of the school year I see both teachers making decisions together.

○ Always

○ Usually

○ Sometimes

○ Never

Appendix D Post-Survey Student Perceptions

Q1 Grade

○ 7th

○ 8th

Q2 I receive more help in this class with two teachers than in my other classes with one teacher.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q3 Both teachers present themselves as equal partners.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q4 I see both teachers in this class making decisions together.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q5 Having two teachers in the room means one of the teachers usually sees something that the other teacher does not.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q6 I believe I learn more by having two teachers in the room.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q7 In this math class I feel comfortable asking my peers for help.

    ○ Extremely comfortable

    ○ Somewhat comfortable

    ○ Somewhat uncomfortable

    ○ Extremely uncomfortable

Q8 I feel comfortable asking both teachers for help.

    ○ Extremely comfortable

    ○ Somewhat comfortable

    ○ Somewhat uncomfortable

    ○ Extremely uncomfortable

Q9 I am successful in this class since I have two teachers.

    ○ Strongly agree

    ○ Somewhat agree

    ○ Somewhat disagree

    ○ Strongly disagree

Q10 I like the variety of activities in this class.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q11 I prefer to have two teachers in class.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q12 My teachers know what I need to be successful.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q13 I understand both teachers when they explain things to me.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q14 I understand one teacher more than the other teacher when things are explained to me.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q15 Why do you think this class has two teachers?

_____

Appendix E Pre-Survey Teacher Perceptions of Co-teaching

Q1 Choose one

○ Special Education Teacher

○ General Education Teacher

Q2 What content area do you teach?

○ English Language Arts

○ Math

Q3 Number of years teaching (Include 2022-2023 school year) _____

Q4 How many years have you co-taught? (Co-teaching is defined as a special education teacher and a general education teacher simultaneously teaching the entire class time.)

○ First Year

○ 1 year

○ 2 years

○ 3 years

○ More than 3 years

Q6 How did you get involved in co-teaching?

○ Volunteered

○ Administration assigned

○ Administration recommended involvement

○ Other _____

Q7 Which response best describes how you were paired with your co-teacher/s?

○ I was assigned by my administrator

○ I chose my co-teaching partner

○ Other _____

Q8 Have you received formal training for co-teaching?

○ Yes

○ No

Q9 (GENERAL EDUCATION TEACHERS ONLY) Have you received formal training in teaching students with disabilities?

○ Yes

○ No

○ N/A

Q10 Have you received formal training in culturally responsive teaching?

○ Yes

○ No

Q11 How many periods do you teach a day? (Double periods count as 2 periods)

○ 4 periods

○ 5 periods

○ 6 periods

Q12 How many periods a day are you co-teaching? (Double periods count as 2 periods)

○ 1

○ 2

○ 3

○ 4

○ 5

○ 6

Q13 How many grade levels do you teach this school year?

○ 1

○ 2

○ 3

Q14 How many co-teachers are you assigned this school year?

○ 1

○ 2

○ 3

○ more than 3

Q15 The expectations of co-teaching are clearly defined by administration? (Administration is the principal and assistant principal)

○ Strongly Agree

○ Somewhat Agree

○ Somewhat Disagree

○ Strongly Disagree

Q16 Of the following co-teaching models, which ones are you most familiar with?

	Unfamiliar	Familiar	Understand how to implement	Currently Incorporate in my teaching
One Teach One Observe	○	○	○	○
One Teach One Assist	○	○	○	○
Station Teaching	○	○	○	○
Parallel Teaching	○	○	○	○
Alternative Teaching	○	○	○	○
Team Teaching	○	○	○	○

Q17 If you could change one thing about your co-teaching experience so far this year, which would you request?

○ Expectations of co-teaching

○ Planning time

○ Sharing roles and responsibilities

○ Administration support

○ Instructional coach support

○ Maintaining successful relationships between co-teachers

○ Avoiding scheduling conflicts during co-teaching class time so that both teachers are consistently present in the room

○ Implementing co-teaching models

○ Other _____

Q18 What do you perceive the **MOST** challenging aspect of implementing co-teaching to be this school year?

○ Planning time

○ Sharing roles and responsibilities

○ Administration support

○ Maintaining successful relationships between co-teachers

○ Avoiding scheduling conflicts during co-teaching time so that both teachers are consistently present in the room

○ Implementing co-teaching models

○ other _____

Q19 I see increased student engagement when I teach in a co-taught environment.

○ Strongly Agree

○ Somewhat Agree

○ Somewhat Disagree

○ Strongly Disagree

Q21 I have difficulty providing instruction to students labeled with a learning disability, emotionally disturbed and/or Other Health Impairments (OHI).

○ Strongly Agree

○ Somewhat Agree

○ Somewhat Disagree

○ Strongly Disagree

Q22 I believe co-teaching provides improved academic performance for **ALL** students.

○ Strongly Agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q23 Which instructional design models (techniques) do you currently implement. (Check all that apply)

☐ Bloom's Taxonomy

☐ Backward mapping

☐ Vygotsky-scaffolding

☐ Multiple Intelligences

☐ Other _____

Q24 Which teaching methods do you currently implement (Check all that apply)

☐ Direct Instruction

☐ Directed Discussion

☐ Guided Instruction

☐ Project Based Learning

☐ Cooperative Learning

☐ Inquiry Based Learning

☐ Other _____

Q25 In my class the needs of students in special education compares to the needs of students who are not in special education.

○ Strongly Agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q26 For students labeled with a learning disability, emotionally disturbed and/or other health impairments (OHI), where is the best placement to receive instruction to be most successful?

	Strongly Agree	Somewhat agree	Somewhat disagree	Strongly disagree
Resource room- students in special education are taught by a special education teacher	○	○	○	○
Push in/Pull out- students in special education are taught by a general education teacher and the special education teacher will come into the classroom AND pull students out into a separate classroom to provide assistance.	○	○	○	○
Inclusion classroom co-taught by a special education teacher and a general education teacher	○	○	○	○

Q27 What is the percentage of students with an IEP for each of your co-taught classes? (GIFTED IEPs ARE NOT INCLUDED)

○ Class 1 _____

○ Class 2 _____

○ Class 3 _____

○ Class 4 _____

○ Class 5 _____

Appendix F Post Teacher Survey Perceptions of Co-teaching

Q1 What has been the **MOST** challenging aspect of implementing co-teaching? (CHOOSE ONE AND EXPLAIN)

◯ Planning time _____

◯ Lack of training/professional development _____

◯ Limited resources _____

◯ Personality clashes _____

◯ Sharing of roles and responsibilities _____

◯ Administration support _____

◯ Maintaining positive relationship between co-teacher/s _____

◯ Avoiding scheduling conflicts during the co-teaching class time s that both teachers were consistently present in the classroom _____

◯ Implementing co-teaching models _____

◯ Other _____

Q2 Which co-teaching models were implemented during class time?

	Always	Often	Sometimes	Never
One Teach One Assist	○	○	○	○
One Teach One Observe	○	○	○	○
Station Teaching	○	○	○	○
Alternative Teaching	○	○	○	○
Team Teaching	○	○	○	○

Q3 At any time from August 29, 2022 to December 22, 2022 was the push-in/pull-out model used in the inclusion classroom? (Push in/Pull out model is defined as when the special education teacher enters the classroom to provide support for particular students **AND** when the special education teacher takes particular students out of the classroom to provide instruction/support) If yes, please explain.

○ Yes _____

○ No _____

Q4 How often did in depth planning occur between you and your co-teacher/s?

○ Daily

○ Once a week

○ Once every two weeks

○ Monthly

○ Other _____

Q5 When do you and your co-teacher/s find time to plan together?

	Always	Often	Sometimes	Never
During our common planning period that is NOT our prep period	○	○	○	○
During our prep period	○	○	○	○
During our lunch	○	○	○	○
Before school	○	○	○	○
After school	○	○	○	○
On the weekends	○	○	○	○
Via emails/texts/phone calls	○	○	○	○
Discussions informally before/after class	○	○	○	○

Q6 I believe students are more engaged in co-taught classrooms? Describe the engagement or disengagement.

○ Strongly agree _____

○ Somewhat agree _____

○ Somewhat disagree _____

○ Strongly disagree _____

Q7 My co-teaching partner/s and I share the responsibility of preparing materials and preparing the classroom for instruction.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q8 My co-teaching partner/s and I didn't always agree but we found solutions to continue working to best instruct students.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q9 I gained new ideas about teaching from my co-teaching partner/s.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q10 What supports did you provide to students **WITH** disabilities.

	Always	Often	Sometimes	Never
Extended time on assignments/tests	○	○	○	○
Review/repeated directions	○	○	○	○
Chunking of assignments	○	○	○	○
Modeling	○	○	○	○
Scaffolding	○	○	○	○
Verbal directions	○	○	○	○
Simplified directions	○	○	○	○
Use of manipulatives/anchor charts/writing graphic organizers	○	○	○	○
Checks for understanding	○	○	○	○
Peer assistance	○	○	○	○

One on one with teacher	○	○	○	○
Modified assignments/tests	○	○	○	○
Opportunity for movement/breaks	○	○	○	○
Use of headphones to block noise	○	○	○	○
Open book/Open notes for test	○	○	○	○
Positive reinforcement (16)	○	○	○	○
Individual behavior chart/sheet (17)	○	○	○	○
Classroom positive behavior support system (18)	○	○	○	○
Schoolwide positive behavior support system (19)	○	○	○	○

Q11 What supports did you provide to students **WITHOUT** disabilities

	Always	Often	Sometimes	Never
Extended time on assignments/tests	○	○	○	○
Review/repeated directions	○	○	○	○
Chunking of assignments	○	○	○	○
Modeling	○	○	○	○
Scaffolding	○	○	○	○
Verbal directions	○	○	○	○
Simplified directions	○	○	○	○
Use of manipulatives/anchor charts/writing graphic organizers	○	○	○	○
Checks for understanding	○	○	○	○
Peer assistance	○	○	○	○
One on one with teacher	○	○	○	○
Modified assignments/tests	○	○	○	○
Opportunity for movement/breaks	○	○	○	○
Use of headphones to block noise	○	○	○	○
Open book/Open notes for test	○	○	○	○

Positive reinforcement	○	○	○	○
Individual behavior chart/sheet	○	○	○	○
Classroom positive behavior support system	○	○	○	○
Schoolwide positive behavior support system	○	○	○	○

Q12 **GENERAL EDUCATION TEACHERS ONLY**- I treat my co-teaching partner as an equal in the classroom and during planning sessions.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

○ N/A

Q13 **GENERAL EDUCATION TEACHERS ONLY**- I gained new "insight" about students as learners having worked in partnership with a special education teacher in the same classroom.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

○ N/A

Q14 **GENERAL EDUCATION TEACHERS ONLY**- I am confident in providing instruction to students who are labeled with a learning disability, emotionally disturbed, and other health impairments without a special education teacher in the classroom.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

○ N/A

Q15 **SPECIAL EDUCATION TEACHERS ONLY**- I feel like an equal in the classroom and during planning sessions.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

○ N/A

Q16 If you had the opportunity to co-teach again, which **ONE** of the following would you need for you and your students to be successful?

○ Specific time built into the schedule for planning time

○ Smaller class size

○ Training/professional development of effective co-teaching

○ Training/professional development on differentiated instruction

○ Other _____

Q17 If given the opportunity would you co-teach again. Why or Why Not?

○ Yes _____

○ No _____

Q18 I believe co-teaching benefit students with disabilities.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q19 I believe co-teaching benefits students without disabilities.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q20 I believe co-teaching benefit students labeled as "gifted"

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Q21 Briefly explain how co-teaching benefit **OR** does not benefit students with and without disabilities.

_____

Q22 I am satisfied with how my co-teacher/s communicate with me.

○ Strongly agree

○ Somewhat agree

○ Somewhat disagree

○ Strongly disagree

Appendix G Things to Consider With Co-Teaching

Our vision of co-teaching is having two teachers act as 50/50 partners within the classroom. The students should think that they have 2 co-teachers, not one main teacher and a support person. Both teachers need to buy into "us" as a team. Little things matter like having both of your names on the door and feeling comfortable to open a desk drawer for supplies. You will need to work on your relationship with each other and the students.

This activity is to help you start visualizing what it will be like with a co-teacher.

Personal Expectations: (Share any personal information that you think is relevant)

What are your pet peeves?

What noise level can you tolerate in the classroom/ hallway/ partner work?

Do you stay late or come early to school?

What does your classroom look like now? How do students work throughout your lesson?

Student Expectations (Students need consistency and routines):

What are procedure and routines within the classroom? Where will student supplies be located? How will they use the supplies?

Do you expect the students to use a binder or notebook? How should it be set up? What is the routine for entering work or getting the binder?

What do you expect the students to act like withing groups, independent, and throughout the room?

How will you practice the expectations?

How will the students know they are meeting the expectations?

What are the consequences of misbehavior? (Independent work packet, phone call, moved groups, etc.)

How should students talk to one another within a group? How will you teach them to socialize within the group?

What are the procedures and routines in the room?

Groups should be flexible- How often will you change groups based on formative data? How will students know their group has changed?

 Teacher Expectations:

How will the teachers divide the planning responsibilities equally?

What will a lesson look like? What will each of you be doing?

When will the teachers plan for the upcoming lessons together (days and times)? (PLC time, before school, after school, google doc, etc.)

When should the lesson plan be shared with the resource teacher (Thursday?)?

What will the teacher's responsibilities be with checking assessments, classwork, homework, open ended, etc.?

During class, both teachers should circulate to make sure the independent group/ other students are on task. How will you address each other within a lesson to make sure the responsibility is shared? Set a timer and take turns?

Who will be contacting parents?

Where will classwork be stored and organized?

How will you both handle PBIS?   (When are points entered into the system?)

What does a Positive classroom rewards system based on expectations look like in your class?

 Room Set-Up:

What will the room look like?

Where will the independent/ tech group be working? Can you see their laptops?

Where will the support teacher pull kids within the room?

How will students flow throughout the room?

Bulletin boards/ student work/ data walls- what will it look like at the beginning of the year?

How often will they change?

Do you have supplies/ manipulatives on the tables? In an area students can use? How do you

pass out papers? Collect classwork/homework (bins)?

PBIS, room expectations, lesson artifacts, etc. will need to be displayed. Is there certain areas

you want for each of these posters?

How will the room be decorated?

Things to consider with Co-Teaching: completed with 7th grade general education co-

teacher.

Personal Expectations: (Share any personal information that you think is relevant)

What are your pet peeves?

7th grade co-teacher- negativity and complaining

My response- students who copy and students who let them copy

What noise level can you tolerate in the classroom/ hallway/ partner work?

Both teachers agreed upon- Partner work or small group- noise level in classroom 1 or 2,

hallways- noise level 1

Do you stay late or come early to school?

7th grade co-teacher- Do not stay after school unless there are required meetings and do not

come to school early.

<u>My response</u>- Stay late sometimes and do come to school early.

What does your classroom look like now? How do students work throughout your lesson?

<u>7th grade co-teacher</u>- 3 groups (rotations) independent- IXL/Study Island, 2 small group instruction Higher group start at IXL/Study Island

<u>My response</u>- Push in model with two 8th grade classes, and push out model with one 7th grade class. Mostly whole group instruction, little differentiated instruction.

Student Expectations (Students need consistency and routines):

What are the procedures and routines within the classroom? Where will student supplies be located? How will they use the supplies?

<u>We agreed upon</u>- Start with warm up setting a timer, transitions will start immediately because students will already be in groups for first rotation.

Do you expect the students to use a binder or notebook? How should it be set up? What is the routine for entering work or getting the binder?

<u>We agreed upon</u>- Students will use a binder for class-sections for warm up, classwork, data and resources

What do you expect the students to act like withing groups, independent, and throughout the room?

<u>We agreed upon</u>- Students' behavior will vary each day, some may have difficulty working independently, some students will be helpful towards each other while working in groups.

How will you practice the expectations?

<u>We agreed upon</u>- Practice in groups, same daily routines, practice during rotations.

How will the students know they are meeting the expectations?

We agreed upon- Immediate feedback, student teacher conferences, verbal praise, and positive reinforcement.

What are the consequences of misbehavior?

We agreed upon- student-teacher conference, alternative assignment/activity, one on one help from teacher, phone call home, change of seat, change groups if needed, repeat expectations, modeling from teachers, unable to earn points, parent-teacher conference, referral

How should students talk to one another within a group? How will you teach them to socialize within the group?

We agreed upon- Follow PBIS-PAWS (Polite, Accountable, Wise, Safe), modeling appropriate interactions between co-teachers, explaining not giving out answers.

What are the procedures and routines in the room?

We agreed upon- Daily warm up and morning announcements by teachers, timer set to transition to group, and timer set during group work.

Groups should be flexible- How often will you change groups based on formative data? How will students know their group has changed?

We agreed upon- Will change groups based on test scores, student needs and behavior and student preferences if needed

Teacher Expectations:

How will the teachers divide the planning responsibilities equally?

We agreed upon- Plan by standards (skills and activities needed) sharing responsibility and meeting weekly to plan.

What will a lesson look like? What will each of you be doing?

We agreed upon- Each teacher will have a small group, small group instruction for at least 20 minutes, warm up at least 10 minutes, independent group-IXL, activities/lessons may be different in groups based on students' needs

When will the teachers plan for the upcoming lessons together (days and times)?

We agreed upon- Plan during Professional Learning Community (PLC) time

When should the lesson plan be shared with the resource teacher?

We agreed upon- We are planning together

What will the teacher's responsibilities be with checking assessments?

We agreed upon- I will keep track with PBIS daily points, we will both monitor IXL assignments, 7th grade co-teacher will be the point person for checking assessments if graded after class.

During class, both teachers should circulate to make sure the independent group/ other students are on task. How will you address each other within a lesson to make sure the responsibility is shared? Set a timer and take turns?

We agreed upon- We will both monitor the independent group. Both teachers will be sitting in each of our groups facing students in independent groups

Who will be contacting parents?

We agreed upon-We will both contact parents through Talking Points, phone calls and texts. Where will classwork be stored and organized?

We agreed upon- Student classwork will be stored in their binders and students will be responsible to get binders before sitting in assigned seats.

How will you both handle PBIS?

We agreed upon- I will be the point person for entering PBIS points into the system and 7th and we will both enter points for students during our small group time

What does a Positive classroom rewards system based on expectations look like in your class?

We agreed upon- Using a point system from PBIS for students to earn a monthly reward

Room Set-Up:

What will the room look like?

We agreed upon- independent group located on each side of the classroom by wall, teacher groups in center of class, tables for small groups and desks for independent group

Where will the independent/ tech group be working? Can you see their laptops? **(Computers facing the teachers along the walls)**

We agreed upon- independent group located on each side of the classroom by wall, we can monitor students' progress on IXL live

Where will the support teacher pull kids within the room?

We agreed upon-Students will not be pulled to teach a lesson, we are equally working in small groups.

How will students flow throughout the room?

We agreed upon- 3 rotations, students will get up and move when transitioning to another group, students will be instructed, reminded and monitored to transition directly to the next assigned group

Bulletin boards/ student work/ data walls- what will it look like at the beginning of the year? How often will they change?

We agreed upon- Posting data charts on wall, required IXL assignments to be completed, artifacts to use during class and PBIS points posted

Do you have supplies/ manipulatives on the tables? In an area students can use? How do you pass out papers? Collect classwork/homework (bins)?

<u>We agreed upon</u>- calculator bins for students and manipulatives on tables when needed, each teacher will pass out papers, collect papers when needed, PBIS, room expectations, lesson artifacts, etc. will need to be displayed.

Are there certain areas you want for each of these posters?

<u>We agreed upon</u>- PBIS points will be posted by and artifacts will be displayed around the room

How will the room be decorated?

<u>We agreed upon</u>- bulletin boards and borders, reference walls

Things to consider with Co-Teaching: completed with 8th grade general education co-teacher.

What are your pet peeves?

<u>8th grade co-teacher</u>- when we (teachers) focus more on testing and not on actual student learning, students pestering and teasing each other, students disrespecting classroom materials

<u>My response</u>- students copying of each other and students letting others copy, writing down answers is not learning, consequence of copying-if you want credit then you must explain it to teacher and if they can't, they will receive a new assignment to complete. Look at the cause of why they are copying.

What noise level can you tolerate in the classroom/ hallway/ partner work?

We agreed upon- Hallways- noise level 1, Partners or groups- noise level 1 or 2 (structured/productive chaos)- students can have headphones if needed to block out noise

Do you stay late or come early to school?

<u>8th grade co-teacher</u>- I come early but like to get independent work done. I stay late every day, would like to have a set time one day after school to make sure the following lesson plan is completed

<u>My response</u>-I stay late and arrive early sometimes.

What does your classroom look like now? How do students work throughout your lesson?

<u>We focused on what the our class will look like starting the new school year</u>- Quiet Corner in room, 3 groups- 2 small groups and independent, but if class is more than 22 then we may need 3 groups and 2 sets of pairs working together, Parking Lot large poster paper for students questions, IXL- independent group desks against wall, warmups to start class-different math skills for different days-early finishers when warmup is completed before timer goes off

Student Expectations (Students need consistency and routines):

What are the procedures and routines within the classroom? Where will student supplies be located? How will they use the supplies?

We agreed upon- There will be a calculator caddy and students' materials on the small student table as they enter class, students enter the room-get calculator, binder and warm up folder and immediately start warm up-if students finish warm up before timer goes off then they will complete Early Finisher Work

Do you expect the students to use a binder or notebook? How should it be set up? What is the routine for entering work or getting the binder?

<u>We agreed upon</u>- Students get materials as soon as they enter the room, students will use binders with sections for warmups, classwork, references and data

What do you expect the students to act like within groups, independent, and throughout the room?

We agreed upon- Students will have difficulty with math class because this is the only class that they have that is a double period (94 minutes) with the same two teachers in the same room. Students may also have difficulty working in a class where the expectation is to work in groups as well as independently. This will be the only class where students are working in groups in a daily basis.

How will you practice the expectations?

We agreed upon- Daily during class activities and in between transition

How will the students know they are meeting the expectations?

We agreed upon- Teacher immediate feedback, reward/point system

What are the consequences of misbehavior? (Independent work packet, phone call, moved groups, etc.)

We agreed upon- Teacher feedback of inappropriate behavior, teacher modeling of appropriate *behavior, student-teacher conference, phone call home, change of seats, unable to earn points*

How should students talk to one another within a group? How will you teach them to socialize within the group?

We agreed upon- Practice positive socialization during small/chunking activities/assignments during group work, follow and review PBIS matrix, weekly community building activity

What are the procedures and routines in the room?

We agreed upon- Same daily routine- start class with warm up and announcements from teachers, review of expectations and then transition to groups

Groups should be flexible- How often will you change groups based on formative data? How will students know their group has changed?

We agreed upon- We will plan a week ahead, incorporate formative assessments into the plans to determine our groups for the next cycle, change of groups will be announced at the start of class

Teacher Expectations:

How will the teachers divide the planning responsibilities equally?

We agreed upon- We will plan together

What will a lesson look like? What will each of you be doing?

We agreed upon- Teachers will alternate every two weeks with reviewing the warmup, while the other teacher completes attendance and completes formative assessment during warm up time. The timer will be set for 5 minutes for independent work time on warmups

When will the teachers plan for the upcoming lessons together (days and times)? (PLC time, before school, after school, google doc, etc.)

We agreed upon- We will plan for upcoming lessons a week ahead of time during PLC time, before or after school

When should the lesson plan be shared with the resource teacher?

We agreed upon- Lesson plans are not shared. Both teachers will plan together.

What will the teacher responsibilities be with checking assessments, classwork, homework, open ended, etc.?

We agreed upon- No homework given to students, 8th grade co-teacher will check assessments due to the time constraints of my schedule teaching 6 out of 7 periods.

During class, both teachers should circulate to make sure the independent group/ other students are on task. How will you address each other within a lesson to make sure the responsibility is shared? Set a timer and take turns?

We agreed upon- A timer will be used when completing group work. The independent group working on IXL will be facing the wall so both teachers are able to see students' screens. Both teachers will also be logged into IXL to view Live.

Who will be contacting parents?

We agreed upon- Both teachers will contact parents. All parents will receive initial contact in September/October

Where will classwork be stored and organized?

We agreed upon- Binders will be located on shelf by door, color coded bins and folders for each class

How will you both handle PBIS?   (When are points entered into the system?)

We agreed upon- Points will be entered before the end of the day

What does a Positive classroom rewards system based on expectations look like in your class?

We agreed upon- Individual rewards

Room Set-Up:

What will the room look like? Teacher table in front and back of room for small group instruction. The independent group will be located on the right and left side of the room. This will create three stations in the classroom.

Where will the independent/ tech group be working? Can you see their laptops?

We agreed upon- Laptops facing teachers, desks facing wall

Where will the support teacher pull kids within the room?

We agreed upon- Students will not be pulled from the room to receive instruction

How will students flow throughout the room?

We agreed upon- students will transition in one direction to the next group activity

Bulletin boards/ student work/ data walls- what will it look like at the beginning of the year? How often will they change?

We agreed upon- Growth mindset and invisible math posters, vocabulary wall, data will be in students' binders, students work and achievements will be posted on the wall

Do you have supplies/ manipulatives on the tables? In an area students can use? How do you pass out papers? Collect classwork/homework (bins)?

We agreed upon- Materials are labeled in classroom

PBIS, room expectations, lesson artifacts, etc. will need to be displayed. Are there certain areas you want for each of these posters?

We agreed upon- PBIS and expectations in front of room, bulletin board for lesson artifacts

How will the room be decorated?

We agreed upon- Growth mindset posters, hanging lights, LED lights, student made artifacts, community building student made artifacts.

Below is a lesson planning log which outlines the duration of time and notes for lesson planning with the7th grade general education teacher and the 8th grade general education teacher.

Appendix H Co-teaching Experience Questionnaire

Q1 Briefly describe your perception of what a special education teacher does.

Q2 How did your personal experiences in learning math (elementary, middle, high school, college) shape your views about teaching mathematics to students with and without disabilities?

Q3 If given the opportunity to co-teach again, what would you keep the same? (PLEASE BE SPECIFIC AS POSSIBLE AND GIVE EXAMPLES)

Q4 What would you do differently if you were to co-teach again? (PLEASE BE SPECIFIC AS POSSIBLE AND GIVE EXAMPLES)

Q5 What were things that got in the way of co-teaching? (PLEASE BE SPECIFIC AND GIVE EXAMPLES)

Q6 What were things that helped you co-teach? (PLEASE BE SPECIFIC AND GIVE EXAMPLES)

Q7 Please share a brief story of a positive experience that you had while co-teaching?

Q8 Please share a brief story of a negative experience that you had while co-teaching?

Q9 Do you think your race impacts your teaching? Why OR Why not?

Appendix I Co-Teaching Questionnaire

Q1 Briefly describe your perception of what a special education teacher does.

8ᵗʰ grade general education teacher- A special education teacher plans lessons, prepares materials, teaches students, handles discipline, but while doing all that brings their expertise on how to differentiate and meet all students at their level.

7ᵗʰ grade general education teacher - Provides academic and behavioral support and modifications for students with IEPs.

My response- A special education teacher works alongside general education teachers to provide instruction and/or modifications and individualized support that may be needed for academic, or behavior needs. A special education teacher writes IEPs, Re-evaluation reports, positive behavior support plans and functional behavior assessments with the input of teachers, staff, and parents.

Q2 How did your personal experiences in learning math (elementary, middle, high school, college) shape your views about teaching mathematics to students with and without disabilities?

8ᵗʰ grade general education teacher - Math was always easy to me and I was never expected to explain my thinking or justify my answers. In college, I had a class that was very difficult for me. I would hurry to get all the notes copied, but really did not understand anything that was being taught. After class, a friend would review the material with me. She color-coded diagrams and explained problems in a way that made sense to me. This experience helped me to understand how paralyzing it is to not understand what is being taught.

7ᵗʰ grade general education teacher - **All students learn in various ways. Some are visual learners, auditory learners. Some are more hands on. Some kids learn with one example, some need many examples or explained a different way.**

My response- During elementary, middle and high school I was good at procedural math but not at conceptual math. In college and in my first years of teaching I had to teach myself and work through problems to understand them. During my years of schooling there was no connection to real life, I remember being taught to memorize the facts and rules of solving problems. This shaped my views by not just teaching math to all students but to explain how to solve problems different ways and still get the same answer. I connected math problems to real life situations for students to understand.

Q3 If given the opportunity to co-teach again, what would you keep the same? (PLEASE BE SPECIFIC AS POSSIBLE AND GIVE EXAMPLES)

8th grade general education teacher - Co-planning...when we met each week to work through the plans for the following week it provided shared ownership. Teaching in small groups...the rotations provide stronger accountability for students.

7th grade general education teacher - I would keep small group instruction the same.

My response- 8th grade classes- grading for equity-what you learned and understand rather than grading during learning, homework completed and participation, using co-teaching models and differentiated instruction daily. Including community building activities and lessons weekly. 7th grade class- co-teaching models

Q4 What would you do differently if you were to co-teach again? (PLEASE BE SPECIFIC AS POSSIBLE AND GIVE EXAMPLES)

8th grade general education teacher - Hold the time to co-plan sacred...behavioral concerns and management of the students (SAP referrals, discipline referrals, contacting parents, etc.) interfered with planning time. All of these things are really important, but we need our planning

time. I don't know how we manage that with the limited time provided. Have an agreed upon set system for rewards.

7ᵗʰ grade general education teacher - I would like to have more differentiated instruction. For example, kids working on various tasks according to their area of need.

My response- Incorporate more community building activities/lessons throughout the month, plan and incorporate culturally relevant lessons and activities.

Q5 What were things that got in the way of co-teaching? (PLEASE BE SPECIFIC AND GIVE EXAMPLES)

8ᵗʰ grade general education teacher - Coverages were given which left one teacher in the room. (2) The group of students being co-taught have a lot of baggage and there are no systems in place in school to address those issues. These issues took time away from planning and would often cause disruptions in class.

7ᵗʰ grade general education teacher - Teachers being pulled out to cover other classes gets in the way. Also, lack of common planning time being available.

My response- Being burnt out by having a 37 minute coverage for homeroom, then having to teach 6 out of 7 period each day, being assigned a coverage during my co-teaching class because a general education teacher called off, not having a planning period built into the schedule for my co-teachers and I to plan. Students in class had severe trauma issues that affected learning and there were no services and unwillingness from students' services to meet the needs of students and families.

Q6 What were things that helped you co-teach? (PLEASE BE SPECIFIC AND GIVE EXAMPLES)

8ᵗʰ grade general education teacher - Meeting together at the end of last year and working through the set of questions. The questions provided an opportunity to get to know each other better. Also, the shared belief that co-teaching is what is best for students.

7ᵗʰ grade general education teacher - It is very helpful co teaching to teach in small groups. This kept students more engaged in the learning. This also prevented kids from opting out. Having two teachers allowed us to show multiple ways to teach a skill.

My response- My co-teaching partners having the math content background, my prior experience of teaching math to students with and without disabilities.

Q7 Please share a brief story of a positive experience that you had while co-teaching?

8ᵗʰ grade general education teacher - The positive story that comes to mind is B.B. HIs needs are unique and quite demanding. Together we worked through multiple iterations of what he could do in class. Seeing him succeed and be proud of his work was a result of our team effort. Though he was the biggest success story, seeing students succeed because they are working at their own level instead of everyone being expected to do the same work is positive. I have tried this in previous years with limited success, but working together to find a system that works has been very positive for me.

7ᵗʰ grade general education teacher - I feel it is all positive. Keeping students engaged while working in small groups is the most positive. I love that it allows kids to feel safe, comfortable, and confident to speak up in a small group when they feel uncomfortable, embarrassed, or invisible in a large class. I love that it allows me to talk to each kid individually about math or just about their person lives. It allows me to build positive relationships with each kid.

My response- Black student labeled with a learning disability- differentiated work to accelerate his learning- working on 8th grade content that is usually taught in the second semester of 8th grade. My co-teacher and I were intentional on differentiating instruction and giving students their own learning paths to be successful. Also a students labeled with a vision impairment and learning disability- talking with him, the parent and vison itinerant to built an individualized learning path based on his math and comprehension level and watching him become more engaged in the classroom.

Q8 Please share a brief story of a negative experience that you had while co-teaching?

8th grade general education teacher - My negative experience is not a specific situation but a nagging feeling that I am not doing enough in the partnership. This is my first year co-teaching. This is my first-year teaching 8th grade GO Math. I am doing my best but am I focusing my efforts on what is best for both of us.

7th grade general education teacher - A negative experience is when you plan for small group instruction and the teacher is pulled to be somewhere else. When I teach a whole large group I find the students who struggle the most are not engaged at all.

My response- As the special education teacher I am pulled from my co-teaching class on a regular basis to cover classes because another teacher in the building is absent. The special education teacher is always the first teacher thought of to be a substitute when a teacher is absent. Also while co-teaching with two teachers I always felt like I wasn't doing enough to help my co-teaching partners without planning time built into the schedule and IEP meetings and deadlines to complete Re-evaluation Reports and IEPs.

Q9 Do you think your race impacts your teaching? Why OR Why not?

8th grade general education teacher - Yes. I think race impacts my teaching because I was raised in a white bubble where I did not have to think about if race impacted my life. I am working hard to educate myself but as a white person I need to make a conscience effort to identify how race impacts my classroom/teaching/relationships or how race impacts the students in other classes who then carry this into our class.

7th grade general education teacher - I truly hope not. I feel I give all students the same level of dignity and respect.

My response- Absolutely. Every time I am in the classroom I am teaching from a Black lens. I bring my life experiences as a Black learner and teacher into the classroom, which helps me to think of students as individual learners and to provide instruction that is needed as they are not the same for all students**.**

Appendix J Lesson Planning Log With Co-teachers

(Below is a lesson planning log which outlines the duration of time and notes for lesson planning with the7th grade general education teacher and the 8th grade general education teacher)

8th grade co-teacher 8-24-2022 8am-10am

• Room preparation

• Planning for first week of school-Get to Know You Activities

• Plans for procedures, materials and class rules

8th grade co-teacher 8-26-2022 10:00 am via Microsoft Teams

• seating chart

• Get to know You activities

• Walk a Mile in My Shoes Activity

8th grade co-teacher 8-30-2022 6:30 am-7 am

• Plan for today and week-discuss students

7th grade co-teacher 8-30-2022 12:10pm-12:20pm

• Plan for Wednesday

8th grade co-teacher 9-1-2022 2:30 pm-4:10 pm

• Plan for administering Classroom Diagnostic Tool (CDT)

• Differentiating instruction for five students

• Planning for groups and community building warm up

• Preparing Module 1 Test

7th grade co-teacher 9-1-2022 11am-11:30am

• Planning for week for groups

8th grade co-teacher 9-7-2022 2:45pm-4pm

• Discussing plans, students' strengths and areas of needs

• Planning for the week

• Preparing exit slip, differentiation instruction on IXL

8th grade co-teacher 9-15-2022 11 am-11:30 am

• Planning for next week's groups-activities, assignments and community building warm up

8th grade co-teacher 9-19-2022 11 am-11:30 am

• Planning for new assigned seats and procedures for transitions between groups

8th grade co-teacher 9-20-2022 11 am-11:30 am

• Phone calls to parents

8th grade co-teacher 9-2022 3:59 pm via text

• Planning for community building warm up

8th grade co-teacher 9-22-2022 11 am-11:40 am

• Student conference

8th grade co-teacher 9-23-2022 11 am-11:30 am

• Discussing students' performance and behavior

• Reviewing Module 1 Test data

7th grade co-teacher 9-24-2022 7:25 am-7:37 am (during homeroom)

• Briefly planned and discussed CDT results

8th grade co-teacher 9-27-2022 11 am-11:30 am

• Preparing exit slip and Unit 2

• Preparing student data sheet for students to track their data

8th grade co-teacher 10-4-2022 11 am-11:45 am

• Planning for the week and for community building activity

• Differentiating instruction

7th grade co-teacher 10-14-2022 7:30 am-7:37 am (during homeroom)

• Briefly discussed students Unit 1 Tests and plans for week

8th grade co-teacher 10-14-2022 11 am-11:45 am

• Planning group lessons/activities for new module

• Preparing Test for new module

• Planning warmups and community building activity

8th grade co-teacher 10-17-2022 2:30 pm-3 pm after school

• reflecting on groups, activities and teaching

8th grade co-teacher 10-19-2022 6:40 am-7 am before school

• Reviewing plans for the day

• Discussing students' academic and behavioral needs

8th grade co-teacher 10-26-2022 11 am-11:45 am

• Writing student referrals for Student Assistance Program

8th grade co-teacher 11-2-2023

• Planning for weekly warmups and community building activity

8th grade teacher 11-9-2022 during 5th period- Prep period

• Weekly planning for eligible content

• Students concerns/issues in and out of class

8th grade co-teacher 11-29-2022 6:45 am before homeroom

• Planning for groups

• Differentiated instruction on IXL

8th grade co-teacher12-2-2022

• Planning for next week (slope and y-intercept)

• Plan for CDT testing

8th grade co-teacher 12-13-2022 7:40 am to 7:50 am and 10:50 am to 11:10 am

• Planning- groups-stations

• Student-teacher conferences- review grades, test scores and student goals

8th grade co-teacher 12-19-2022 11:00 am to 11:30 am

• Planning for group activities

• Differentiated work on IXL

• Discussing student progress

8th grade co-teacher 12-22-2023 8:15 am to 9:15 am via texts

• Planning- change of plans due to large student absences

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