Marshall Street

# Literature Review

## OPENING DOORS TO COLLABORATION

A collection of research-to-impact practices developed with the Networked Improvement Community for Students with Disabilities

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# Literature Review


## ABSTRACT

Collaboration between general and special educators across all levels of the school system has long been seen as a best practice when considering how to serve students with disabilities effectively. There is evidence in the research base that stronger collaboration is correlated with better results for both educators and students. One particular form of collaboration, co-teaching, has emerged as a leading approach to collaboration at the classroom level. Co-teaching approaches are buoyed by a strong body of research and have the potential to serve students with learning and thinking differences. This literature review synthesizes the existing research on educator collaboration broadly as well as the specific practice of co-teaching, focusing on both defining the practices and explaining their various uses. Research selected for inclusion in this literature review includes seminal texts as well as literature published from 2008 to 2023. This review is designed for school district administrators considering adopting or improving collaborative practices in their districts.


# Introduction

In this literature review, we share a concise overview of collaboration practices and methods with a particular focus on co-teaching, an emerging best practice and service delivery model grounded in the philosophy of inclusive education. Our purpose is to equip school district staff who are considering adopting or improving collaborative practices between general educators and special educators with a summary of the research on collaboration so that staff can make informed and thoughtful implementation decisions for their districts. The literature review was conducted by Marshall Street, a coalition of educators working to systematically improve opportunities for students across the United States.

This literature review is part of a larger collection of improvement tools for districts. The Networked Improvement Community for Students with Disabilities (NIC), a group of 10 public charter school networks serving more than 75,000 students nationwide, launched in 2019 to make dramatic gains in

the learning experiences, environments, and outcomes for Black and Latinx students with disabilities experiencing poverty. Led by Marshall Street at Summit Public Schools in partnership with technical assistance providers NIRN, RTI International, SRI International, and SWIFT Education Center, NIC participants used continuous improvement methods, supported by this literature review of leading research and a corresponding toolkit of best practices, to improve implementation in these areas with the potential to increase academic outcomes for students with disabilities: Collaboration, Literacy, Multi-tiered Systems of Support, Transitions, and Emotional and Behavioral Supports.

This literature review provides a brief overview of the research regarding the following questions:

- **WHAT IS EDUCATOR COLLABORATION?**
- **WHY IS SPECIAL AND GENERAL EDUCATOR COLLABORATION IMPORTANT?**
- **WHAT IS CO-TEACHING?**
- **WHY IS CO-TEACHING IMPORTANT?**
- **WHAT ARE THE BENEFITS OF CO-TEACHING?**
- **WHAT ARE THE LIMITATIONS OF CO-TEACHING?**
- **WHAT IS THE MOST COMMON FRAMEWORK(S) OF CO-TEACHING?**
- **HOW EFFECTIVE IS CO-TEACHING, AND FOR WHOM?**
- **WHAT ARE THE NECESSARY CONDITIONS FOR SUCCESSFUL IMPLEMENTATION?**

There are several excellent existing literature reviews on collaboration and co-teaching, such as the 2008 literature review prepared for the Ministry of Education in Saskatchewan. This literature review builds upon earlier works by incorporating findings of earlier seminal texts with literature from 2008 to 2023.



# What is educator collaboration?

Collaboration in education has been defined as a “mutual effort to plan, implement, and evaluate the educational program for a given student” (Correa et al. 2005 in Hernandez 2013) and as “individuals with diverse expertise working together to achieve mutually agreed upon objectives” (Snell and Janney 2000 in Hernandez 2013). When collaboration focuses on supporting students with disabilities, it takes on many forms, including both direct and indirect collaboration. In direct collaboration, a specialist works directly with a child. In contrast, in indirect collaboration, a specialist works directly with another teacher or teachers, taking on an advisory, consultative, inspirer, or sparring partner role (Hansen et al. 2020), including sometimes working in a co-teaching capacity.

Sometimes, collaboration in schools happens within larger teams, where general and special educators work together to make decisions about students (Friend et al. 2010; Blackwell and Rossetti 2014; Education Resource Strategies 2021) during dedicated collaboration times. Ripley (1997) describes how collaborative planning must happen at the district, building, and classroom levels for schools to achieve inclusive practices. However, much of the literature about collaboration in education eventually hones in on co-teaching as a best practice service-delivery model (Friend 2008; Villa et al. 2005; Ronfeldt et al. 2015; Scanlon and Baker 2012). As the most discussed service delivery model situated within collaboration, literature on co-teaching is covered in more detail later in this review.

## Why is Special and General Educator Collaboration Important?

In the literature, the most discussed reason for educators to collaborate is that it leads to improved teacher practice and knowledge. As teachers collaborate, they can share specialist approaches, forms of knowledge, and various skills and strategies (Hansen et al. 2020; Winn and Blanton 2005). Additionally, as educators spend time working with one another, they begin to develop shared beliefs about students, teaching, and learning (Winn and Blanton 2005). In a study of over 8,000 teachers, Ronfeldt et al. (2015) found almost 90% of teachers surveyed viewed being on an instructional team as either helpful or very helpful and specifically saw collaborating on the development of instructional strategies to be the most useful. Teachers in another study reported that collaborative planning allowed them to include instructional accommodations in their lessons by balancing the content-area expertise of general educators with pedagogical knowledge and specialized supports from special educators (Scanlon and Baker 2012). There is even evidence that when teachers change schools, moving to a school with more collaborative practices, the rate at which their teaching skill improves increases (Ronfeldt et al. 2015).

There is also evidence that stronger educator collaboration leads to improved student outcomes. Ronfeldt et al. (2015) found that schools with instructional teams that engaged in better collaboration had higher achievement gains in both math and reading than schools that did not collaborate as well. This supports previous research showing that schools with higher levels of collaboration also have higher levels of student achievement (Goddard et al. 2007; Goddard et al. 2010 in Ronfeldt et al. 2015). Collaboration between educators often leads to greater inclusion of students with disabilities in the general education classroom (Bausela 2003, Boavida and da Ponte 2011, and Lozano et al. 2010 in

Sanahuja-Gavalda et al. 2016), and learning outcomes for students on the autism spectrum are more positive in mainstream placements than in specialist placements (Sanahuja-Gavalda et al. 2016). Beyond specific gains in student achievement, collaboration can enhance the development of important life skills and abilities of students with disabilities (McWilliam and Young 1996 and Barnes and Turner 2001 in Hernandez 2012).

# What is Co-Teaching?

A widely used form of collaboration, co-teaching is a service-delivery option that supports the philosophy of inclusive education (Alnasser 2020; Anderson 2008). The most commonly cited definition of co-teaching in the literature is that of Friend (2008, 9): "Co-teaching occurs when a general education teacher and a specialist — often a special education teacher, reading specialist, speech/language therapist, or bilingual teacher — work as partners to teach a diverse group of students." Further, co-teaching presumes:

- **Instruction for diverse learners primarily occurs concurrently and within the same classroom space.** (Basso and McCoy 2007 in Anderson 2008; Friend 2008; Friend and Cook 2003 in Simmons and Magiera 2007; Gately and Gately 2001; Cook and Friend 1995 in Murawski and Swanson 2001).
- **Teaching partners are both two equally licensed adults.** One is a generalist with expertise in the grade band or content area and the other is a specialist who is licensed as a specialist education teacher, reading specialist, or the like, whose background is in adapting and modifying instruction for students with special needs and learning disabilities (Basso and McCoy 2007 in Anderson 2008; Friend 2008; Friend and Cook 2003 in Simmons and Magiera 2007; Cook and Friend 1995 in Murawski and Swanson 2001).
- **Both teachers are jointly responsible for the academic outcomes of all the students in the classroom.** (Basso and McCoy 2007 in Anderson 2008; Friend 2008; Gately and Gately 2001; Keefe and Moore 2004; Murawski and Swanson 2001).
- **Both teachers engage equitably in joint collaborative planning, instruction, assessment, and reflection.** (Dove and Honigsfeld 2018; Friend 2008; Gately and Gately 2001; Murawski and Lochner 2010).

Importantly, Dove and Honigsfeld (2018) and Anderson (2008) note that co-teaching is *NOT*:

- The simple placement of two teachers in a classroom such as:
  - one person teaching while another person has a prep period,
  - one teacher conducting a lesson while the other watches,
  - one teacher dictating over the other what is to be taught and how it is to be taught, or
  - one person being assigned as a tutor.
- The combining of two different content classrooms (e.g., ELA and History).

Co-teaching typically refers to the service-delivery model of collaboratively educating students with disabilities alongside their general education peers, though co-teaching is also being implemented for multilingual learners and gifted and talented students (Friend et al. 2010). Some students with

disabilities may have needs that cannot be serviced exclusively in the general education environment, and thus may receive instruction in special education settings in addition to the instruction provided in co-taught general education classrooms (King-Sears et al. 2021).

## Why is Co-Teaching Important?

For decades, the public education system in the United States has failed to effectively serve students with a diverse set of needs, particularly students with disabilities. Inclusion classrooms — classrooms in which students with and without disabilities are served together — are both an educational requirement and a best practice for serving students with disabilities due to governmental mandates such as No Child Left Behind (NCLB), the Individuals with Disabilities Education Act (IDEA), and the Every Student Succeeds Act (ESSA) and research showing academic gains from inclusion classrooms (Alnasser 2020; Brendle, Lock, and Piazza 2017; Cole et al. n.d.; Cramer et al. 2010; Weiss, Glaser, and Lloyd 2020). Yet, too often, schools integrate students rather than fully including them. Integrated education places students with diverse needs in general education classrooms without providing them with additional support to open access to learning. Inclusive education, on the other hand, is the systemic change of an educational institution to provide an equitable and participatory learning experience for all students (Hehir, Pascucci, and Pascucci 2016).

According to a recent nationwide survey of education data, 67% of students in special education receive instruction in general education classrooms for at least 80% of the school day (National Center for Education Statistics 2023). The large number of students with special needs integrated in general education classrooms — who, due to the disproportionate rates of Black and Latinx students being referred for special education services, are often Black and Latinx (National Center for Learning Disabilities 2020) — leaves educators with the important question of how to implement inclusion classrooms well (Alnasser 2020; Soslau, Gallo-Fox, and Scantlebury 2019 in Alnasser 2020).

Co-teaching has emerged as a leading strategy for effectively meeting the needs of students with disabilities in an inclusive environment. While co-teaching is not required as a method of instruction by governmental mandates (Cramer et al. 2010; DeMartino and Specht 2018), schools across the United States have embraced co-teaching due to:

- **A wide research base on co-teaching implementation models** (Brendle, Lock, and Piazza 2017; Friend et al. 2010; Kim et al. 2006 in Brendle, Lock, and Piazza 2017; Kohler-Evans 2006; Mastropieri et al. 2005 in Brendle, Lock, and Piazza 2017; Murawski and Lochner 2010; Ploessl et al. 2010 in Brendle, Lock, and Piazza 2017; Thousand, Villa, and Nevin 2006 in Brendle 2017).
- **Co-teaching's potential to help teachers simultaneously meet accountability standards for students with disabilities, prepare students for postsecondary placement, and provide instruction to diverse students within the general education classroom** (Basso and McCoy 2007 in Anderson 2008; Cramer et al. 2010).



# Benefits of Co-Teaching

The literature notes numerous academic and non-academic benefits of well-implemented co-teaching. Some of the most commonly cited benefits of well-implemented co-teaching for students and teachers are presented in the tables below.

| ACADEMIC BENEFITS FOR STUDENTS | |
|---|---|
| Enhanced academic performance for diverse learners, including students with disabilities | Bauler and Kang 2020; Fu et al. 2007 in Bauler and Kang 2020; Hang and Rabren 2009 in Alnasser 2020; Kirby 2017 in Anderson 2008; Magiera et al. 2005 in Anderson 2008; Murawski 2006 in Alnasser 2020; Strogilos and Avramidis 2016 in Alnasser 2020 |
| Increased access to general education curriculum for diverse learners | Anderson 2008; Basso and McCoy 2007 in Anderson 2008; Dove and Honigsfeld 2018; Howser 2015 in Alnasser 2020; Magiera et al. 2005 in Anderson 2008; Rice et al. 2007 in Anderson 2008 |
| Increased teacher availability to diverse learners | Basso and McCoy 2007 in Anderson 2008; Capp 2004 in Anderson 2008; Keefe and Moore 2004; Villa et al. 2004 in Anderson 2008; Wilson and Michaels 2006 in Friend et al. 2010 |
| Access to two certified teachers with different perspectives on teaching | Bauler and Kang 2020; Kohler-Evans 2006; Mastropieri et al. 2005 in Brendle, Lock, and Piazza 2017; Wilson and Michaels 2006 in Friend et al. 2010 |

| NON-ACADEMIC BENEFITS FOR STUDENTS | |
|---|---|
| Decreased stigmatization and increased empathy for diverse learners by general education students and teachers | Basso and McCoy 2007 in Anderson 2008; Cook 2004 in Anderson 2008; Friend and Cook, in Friend and Pope 2005 in Anderson 2008; Howser 2015 in Alnasser 2020; Keefe and Moore 2004 in Friend et al. 2010 |
| A supportive and engaging learning environment for all students | Ploessl et al. 2010 in Brendle, Lock, and Piazza 2017 |
| Increased collaboration and relationships between all students | Bauler and Kang 2020; Dove and Honigsfeld 2018; Friend and Cook, in Friend and Pope 2005 in Anderson 2008 |
| Increased social skills development for students with disabilities and multilingual learners | Murawski and Lochner 2010 |
| Increased students' sense of belonging in the classroom and at school, particularly for diverse learners | Dove and Honigsfeld 2018 |
| Reduced challenging behaviors by students with disabilities in the general education classroom | Hang and Rabren 2009 in Alnasser 2020; Kirby 2017 in Alnasser 2020; Murawski 2006 in Alnasser 2020; Strogilos and Avramidis 2016 in Alnasser 2020 |

| BENEFITS FOR TEACHERS | |
|---|---|
| Increased job satisfaction | Anderson 2008; Basso and McCoy 2007 in Anderson 2008; Friend and Reisling, in Tichenor 2004 in Anderson 2008 |
| Ongoing job-embedded professional growth for both the general educator and the specialist through training and collaboration | Anderson 2008; Basso and McCoy 2007 in Anderson 2008; Bauler and Kang 2020; Dove and Honigsfeld 2018; Friend et al. 2010 in Brendle, Lock, and Piazza 2017; Pancsofar and Petroff 2013 in King-Sears et al. 2021; Villa et al. 2004 in Anderson 2008 |
| Increased peer support and input on an ongoing basis | Hang and Rabren 2009 in Alnasser 2020; Kirby 2017 in Alnasser 2020; Murawski 2006 in Alnasser 2020; Rea, McLaughlin, and Walther-Thomas 2002 in Alnasser 2020; Strogilos and Avramidis 2016 in Alnasser 2020 |
| Increased capacity to implement a variety of instructional approaches | Bauler and Kang 2020; Friend et al. 2010; Kim et al. 2006 and Thousand et al. 2006 in Brendle 2017; Rice et al. 2007 in Anderson 2008 |
| Equalized roles between general education teachers and specialists | Martin-Beltrán and Peercy 2012 in Bauler and Kang 2020 |

Finally, the literature noted benefits for schools, including **fewer referrals for special education services** (Basso and McCoy 2007 in Anderson 2008; Pugach and Johnson, in Villa et al. 2004 in Anderson 2008) resulting in fewer disproportionate referrals for Black and Latinx students (National Center for Learning Disabilities 2020), and **increased parent satisfaction** (Afflect et al. in Popp 2000 in Anderson 2008; Cramer et al. 2006 in Anderson 2008).

As with many educational approaches, the benefits rely on the effectiveness of the implementation. All of the above benefits can be seen when co-teaching is well-implemented.

## Limitations of Co-Teaching

Few mentions were made in the literature regarding limitations (limitations are defined as shortcomings or weaknesses of the approach) of co-teaching, or of collaborative practices in general. One such mention was that students with disabilities received less specially designed instruction (ASCD 2015). Additionally, anecdotally, schools transitioning to co-teaching noticed an increase in academic outcomes for students with disabilities after introducing co-teaching, and then experienced a leveling off of academic gains after a period of time (ASCD 2015). Notably, for multilingual co-teaching classrooms, ESOL teachers “felt restricted from using their greatest assets in the mainstream classroom. In particular, the use of native language and the ability to focus on the complexities of language development were not leveraged to the highest potential” (McClure and Cahnman-Taylor 2010 in Bauler and Kang 2020, 4).

While limitations were less frequently discussed in the literature, implementation challenges were frequently cited. The main challenges of co-teaching include a lack of co-planning time, lack of administrative support, need for ongoing training/lack of training support, relationship difficulties between co-teachers, and increased workload for general education and specialist teachers (Alnasser 2020; Anderson 2008; Brendle, Lock, and Piazza 2017; Winn and Blanton 2005). Importantly, these challenges are significant enough to prevent many schools from implementing co-teaching with fidelity.

Because these challenges to implementing co-teaching are significant, they are examined more thoroughly in the "Necessary Conditions for Successful Implementation" section of this literature review.

# Common Implementation Frameworks

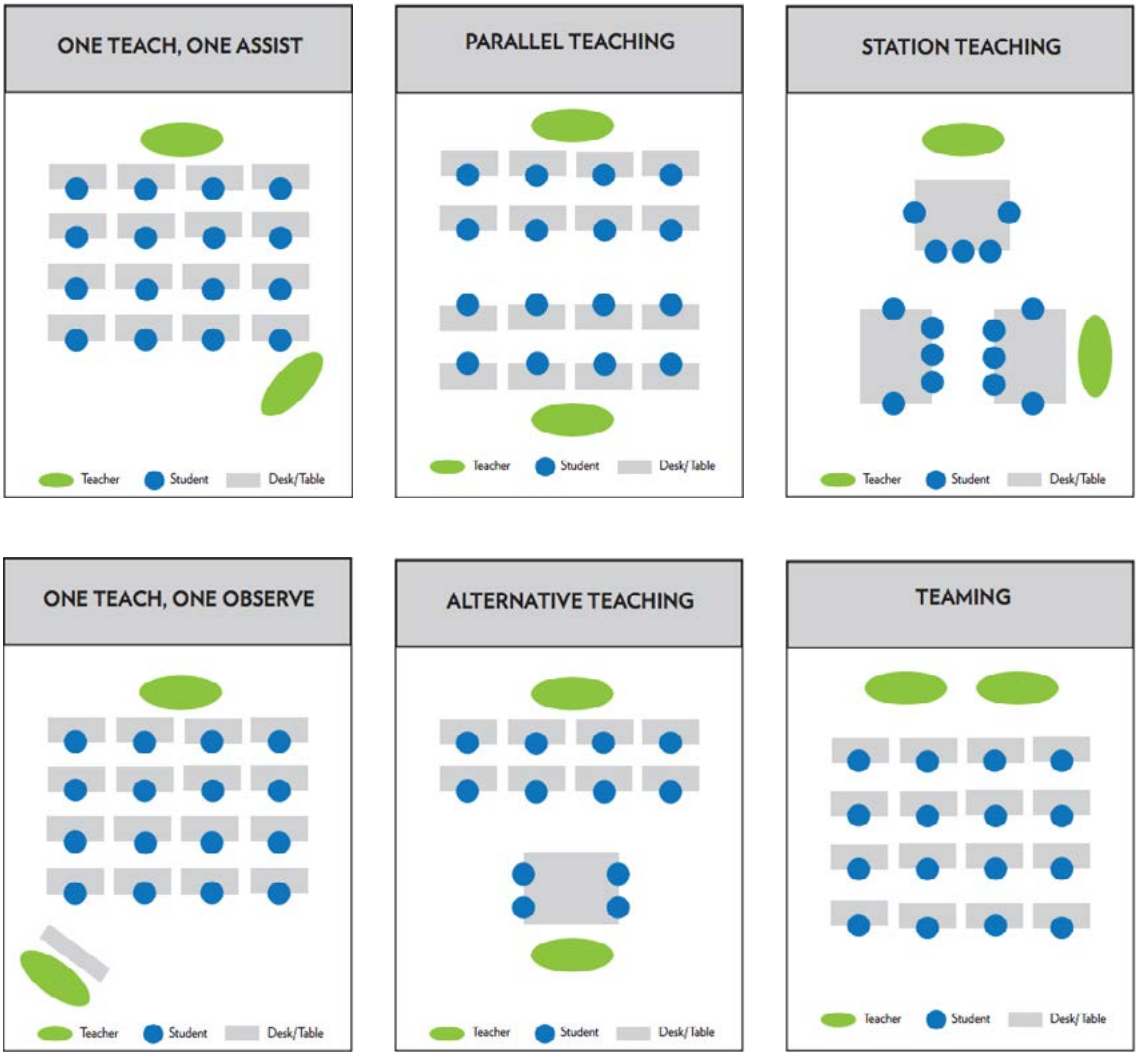
The six models of co-teaching as defined by Friend et al. (2010) is the most commonly cited framework for co-teaching in the literature. An additional framework is Dove and Honigsfeld's seven models of co-teaching for multilingual learners (2018).

Friend et al.'s (2010, 12) six models of co-teaching are listed below. Of the six models, Friend et al. (2010) notes that models 1, 2, and 3 are far more beneficial to students than models 4, 5, and 6:

- 1. **Station Teaching** involves dividing students into three groups and rotating the groups from station to station, where they are taught by the co-teachers at two stations and working independently at the third;
- 2. **Parallel Teaching** requires each of the co-teachers to instruct half of the students, presenting the same lesson to provide instructional differentiation and increased student participation;
- 3. **Alternative Teaching** involves one teacher providing instruction to the majority of students while the other teacher works with a small group for remediation, enrichment, or assessment;
- 4. **Teaming** requires that co-teachers lead large-group instruction, with both teachers lecturing, representing different viewpoints and multiple methods of solving problems;
- 5. **One Teach, One Assist**, also identified as **Supportive Teaching**, involves one co-teacher leading instruction, while the other teacher circulates among the students providing individual assistance;
- 6. **One Teach, One Observe** involves one of the co-teachers leading large-group instruction while the other teacher gathers academic, behavioral, or social data on specific students or the class group.

Dove and Honigsfeld's (2018) seven models of co-teaching for multilingual learners closely map to Friend et al.'s (2010) six models of co-teaching. The chart that follows is a crosswalk of the two frameworks, combined with corresponding benefits and challenges compiled by Anderson (2008, 39).

## SIX APPROACHES TO CO-TEACHING




*Source:* [Teaching Tolerance Seamless Teaching Toolkit]

| SIX MODELS OF CO-TEACHING | SEVEN MODELS OF CO-TEACHING FOR MULTILINGUAL LEARNERS | BENEFITS | CHALLENGES |
|---|---|---|---|
| **Supportive Teaching (One Teach, One Assist)** | One Group: One Leads, One "Teaches on Purpose" | • Students receive additional assistance<br>• Allows for specific observation of students | • Places one teacher in assistant role<br>• Does not fully utilize the advantages of having multiple certified educators in the classroom |
| **One Teach, One Observe** | One Group: One Teach, One Assess | | |
| **Station Teaching** | Multiple Groups: Two Monitor and Teach | • Increased student participation<br>• Increased small group work<br>• More individualized support<br>• Leverages the diverse strengths of the two teachers<br>• Students receive instruction from two teachers | • Higher noise levels<br>• Students may become distracted<br>• Potentially increased planning load |
| **Parallel Teaching** | Two Groups: Two Teach Same Content | | |
| **Alternative Teaching** | Two Groups: One Pre-Teaches, One Teaches Alternative Content | • Leverages the diverse strengths of the two teachers<br>• Students receive instruction from two teachers | • More co-planning time and flexibility are needed<br>• Requires high level of trust between teachers |
| | Two Groups: One Re-Teaches, One Teaches Alternative Content | | |
| **Teaming** | One Group: Two Teach Same Content | • Teachers model positive collaboration | • More co-planning time and flexibility are needed<br>• Requires high level of trust between teachers<br>• Requires complex interpersonal dynamics of trading off during instruction<br>• Does not allow for more targeted, individualized instruction<br>• Does not fully utilize the advantages of having multiple certified educators in the classroom |

The literature notes that the best results for students occur when teaching teams use a variety of models (Scruggs, Mastropieri, and McDuffie 2007 in Alnasser 2020; Solis et al. 2012 in Alnasser 2020), in particular, station teaching, parallel teaching, and alternative teaching. Despite this guidance, supportive teaching is the most commonly used co-teaching model, followed by parallel teaching, because they require less co-planning time (Alnasser 2020; Friend et al. 2010; Keefe and Moore 2004; King-Sears and Strogilos 2020; Scruggs, Mastropieri, and McDuffie 2007 in Alnasser 2020; Solis et al. 2012 in Alnasser 2020).

Additionally, the literature notes that over-reliance on supportive teaching can have the disadvantage of placing one teacher in an assistant role, negatively affecting co-teaching efficacy and teacher morale (Basso and McCoy 2007 in Anderson 2008; Dove and Honigsfeld 2018; Scruggs, Mastropieri, and McDuffie 2007 in Alnasser 2020) and can lead to student views that students with disabilities are a separate group and not an actual part of the general education classroom (Embury and Kroeger 2012).

## Efficacy of Co-Teaching on Academic Outcomes and For Whom

There is definitive evidence that inclusion classrooms (either solo with pull-out and push-in services or co-taught) increase academic outcomes for students with disabilities (Cole et al. n.d.). Because of the wide variability of implementation, there is inconclusive data regarding the extent to which teacher practices, including co-teaching, cause or are correlated with the increase (King-Sears et al. 2021; Hanover Research 2012; Murawski and Swanson 2001). Primarily, this is due to datasets that do not lend themselves to large-scale standardized research. For example, large datasets reviewed in the Murawski and Swanson (2001) meta-analysis lacked disaggregated data for co-taught vs. non-co-taught classrooms as well as disaggregated data for students with disabilities compared to students without disabilities. In addition, the definitions of co-teaching, implementation structures, and fidelity of co-teaching vary wildly, not only from district to district, but also across individual classrooms within schools (Hanover Research 2012). Further, many studies lack specific descriptions of the types of co-teaching approaches used (King-Sears et al. 2021). These study limitations have so far precluded conclusive results about the efficacy of co-teaching.

In the most recent meta-analysis on co-teaching, King-Sears et al. (2021) compared the academic achievement of students with disabilities in co-taught classes to the achievement of students with disabilities in special education settings such as resource rooms or self-contained classrooms. The study authors conducted a comprehensive search of published and gray literature, which resulted in 26 eligible studies for a total of 3,714 students with disabilities. The analysis found a positive moderate effect size ($g = 0.47$) for students in co-taught settings compared to students in special education settings. Yet, crucially, the studies used for the meta-analysis lacked information about co-teaching instructional practices and equivalency of students assigned to co-taught or special education settings. Thus, it is unclear how much of the positive moderate effect size is due to co-teaching, as opposed to the positive effect inclusion classrooms have on academic outcomes. More research is needed that compares the academic performance of students with disabilities in solo-taught inclusion classrooms to those in co-taught inclusion classrooms.

The lack of conclusive evidence of efficacy means there is also a lack of evidence on sub-group performance, particularly for target populations of Black and Latinx students with disabilities experiencing poverty. No literature surveyed had subgroup data for Black students, Black students experiencing poverty, or Black students with disabilities experiencing poverty. Similarly, no literature surveyed had subgroup data for Latinx students, Latinx students experiencing poverty, or Latinx students with disabilities experiencing poverty. However, a 2020 study on the effects of co-teaching for multilingual learners in K–4 classrooms in New York found that language proficiency scores increased over two years of co-teaching instruction (Bauler and Kang 2020). As 78% of the United States' multilingual learners are Hispanic (National Center for Education Statistics 2021), this study may be used as a partial proxy, though the study did not report on disability or income status.

Although the meta-analyses did not provide conclusive evidence of the efficacy of co-teaching, they also did not provide conclusive evidence that co-teaching, regardless of fidelity, has negative effects on academic outcomes (Murawski and Swanson 2001; King-Sears et al. 2021). Thus, co-teaching appears to be a strategy for effectively implementing inclusion classrooms with limited downsides and the potential for positive academic gains when executed with integrity, though more research is needed.

Given the limited downsides and **potential benefits** of co-teaching, it is important to note that Black and Latinx students in special education programs are more likely to be removed from inclusive general education classrooms than their white peers (de Valenzuela et al. 2006, Fierros and Conroy 2002, and Sullivan 2011 in Waitoller and Artiles 2013), leading to situations where Black and Latinx students with disabilities are less likely to see the benefits of collaboration and co-teaching. This is especially troubling because co-taught classrooms often implement aspects of Universal Design for Learning (UDL), which helps to make them inclusive not just of students of varying abilities, but also of different races and socioeconomic statuses as well (Sullivan and Thorius 2010). By removing Black and Latinx students with disabilities from these co-taught classrooms, schools are pushing students of color further from opportunity.

# Necessary Conditions for Successful Implementation

Successful collaboration requires a school- and district-level belief in the value of true inclusion. With this vision, districts and schools can create the policies, staffing, structures, schedules, professional development, and culture changes that undergird effective collaborative relationships and processes, including but not limited to co-teaching.

High-quality, high-impact co-teaching and other forms of collaboration can be achieved through thoughtful strategic planning on the part of districts, school administrators, and teachers (Ripley 1997). When time and intention are used to purposefully plan for the structure of multiple adults working together across a school community, excellence is possible. Yet implementing collaborative practices with fidelity can be difficult, especially because of the traditional siloing of general and special educators, particularly in teacher education (Winn and Blanton 2005). The literature specifically highlighted several challenges to implementing co-teaching effectively. When these challenges were not addressed,

co-teaching failed to happen in classrooms. Due to the significant impact of these challenges on implementation, the challenges are listed here as necessary conditions for successful implementation, both of co-teaching specifically and of collaboration more generally.

# Necessary Conditions for Collaboration and Co-Teaching

Many of the implementation challenges to effective co-teaching and collaboration raised in the literature can be addressed by system-level changes. Thus, the following system-level changes are necessary conditions for the successful implementation of collaborative practices.

If the specific practice of co-teaching is the desired outcome, more specificity may be required. Necessary conditions specific to co-teaching are shown in gray boxes below.

### ADEQUATE SCHEDULING FOR CO-TEACHING AND COLLABORATION

**Student scheduling.** Schools must practice inclusive education, assigning the majority of, if not all, students with disabilities to general education classrooms for 80% or more of the school day (Anderson 2008). Much of the literature recommends not more than 25–30% of an inclusion classroom be composed of students with disabilities (Basso and McCoy 2007 in Anderson 2008; Mageria et al. 2008 in Alnasser 2020; Perez 2012 in Alnasser 2020).

> Education Resource Strategies (2021, 3) notes that scheduling slightly larger than average co-taught class sizes (for example, 26 or 27 students instead of 24 students on average) allows for smaller targeted group arrangements (for example, 13 students in a targeted group instead of 24 in the whole classroom).

**Dedicated weekly co-planning preparation periods for all collaborating teachers** (Alnasser 2020; Anderson 2008; Ashton 2003 in Alnasser 2020; Baecher and Bell 2017 in Bauler and Kang 2020; Bauler and Kang 2020; Brendle, Lock, and Piazza 2017; Dove and Honigsfeld 2018; Education Resource Strategies 2021; Howser 2015 in Alnasser 2020; Pappamihiel 2012 in Bauler and Kang 2020; Simmons and Magiera 2007; Scruggs, Mastropieri, and McDuffie 2007 in Alnasser 2020)

- Anderson (2008, 42) notes: "[Hawbaker, Balong, Buckwalkter, and Runyon (in Mitchell 2005)] These authors suggest that teachers require 60–90 minutes for each 3–4 week unit, in addition to individual teacher prep time. This time should be separate from special education teachers' IEP management and meetings.

> **Teacher scheduling.** Schools must schedule specialists to co-teach with general education teachers (Anderson 2008; Education Resource Strategies 2021) and schedule dedicated co-planning time.
>
> - The literature suggests several scheduling considerations, such as limiting co-teaching assignments to one to two classrooms per year (Mitchell 2005 in Anderson 2008); limiting to not more than three lesson plan preparations (Basso and McCoy 2007 in Anderson 2008); or limiting assignments to common grade levels or subject areas (Friend 2007 in Anderson 2008).

### ONGOING PROFESSIONAL DEVELOPMENT ON TOPICS FOR CO-TEACHING TEAMS, SUPERVISORS, AND COACHES

**Skills in co-planning, co-instructing, and co-assessing** (Brendle, Lock, and Piazza 2017; Cramer et al. 2006 in Anderson 2008; Friend et al. 2010; Keefe and Moore 2004; Mavropalias, Deligianni, and Symeonidou 2019 in Alnasser 2020; Murawski and Lochner 2010; Simmons and Magiera 2007 in Alnasser 2020; Scruggs et al. 2007 in Brendle, Lock, and Piazza 2017)

**Skills in differentiated instruction** (Alnasser 2020)

**Culturally relevant instruction**, particularly when collaborating to support multilingual learners (Gleeson and Davison 2016 in Bauler and Kang 2020)

**Co-teaching models** (Murawski and Lochner 2010)

### A SCHOOL-WIDE VISION FOR INCLUSIVITY

**Funding for support staff positions** (Dove and Honigsfeld 2018) such as additional psychologists, mental health counselors, special education program staff, and instructional coaches (Education Resource Strategies 2021)

**Regular instructional supervision and clear expectations** (Alnasser 2020; Weiss and Lloyd 2002 in Alnasser 2020)

**Promotion of shared vision of inclusion** (McLeskey and Waldron 2015 in Alnasser 2020; Villa et al. 2005)

**Investment in school-wide culture of teacher collaboration** (Bell and Baecher 2012 in Bauer 2020; Brendle, Lock, and Piazza 2017; Dove and Honigsfeld 2018; Webb and Barnash, in Cramer 2006 in Anderson 2008)

**Promotion of shared vision of co-teaching** (Alnasser 2020)

### TIME AND RESOURCE INVESTMENT TO ENHANCE TEACHER COLLABORATION

**Well-defined teacher roles** (Bauler and Kang 2020; Brendle, Lock, and Piazza 2017; Friend and Cook 2010; Mastropieri et al. 2005 in Brendle, Lock, and Piazza 2017; Ripley, in Cramer 2006 in Anderson 2008; Scruggs, Mastropieri, and McDuffie 2007 in Alnasser 2020; Simmons and Magiera 2007 in Alnasser 2020; Whiting 2017 in Bauler and Kang 2020)

**Teacher trust** (Ashton 2003 in Alnasser 2020; Scruggs, Mastropieri, and McDuffie 2007 in Alnasser 2020; Ronfeldt et al. 2015)

**Equity of teacher roles** (Harper and de Jong 2009 in Bauler and Kang 2020; Rice and Zigmond 2000 in Alnasser 2020)

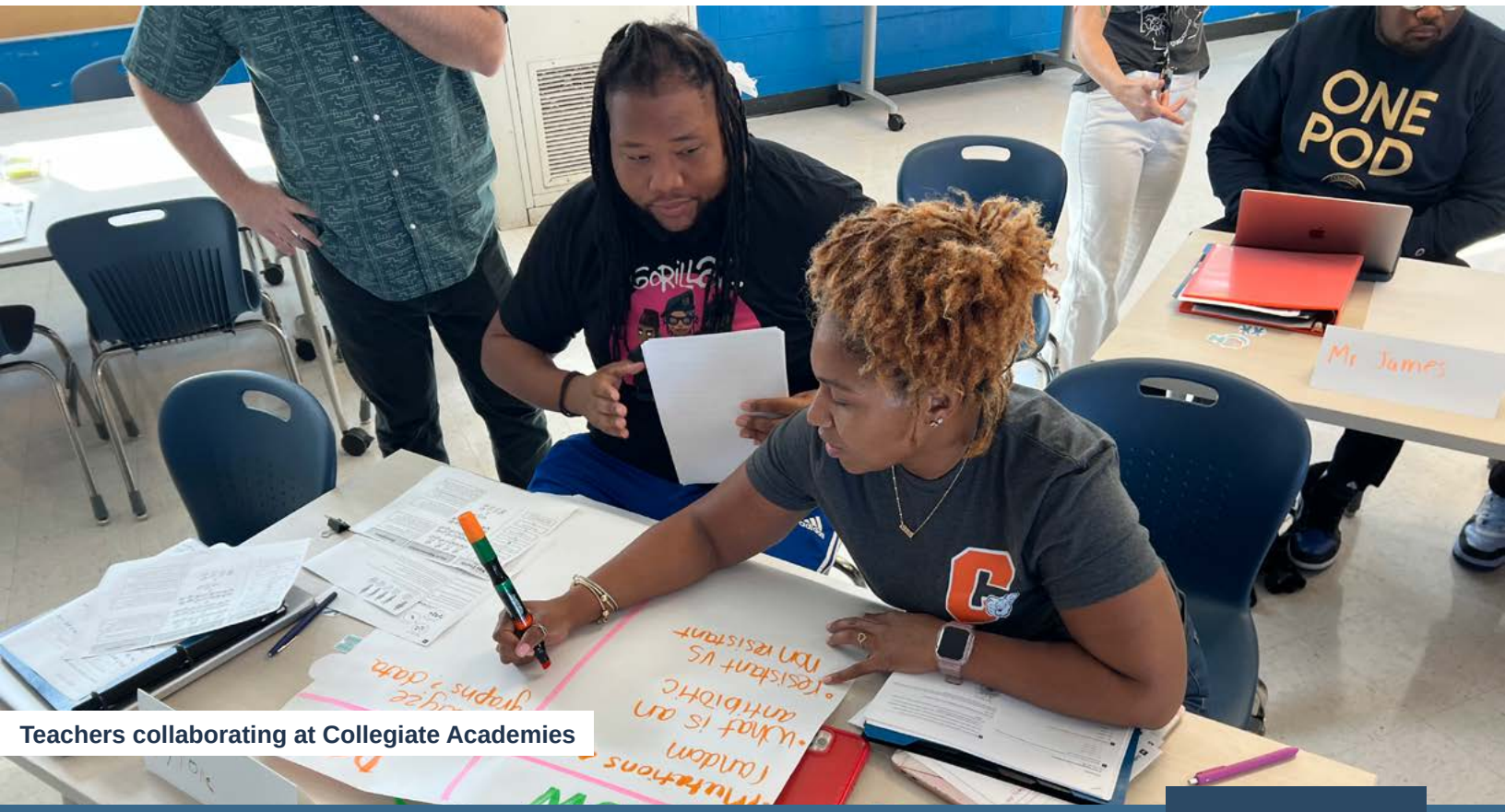
**Teacher buy-in for co-teaching** (Dove and Honigsfeld 2018; Friend and Pope 2005 in Anderson 2008; Rice and Zigmond 2000 in Alnasser 2020)

# Conclusion

In conclusion, collaboration between general and special educators is crucially important for schools that are working to become more inclusive of all learners. Within the broad landscape of collaborative practices, co-teaching is currently the best strategy for effectively meeting the needs of all students within classrooms. Co-teaching can be effective for a myriad of students with learning and thinking differences, including students with disabilities and multilingual learners; thus, creating a district culture of co-teaching can benefit many subgroups of diverse learners. District staff looking to adopt or improve their collaborative practices must recognize that many system-level changes — including scheduling, professional development, culture, and staffing — will be necessary to implement co-teaching, co-planning, and other collaborative teams effectively.

While the literature has not yet been able to provide conclusive evidence of co-teaching efficacy on academic scores, the literature confirms the efficacy of inclusion (solo and co-taught) classrooms and suggests collaboration has positive benefits on classroom culture, student sense of belonging, and teacher job satisfaction, which are all foundational elements to increasing outcomes for diverse learners. In short, collaboration between educators traditionally tasked with serving students in silos has the potential, if the necessary conditions are met, to dramatically increase academic outcomes for diverse learners. If nothing else, co-teaching is an approach to meeting the inclusion requirements of IDEA and ESSA with a whole host of benefits for both students and teachers.

Best practices for collaboration in schools and networks are discussed in the companion collection, ***Opening Doors to Collaboration***.




**Teachers collaborating at Collegiate Academies**

# Appendix

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