# Co-teaching literature review

## Introduction

This literature review sought to systematically examine recent research to understand the breadth and depth of effective co-teaching practices in contemporary learning environments during the last ten years. A total of thirty-one articles were thematically coded to respond to the following three research questions:

1. What are recommended practices for each stage of the co-teaching cycle in contemporary learning spaces?
2. What are the benefits of co-teaching and how might they be leveraged?
3. What are the challenges of co-teaching and how might they be overcome?

This review begins by examining the background to co-teaching and how it has evolved in western education as an inclusive approach towards its recent popularity as a vehicle for pedagogical change in contemporary schools. Following the description of the methodology used, the review reports findings related to the four stages of the contemporary co-teaching cycle: (1) co-planning; (2) co-teaching; (3) co-debriefing; and (4) co-reflecting, before exploring reported benefits and challenges.

## Background

As a concept, the practice of co-teaching—where two or more educators are jointly involved in the educative process—predates modern western education. Platonic texts written in Ancient times speak to the educational value of dialogue between philosophers such as Socrates and Aristotle to find the extent of value and truth in their opinions. The establishment and consolidation of medieval universities from the eleventh century onwards led to the study of liberal arts, where students studied under the tutelage of multiple teachers to attain broad and interconnected knowledge of disciplines such as arithmetic, geometry, music theory, logic, and rhetoric. Aztec artefacts from the 15th and 16th centuries document the education of children up to age 14 as a partnership between parents and local council to ensure the continuation of language and culture.

In contemporary western education, early twentieth century accounts of co-teaching can be found in the work of John Dewey—whose experimental Chicago schools embraced teachers working together in communities of inquiry to improve education outcomes—and Maria Montessori, who similarly viewed education as a collective mission towards the self-actualisation of all learners. At the same time, advocates of co-teaching grappled with the realities of industrialised mass education predicated on information scarcity and limited professional capital. In surveying the four ages of teacher professionalism in the twentieth century, Hargreaves (2000) argued that the first two ages of *pre-professionalism* (pre-1960s) and the *autonomous professional* (1960-1980) involved teachers working in unchallenged isolation, while it was not until the compliance-related pressures accompanying the third age of the *collegial professional* (1980s-2000) that teachers started to work together to achieve common educational goals principally as a matter of necessity:

By the mid to late 1980s, individual teacher autonomy was becoming unsustainable as a way of responding to the increased complexities of schooling. The world in which teachers worked was changing, and so was their own work. More and more teachers faced the prospect of having to teach in ways they had not been taught themselves (p. 162).

The 1980s also aligned with the re-discovery in the west of Russian educational theorists such as Alexei Leont'ev and Lev Vygotsky whose work on collaboration was incorporated into the push towards more learner-centred pedagogies. Central to these theories was an understanding of how both learning and teaching exist as co-constructed activities and the view that learner autonomy and efficacy are both developed through collaborative partnerships.

Although co-teaching practices are visible throughout ancient, medieval, and modern times, it was not until the 1990s that both research and practice gained considerable momentum as part of the inclusive education movement. For many at this time, co-teaching represented a way to bring together general educators—responsible for the instruction of all students—with special educators who were most often responsible for the high-needs and high-risk students previously taught in self-contained, separate learning environments. By combining the efforts of these educators in the same space, school communities were able to claim genuinely inclusive classrooms where all learners had access to the expertise of both types of educators. Although much of the research both past and present still assumes the focus to be on collaboration between specialist and generalist educators, elsewhere the focus has widened to include other educational roles in the school such as librarians, language specialists, and technology support personnel (Santos Green et al., 2013; Sinkkonen & Kyttälä, 2014).

The last decade has seen co-teaching gain even further momentum in the context of open-plan, flexible learning spaces where educators with varying backgrounds and areas of expertise work alongside one another as a matter of school policy. Recognised change experts Sharratt and Fullan (2012) have proposed that contemporary co-teaching be more broadly seen as collaboration between *any* two educators and framed as a cycle involving the four stages of: (1) co-planning; (2) co-teaching; (3) co-debriefing; and (4) co-reflecting. The authors argue that the complete cycle is the “most powerful way to improve teaching practice” (p. 118). Such arguments have since been validated through research reporting the high impact nature of collective teacher efficacy, where teachers work together on shared learning goals and continually seek to understand their collective impact on students’ learning (Donohoo et al., 2018; Hattie, 2019).

## Method

This review followed a systematic approach of identifying relevant co-teaching research and recording the title, year, abstract, sample, methodology, theoretical framework of each article. Selection criteria included research from the last ten years, a specific focus on co-teaching, a K-12 setting, and documentation of co-teaching strategies and their efficacy. To capture a wide range of themes, the review incorporated empirical studies, meta-analyses, and other literature reviews but also included grey literature drawn from professional magazines and policy documents. Each article was coded against activities occurring at the four stages of the co-teaching cycle as well as the documented benefits and challenges.

## Findings

### Co-planning

Co-planning is considered integral to the success of any co-teaching initiative. Many of the benefits observed in recent research can be linked back to effective co-planning strategies put in place early in the life of the initiative, while many of the challenges are either related to, or stem from, difficulties encountered during co-planning. The research for this review recommends the following co-planning strategies for success:

* leveraging the co-planning process to develop empathic understanding between co-teachers
* formalising comprehensive co-teaching agreements
* employing effective communication and collaboration in all planning activities
* accessing high-quality professional learning to support, enrich, and challenge co-teachers
* ensuring bespoke co-planning meeting time
* using students’ learning to inform the planning process
* employing supports such as technology, scaffolds, planning templates, and strategic questioning
* ensuring school administrative procedures, supports, and leadership are in place.

#### Leveraging the co-planning process to develop empathic understanding between co-teachers

Research strongly emphasises the need for co-teachers to have an empathic, robust understanding of one another’s strengths, weaknesses, values, and goals. Such understanding can be developed during the co-planning stage of the cycle by allowing time for co-teachers to properly get to know one another as well as self-assess to understand and articulate their qualities and interests as co-teachers. However, findings also show that early co-planning is an important time of adjustment for co-teachers to the new relationship and underscores the need to embrace flexibility while ensuring compatibility. As Murdock (2015) elaborates, “co-teachers must be good communicators, respect each other, have similar teaching philosophies, be willing to spend time planning together, and at times be willing to drop their own ideas and go with the other person’s plans” (p. 46). Key recommendations include:

* allowing ample time for co-teachers to identify and discuss individual teaching styles, interests, goals, strengths and weaknesses (Ricci et al., 2019; Shaffer & Thomas-Brown, 2015; Strogilos & Tragoulia, 2013).
* paying specific attention to discussion of divergent beliefs and what they might mean for the co-teaching ahead (Hepner & Newman, 2010; Rexroat‐Frazier & Chamberlin, 2019)
* utilising surveys and other templates for self-assessment (Brown et al., 2013)
* interviewing new staff—especially pre-service teachers—prior to placing them in co-teaching groups (Hawkman et al., 2019).

#### Formalising comprehensive co-teaching agreements

Co-teaching agreements strongly support the long-term efficacy of co-teaching initiatives when they are founded on choice, agency, and ownership and pertain to any aspects co-teachers feel are essential for success. Fundamentally, research suggests that co-teaching should be a choice rather than an obligation (Murawski, 2012; Nierengarten, 2013; Rexroat‐Frazier & Chamberlin, 2019). As Nierengarten explains, “choice implies willingness and ownership… [and] a sense of ownership by the teachers results in them investing in the co-teaching relationship and increases the likelihood of success and sustainability” (p. 75). Beyond the fundamental agreement to engage in co-teaching, several key agreements need to be reached during the co-planning process that include:

* shared goals (Cayton et al., 2017; Conderman, 2011; Ricci et al., 2019)
* fair division of workload (Conderman, 2011; Murawski & Dieker, 2004; Ricci et al., 2019)
* determining what each co-teacher’s role will be (Hepner & Newman, 2010; Murawski, 2012; Strogilos & Tragoulia, 2013)
* key curriculum information such as essential questions, unit objectives, and vocabulary (Honigsfeld & Dove, 2015)
* mutually-acceptable expectations about what effective co-teaching will look like (Nierengarten, 2013)
* pedagogical approaches that will be employed (Shaffer & Thomas-Brown, 2015).

To formalise agreements, Murawski (2012) recommends the use of focused *what, how, why, who, where,* and *when* questioning on every aspect of co-teaching that is deemed to be important. Similarly Honisgsfeld and Dove (2015) suggest that co-teachers take the time to explore, discuss, and agree on key activities from the *whole* co-teaching cycle — for example, thinking ahead as to how co-teaching will be evaluated. In order to effectively agree on lesson content, both Casale and Thomas (2018) and Murawski and Lochner (2011) maintain that draft lessons should be prepared well ahead of time to allow for discussion, debate, and possible revision. Finally, Nierengarten (2013) argues that that agreements need to be extended to include school leaders to ensure that the wider school community can recognise and value successful implementation.

#### Employing effective communication and collaboration in all planning activities

As co-planning within schools unfolds as part of the broader co-teaching initiative, both communication and collaboration are seen as essential and extending to all areas of interaction within the wider school community. For example, Ricci, Persiani, and Williams (2019) stress the need for co-planning and co-teaching activities to be clearly explained to parents along with intended benefits and possible challenges. Hawkman (2019) discusses the important role that schools play in developing preservice teachers through co-teaching, arguing that two-way communication and collaboration between institutions is necessary to develop and share a greater understanding of effective co-teaching practice. Murawski (2012) reminds school leaders that they should be in continual communication with co-teachers about what they observe and what administrative processes and supports can be put in place to enable and improve practice. Similarly, Murawski and Lochner (2011) argue that special educators should be engaged early on as collaborators in the co-planning process to ensure that all students’ needs are met.

#### Accessing high-quality professional learning to support, enrich, and challenge co-teachers

Lack of training of teachers in co-teaching strategies is frequently cited as a factor in why co-teaching initiatives fail (Brendle et al., 2017; Chitiyo & Brinda, 2018; Hepner & Newman, 2010; Nierengarten, 2013; Rexroat‐Frazier & Chamberlin, 2019). It is therefore clear why professional learning represents an integral component of successful co-teaching. Both Stroglios and Tragoulia (2013) and Nierengarten (2013) believe that training needs to occur within the co-planning stage of the cycle, while Chitiyo and Brinda (2018) believe that preservice teacher training at university must play a much greater role in preparing future co-teachers. Hawkman (2019) similarly argues in favour of building common knowledge of effective co-teaching strategies preparing preservice teachers to operate effectively in co-taught environments. Murawski and Lochner (2011) argue that co-teachers can use successful co-teaching to advocate with school leaders for greater support and professional learning moving forward. Although there is limited detail in the research examined specifically on what co-teaching professional learning needs to include, there is general agreement that both co-teaching skills deficits and dispositions need to be examined to build confidence, foster willingness to continue, and enable teachers to support their colleagues when needed. To these ends, Kodkanon, Pinit, and Murphy (2018) argue that professional learning should explore issues that occur in co-planning such as communication breakdowns, perceptions of unfair workload, how to work with resistant colleagues, and how to ensure consistency between classrooms.

#### Ensuring bespoke co-planning meeting time

In the research on co-planning that was examined for this review, meeting time was universally regarded as a necessary structure for the co-planning process. Research generally agrees that this time should be substantial (that is, at least 40 minutes), formally scheduled, uninterrupted, and regular (Hepner & Newman, 2010; Murawski, 2012). Key strategies for meetings include:

* clearly designating meeting time for intended purposes such as co-creating resources, evaluating students’ learning, and reflecting on progress with co-teaching initiatives (Murawski, 2012)
* three-part agendas that include: (1) an overview of the topic being explored; (2) discussion of how the topic will be addressed through co-teaching; and (3) discussion of individual student needs (Conderman, 2011)
* regular co-teaching reflections throughout the year (Hepner & Newman, 2010)
* setting clear objectives that need to be accomplished by the end of the meeting (Brown et al., 2013).

#### Using students’ learning to inform the planning process

Research shows that students’ learning can play a pivotal role in the co-planning process when it is carefully considered. Accordingly, Murawski (2012) recommends that planning time be given to discussing individual students and the challenges they encounter. Since much of the co-teaching research to date has focused on the partnering of regular teachers with special needs teachers, Rexroat-Frazier and Chamberlin (2019) recommend that 30% be set as the upper limit for students with mild-to-moderate disabilities in a typical co-taught classroom. DeMartino and Specht (2018) suggest consultation with students during the planning process to identify what their needs are and suggest ways of meeting these needs. Cayton, et al. (2017) believe that co-planning sessions should frequently involve the analysis of students’ learning to date.

#### Employing supports such as technology, scaffolds, planning templates, and strategic questioning

Findings reflect the value of employing supports in the co-planning process, such as technology, scaffolds, planning templates, and strategic questioning. These supports are particularly important for schools embarking on new co-teaching initiatives and considered highly suitable for teachers new to co-teaching, who may be unfamiliar with navigating co-teaching agreements, structuring co-planning activities, making the best use of meeting time, and more fully understanding their co-teaching partners. Specific supports that are mentioned include:

* collaborative online spaces to streamline planning (Brown et al., 2013; Moorehead & Grillo, 2013)
* use of individual education plans (IEPs) and/or pyramid planning (all/most/some) for students with learning support needs (Conderman, 2011; Nierengarten, 2013)
* combining both separate planning and group co-planning — for example, pre-planning which is done separately, followed by group planning, and then separate post-planning (Honigsfeld & Dove, 2015)
* utilising students’ feedback on what is working well and what can be improved (Embury & Dinnesen, 2013)
* co-creation of lesson content using lesson planning templates (Hepner & Newman, 2010)
* strategic question lists to help explore areas such as co-teachers’ understanding of each other, agreements that need to be established, and/or what modifications need to be made to meet individual students’ needs (Conderman, 2011).

#### Ensuring school administrative procedures, supports, and leadership are in place

Finally, co-planning involves working with administrative structures, processes, and school leaders to ensure that co-teaching is successful. Much of the research in this area suggests that responsibilities lie jointly with co-teachers and school leaders, and that communication channels need to be open at all times so that school leaders are aware of the challenges that co-teachers face and can intervene appropriately where necessary. Specific recommendations for school leaders include:

* consulting with co-teachers when partnerships are developed and established (Conderman, 2011)
* ensuring that timetabling reflects the co-teaching arrangement as a permanent feature of how the class is taught from Day 1 (Johnson & Brumback, 2013; Murdock et al., 2015)
* maintaining consistent co-teaching partners throughout the year (Nierengarten, 2013)
* engaging school support staff as co-teachers (Sinkkonen & Kyttälä, 2014)
* leveraging collaboration between subject teachers and technology teachers, the school librarian, media specialists, and/or other specialist teachers in the school (Santos Green et al., 2013)
* avoiding overloading co-taught classes with high needs or high risk students (Nierengarten, 2013).

### Co-teaching

As the second stage of the cycle, co-teaching is where the success of the initiative is realised and where it has the most impact — in the co-taught classroom. While successful co-teaching is best established through careful, evidence-based co-planning drawing on the recommendations and strategies outlined earlier, this review finds a wealth of approaches to on-the-ground co-teaching that can support and inform teachers’ practice. Co-teaching findings fell into three broad categories associated with successful co-teaching that included:

1. drawing on the strategies of Friend, Reising, and Cook (1993)
2. extending effective pedagogies to become co-pedagogies
3. using co-teaching as a mentoring process for colleagues
4. employing effective classroom communication and management strategies.

#### Drawing on the strategies of Friend, Reising, and Cook (1993)

It is unsurprising to find a very wide range of co-teaching strategies embodied in recent research, which stem from teachers’ personal reflections, empirical research, and expert advice. Many of these strategies can, however, be linked back to the structures first developed by Friend, Reising and Cook (1993) in their model of co-teaching that include: (1) *one teach, one assist* (later extended to an additional strategy: *one teach, one observe*); (2) *station teaching*; (3) *parallel teaching*; (4) *alternative teaching*; and (5) *team teaching*. The popularity of these structures is highly evident across the literature and broadly considered helpful for teachers new to co-teaching and those wishing to diversify their range of co-teaching pedagogies. At the same time, research cautions against overreliance on the structures as the one way for describing different co-teaching approaches (Embury & Dinnesen, 2013; Guise et al., 2017; Murawski & Lochner, 2011). As Guise, Habib, Thiessen, and Robbins (2017) elaborate, there is arguably a need for school communities to move beyond the “emphasis on the [Friend, Reising, and Cook] six co-instructional strategies… to a greater emphasis on theories of teacher learning, the role of the cooperating teacher in mentoring a pre-service teacher, and the creation of a community of practice” (p. 379). Thus, any co-teaching strategies are arguably only useful if they help school communities to self-sustain through ongoing teacher professional learning, understanding the impact of successful co-teaching on students’ learning, and equipping the wider school community with a deeper theoretical understanding of what makes co-teaching successful.

#### Extending effective pedagogies to become co-pedagogies

As classroom practitioners, co-teachers can draw on a range of strategies to ensure that co-taught lessons are authentic, engaging, meaningful, and aligned to learners’ needs. Integral to successful co-teaching is the implementation of a range of pedagogies that are suited to learning in the co-taught classroom. These *co-pedagogies* broadly reflect student-centred, constructivist approaches that are equally useful in non-co-taught classrooms — however, research suggests they help to promote inclusive classroom cultures, the valuing of different opinions, the co-development of ideas through sustained projects, and learning that is both meaningful and authentic. Key recommendations from research include:

* using interdisciplinary team-teaching to blur the boundaries between subject disciplines and extend students’ horizontal connectedness (Kodkanon et al., 2018)
* using Project-Based Learning to provide a shared purpose, framework, and guidelines for collaboration (Kodkanon et al., 2018)
* carefully incorporating controversial topics to promote authentic co-taught class discussions (Casale & Thomas, 2018)
* using anchored instruction — that is, situating learning within a meaningful, problem-solving context (Rexroat‐Frazier & Chamberlin, 2019)
* encouraging more able learners to present extension or passion projects to the class (Murdock et al., 2015)
* employing Socratic circles for authentic and deep class and group discussions (Seglem & VanZant, 2010).

#### Using co-teaching as a mentoring process for colleagues

In much of the empirical research examined in this review, the experience of co-teaching is often associated with continuous professional learning (CPL) since teachers can continually engage with, and learn from, their colleagues throughout the co-teaching cycle (Brendle et al., 2017; Hawkman et al., 2019; Hepner & Newman, 2010; Kodkanon et al., 2018; Patel & Kramer, 2013; Ricci et al., 2019). One key area that both practitioners and school leaders should consider when implementing co-teaching is, therefore, the potential for effective mentoring. This can include supporting colleagues that are new to co-teaching, empowering preservice teacher development during practicums, providing new opportunities for non-teaching support staff to participate, and challenging and extending experienced practitioners.

Evidence-based approaches to mentoring co-teachers include:

* exposing colleagues new to the school early to co-teaching (Hawkman et al., 2019)
* using leader and assistant approaches such as *one teach, one assist* only in the early stages with new teachers; as soon as possible, structure the learning so that these teachers take a more active role (Strogilos & Tragoulia, 2013)
* encourage all teachers in the school to observe highly effective co-teaching teams (Johnson & Brumback, 2013; Murawski & Bernhardt, 2015)
* thinking flexibly about pairings and groupings — for example, pairing two preservice teachers, having a host and guest, and/or pairing subject generalists with subject specialist (Hawkman et al., 2019)
* peer coaching (Nierengarten, 2013)
* having a morning class “meeting time” with structured social and learning activities, and relevant routines so that teachers and students become accustomed to co-teaching (Murdock et al., 2015).

#### Employing effective classroom communication strategies

How co-teachers communicate with one another and with students is an area that is crucial to the success of co-teaching. Effective communication encompasses both written and verbal interaction and is often strategically timed. Classroom-based communication strategies often tie in with other high impact feedback such as feedback, cognitive task analysis, reciprocal teaching, and explicit instruction. In the research on co-teaching, recommended communication strategies include:

* using online questionnaires at the start of a co-taught unit of work to gather data about students’ learning preferences (DeMartino & Specht, 2018)
* making frequent use of parity signals such as “we”, “us”, “our class”, as well as having both teachers’ names on doors to convey their equal importance (Conderman, 2011; Embury & Kroeger, 2012; Hepner & Newman, 2010)
* using frequent “thinking aloud” strategies to foster metacognition and support students with cognitive task analysis (Hattie, 2012; Hawkman et al., 2019; Rexroat‐Frazier & Chamberlin, 2019)
* using both active interplay (tightly pre-planned exchanges between co-teachers throughout the lesson) and passive interplay (non-presenting teacher informally adding ideas to the lesson) when co-presenting (Rexroat‐Frazier & Chamberlin, 2019)
* experimenting with instructional role play such as “smart teacher, dumb teacher” and “good cop, bad cop” (Rexroat‐Frazier & Chamberlin, 2019)
* utilising shared online spaces such as wikis and blogs (Seglem & VanZant, 2010).

### Co-Debriefing

Whether immediately following a lesson or at a scheduled time such as the end of the school day, regular and frequent formal co-debriefing is seen as both essential for successful co-teaching. Co-debriefing provides an opportunity for co-teachers to build trust, grow professionally, and become more aware of themselves and one another through “constructive, critical analysis of teaching” (Patel & Kramer, 2013, p. 172). On a broader level, debriefing helps to de-privatise teachers’ practice and build professional learning communities that “are committed to collaboratively improving their teaching pedagogies and monitoring learning outcomes and well-being of all students” (Fletcher et al., 2017, pp. 79–80). Like co-planning sessions, the research suggests that co-debriefing needs to be formalised through structured sessions that are scheduled, sufficient in length, and uninterrupted. However, some argue that debriefing also inherently involves informal communication between colleagues during class time through the processes of gathering, reflecting, and discussing data as they go (Guise et al., 2017; Hawkman et al., 2019; Murawski & Lochner, 2011; Ricci et al., 2019).

The research findings pertaining to co-debriefing fell into three categories that included:

1. using co-generative dialogue to understand problems and co-generate solutions
2. using co-assessment to make sense of students’ learning
3. involving other stakeholders in evaluation of co-teaching.

#### Using co-generative dialogue to understand problems and co-generate solutions

An essential component of co-debriefing is co-generative dialogue, which is “… when co-teachers discuss the issues that impact teaching and learning and collectively generate solutions to any problems” (Scantlebury et al., 2008, p. 971). Co-generative dialogue also includes not only post-lesson debriefings, but also “huddles” in the middle of a lesson when co-teachers debrief in the moment of teaching (Guise et al., 2017).

Strategies for fostering meaningful productive co-generative dialogue include:

* focusing on contradictions that arise—that is, exceptions to what usually happens in the lesson—which might include both positive and negative things that need to be addressed, eliminated, or increased (Tobin, 2014)
* using very short video-recorded segments of the lesson (or vignettes) as focal points for discussions about what is happening and why it is happening (Nierengarten, 2013)
* ensure that all participants in the dialogue have equal power to call and convene a meeting, initiate topics, respectfully speak and say whatever is on their mind (Tobin, 2014)
* share turns at speaking, ensure the discussion is balanced, practise active listening, and encourage those who have been silent to talk (Takala & Uusitalo-Malmivaara, 2012)
* avoid moving onto a new topic until the current topic is resolved and all participants have the sense that a solution has been co-generated (Guise et al., 2017).

#### Using co-assessment to making sense of students’ learning

Research suggests that co-debriefing involves making sense of students’ learning and builds on the monitoring of learning in the co-taught classroom — a practice sometimes referred to as *co-assessment* (Blair et al., 2010; Honigsfeld & Dove, 2015; Murawski & Lochner, 2011). Although co-assessment might focus on any aspect of learning that was observed, the debriefing of students’ learning can involve a structured, focused approach to evaluating co-teaching practices and their impact on learning. For example, co-teachers can check in with each other to determine whether the students are achieving the lesson’s learning goals, whether co-teachers are using good communication skills with each other, or whether the learning activities need to be adjusted. Key recommended practices for further making sense of students’ learning include:

* using checklists to structure items for discussion (Brown et al., 2013; Murawski & Lochner, 2011; Santos Green et al., 2013)
* establishing bespoke meetings for the sole purpose of evaluating co-teaching strategies and analysing student data (Conderman, 2011)
* drawing on descriptive (rather than evaluative) data about the lesson to support objective (rather than subjective) assessment of students’ learning (Murawski & Lochner, 2011)
* addressing the core question of whether the evidence indicates that successful learning is occurring in the class (Brown et al., 2013; Conderman, 2011).

#### Involving other stakeholders in evaluation of co-teaching

Some argue that the co-debriefing stage of the co-teaching cycle is also an ideal time to involve other stakeholders such as school leaders in the evaluation of co-teaching (Murawski & Bernhardt, 2015; Murawski & Lochner, 2011; Nierengarten, 2013). Given school leaders often have more control over important administrative processes within the school, involving them can be an opportunity to address any processes that may be impacting on successful co-teaching. Conversely, as Murawski and Bernhardt (2015) explain, it is essential that school leaders evaluating co-teaching have a robust understanding of what effective co-teaching looks like and what they should look for when evaluating classroom practice:

When evaluating co-teaching pairs, make sure you understand co-teaching principles and strategies in addition to what you already know about effective teaching practices. Because the most effective co-teaching teams use a variety of co-instructional approaches, you will need to observe pairs more frequently to get a deeper understanding of what is occurring in the classroom. Learn what to look, listen, and ask for that will demonstrate co-planning, co-instructing, and co-assessing (p. 33).

Key recommended practices for engaging with other stakeholders to evaluate co-teaching include:

* not assuming that everyone—including school leaders—will have a robust understanding effective co-teaching and that some may need help attaining this understanding (Murawski & Bernhardt, 2015)
* working proactively to identify gaps in co-teaching knowledge and skills and provide targeted professional learning to address these gaps (Johnson & Brumback, 2013)
* identify and flagging timetabling issues that may be impeding successful co-teaching (Nierengarten, 2013)
* helping to ensure that teachers are partnered appropriately and be prepared to re-think partnering if it is not working favourably
* leverage successful co-teaching to increase and institutionalise co-teaching practices throughout the school.

### Co-Reflecting

As the final stage in the co-teaching cycle, co-reflecting is necessary for grounding the experiences of co-teaching in ongoing reflective practice. Co-reflecting enables colleagues to identify what is working as well as changes to practice and next steps that are needed to move forward. According to the research, co-reflecting combines evaluation of students’ learning with deep collegial discussion, professional learning, and forward planning and decision-making. As Nierengarten (2013) explains:

The importance and power of reflection to educators and their professional development cannot be overstated. These reflective practitioners can use data from observations, student performance and students themselves to guide and direct instructional decisions. Educators that co-teach are in an ideal situation to spur their own professional growth through dialogue with their co-teachers (p. 80)

Co-reflecting practices examined for this review fell into three categories including:

1. reflecting on pedagogical practices
2. using of both formative and summative data in final evaluations
3. honestly evaluating the co-teaching relationship.

#### Reflecting on pedagogical practices

Effective pedagogical practices underpin the success of any co-teaching initiative. As explored in this review, although many of the practices recommended in the research apply equally well in non-co-taught classrooms, their use in co-teaching requires ongoing evaluation in order to understand their impact and inform further development and use moving forward. As Johnson and Brumback (2013) explain, co-teaching offers a unique professional learning environment in teachers can continually “reflect on and share instructional practices” (p. 7). According to Patel and Kramer (2013), co-teaching enables critical reflective practices when:

* co-teachers offer varying perspectives of the same lesson
* one co-teacher can share how they witnessed events that the co-teacher did not notice
* one co-teacher can share how they gained a better understanding of the struggles and successes of a particular group of students
* both teachers have a thorough discussion of their effectiveness and impact on learning.

#### Using both formative and summative data

Whereas co-debriefing focuses on making sense of students’ learning by examining available evidence both during and after co-teaching activities, co-reflection most often involves deeper reflection on what student learning data might mean moving forward. Critically, at the end of the co-teaching cycle, teachers have access to both formative and summative data about students’ learning and Nierengarten (2013) regards these types of data as equally important for effective co-reflection:

Both formative and summative evaluations are needed to develop and implement an effective co-teaching program adequately. Formative data will provide important information related to the implementation of the co-teaching practice and summative data supplies details needed for rethinking and revision of the program (p. 79).

#### Honestly evaluating the co-teaching relationship

Co-reflecting is most often associated with strengthening co-teaching relationships. Patel and Kramer (2013) summarise empirical findings that show, for example, through co-reflection, “teachers have revealed that their collegial relationships have strengthened, and they feel greater levels of support from their teaching partners” (p. 172). However, the co-reflection stage of the co-teaching cycle is often an important stage for identifying when co-teaching relationships are not working and building in remediation strategies. Murawski and Bernhardt (2015) explain that some responsibility rests with school leaders for having mitigation strategies in place:

Part of leadership for co-teaching is making sure you have ways to mitigate problems when the partners need ‘couples therapy’. Not all teachers are going to work well with all other teachers, even when everyone assumes that we all have the best of intent. Sometimes teachers have different beliefs about what’s best for students. You need to be ready for that. If it happens, what is the leadership team’s game plan going to be? (p. 32).

Hepner and Newman (2010) provide a set of strategic co-reflection questions about the co-teaching relationship that include a focus on whether:

* parity has been achieved where both parties feel they have had equal input and equal recognition
* roles and responsibilities are made clear and shared equally
* co-teachers are continuing to learn from one another
* resources are freely shared
* verbal and non-verbal communication is clear honest, open, and regular
* further co-teaching resources have been explored and discussed
* time is spent productively and sufficient time for co-planning is allowed
* both teachers feel a sense of ownership of the teaching space
* both teachers have confidence in one another’s knowledge of curriculum, pedagogy, and technology
* special needs students are fully incorporated into the class.

Johnson and Brumback (2013) argue that co-teachers should be prepared to request a change of partner if their co-teaching relationship is having limited, or even a detrimental, impact on learning and teaching.

## Benefits

The benefits of co-teaching are well-documented in the research, extending from those within the co-teaching partnership—such as the ability to learn professionally from one’s colleagues through de-privatised practice—to those that are identified in the broader school community, such as improved learning outcomes and more engaged learners. The benefits in this review fell into nine categories suggesting that:

1. co-teaching supports inclusion and differentiation
2. assessment and curriculum can be more holistic and integrated
3. co-teachers broaden professional horizons by working with others
4. co-teaching represents continuous professional learning
5. collective teacher efficacy is stronger in schools with co-taught classrooms
6. co-teaching fosters learner and teacher wellbeing
7. administrative efficiencies can be achieved
8. co-teaching can catalyse changes to pedagogical practice
9. co-taught classrooms foster learner engagement and development of pro-social skills.

### Co-teaching supports inclusion and differentiation

Much of the research examined focuses on how co-teaching supports differentiation by creating a learning environment with two educators working side-by-side, where appropriate structures can be employed to meet the needs of all learners (Murawski & Lochner, 2011; Ricci et al., 2019). A co-taught classroom is generally considered more flexible in allowing teachers to assume different roles at different times. Several benefits related to differentiation include:

* reduced student-to-teacher ratios with more one-on-one time (Embury & Kroeger, 2012; Hepner & Newman, 2010; Moorehead & Grillo, 2013; Murawski & Lochner, 2011)
* the least restrictive environment for students with learning needs, where their needs are more likely to be met and where their learning outcomes are more likely to be improved (Brendle et al., 2017; Murdock et al., 2015; Rexroat‐Frazier & Chamberlin, 2019)
* opportunity for one teacher to work with small groups and/or individuals while another teacher is instructing the class (Patel & Kramer, 2013)
* ability to provide multiple explanations of difficult concepts (Conderman, 2011) and joint feedback (King, 2018)
* opportunities to intervene earlier in the instructional process (Chitiyo & Brinda, 2018; Embury & Kroeger, 2012; Murdock et al., 2015).

### Assessment and curriculum assessment and curriculum can be more holistic and integrated

The research suggests that co-teaching provides a form of triangulated assessment where co-teachers are able to both monitor key aspects of students’ learning and use the co-debriefing and co-reflecting stages of the cycle to share their findings and use evidence to forward plan. The research suggests that co-teachers should take advantage of the presence of two teachers in the classroom to gather and document on-the-ground insights that can be used at a later time (Johnson & Brumback, 2013; Patel & Kramer, 2013; Ricci et al., 2019). Research also suggests that co-teaching offers a way to integrate the curriculum more effectively, especially in the area of STEM (Kodkanon et al., 2018; Santos Green et al., 2013).

### Co-teachers broaden professional horizons by working with others

For some, co-teaching represents a broadening of horizons for the teachers involved because they are working with colleagues with different values, pedagogical practices, and perspectives. Ricci, Persiani and Williams (2019) regard bringing multiple perspectives into the classroom as a key benefit for students, while Johnson and Brumback (2013) underscore the importance of students learning how to collaborate by observing successful professional collaboration between co-teachers.

### Co-teaching represents continuous professional learning

With its emphasis on continuous learning through professional interaction and collaboration between co-teachers, co-teaching represents a powerful form of embedded and authentic professional learning (Brendle et al., 2017; Johnson & Brumback, 2013; Murawski, 2012). The benefits documented in the research include:

* co-teachers as a form of “sounding board” for creative ideas (Hawkman et al., 2019; Ricci et al., 2019)
* a supportive environment for preservice teachers to learn on the job while encouraging them to take risks (Guise et al., 2017; Hawkman et al., 2019; Patel & Kramer, 2013)
* a way to mentor other teachers (Guise et al., 2017; Kodkanon et al., 2018)
* an opportunity to model pedagogical practices and/or uses of technology (Santos Green et al., 2013)
* an environment for supporting professional relationship building (Hawkman et al., 2019).

### Collective teacher efficacy is stronger in schools with co-taught classrooms

Co-teaching is often associated with building collective teacher efficacy since it deprivatises teaching practice and encourages co-teachers to make sense of students learning and solve problems through co-generative dialogue. The research suggests that co-teaching is often the vehicle for:

* encouraging greater teacher efficacy, especially for those new to teaching (Hawkman et al., 2019; Kodkanon et al., 2018; Patel & Kramer, 2013; Santos Green et al., 2013)
* fostering a belief that combined teaching efforts have an impact on students’ learning (Moorehead & Grillo, 2013)
* encouraging collaboration to spark ideas, solve problems, co-develop resources, and develop communities of practice (Guise et al., 2017; Johnson & Brumback, 2013; Santos Green et al., 2013)
* extending the range of pedagogies that are employed in a typical classroom (Patel & Kramer, 2013).

### Co-teaching fosters learner and teacher wellbeing

The research on co-teaching and learner wellbeing suggests that positive teacher relationships are often a springboard for an inclusive classroom culture where students receive emotional support, develop trust, and often report feeling a stronger sense of belonging (Kodkanon et al., 2018; Murdock et al., 2015). Others suggest that inclusive co-taught classrooms often correlate with improved learner behaviour through positive peer relations and the reduction of stigmas for students with learning disabilities (Chitiyo & Brinda, 2018; Conderman, 2011; Hepner & Newman, 2010; Murawski & Lochner, 2011). Empirical findings also support greater staff satisfaction, reduction of burnout, and improved morale (Chitiyo & Brinda, 2018; Murawski & Lochner, 2011; Murdock et al., 2015).

### Administrative efficiencies can be achieved

For some, co-teaching yields administrative efficiencies that come from combining teachers’ efforts. Both Rexroat-Frazier and Chamberlin (2019) and Santos-Green, et al. (2013) find that effective co-teaching is more likely to reduce—rather than add to—teacher workloads, while Murdock, Finneran, and Theve (2015) argue that teacher absence in co-taught classrooms has far less of an impact since students will rarely go a day without at least one or the other of their co-teachers.

### Co-teaching can catalyse changes to pedagogical practice

Co-teaching is associated with changes to pedagogical practice — often the result of co-teachers being flexible and willing to adopt different approaches, strategies, and models as a result of working with one another. In reviewing the research in this area, King (2018) focuses on specific pedagogical changes related to feedback that often occur as a result of teaching in co-taught classrooms:

* improved pedagogical effectiveness of question-answer exchange during instruction
* richer and more effective class discussions
* high-impact joint feedback, which makes learning visible and enables co-teachers to manage competing voices and evaluate multiple students at once
* ability to provide both positive and negative feedback to the same student
* co-teachers both contributing to the progressivity of the lesson sequence.

As the author further explains, “co-teachers can collaborate in a phenomenally fine-tuned fashion, co-participating in both the initiation and feedback components of the sequence and accomplishing together what one individual does in a single-teacher context” (p. 12). In addition to effective feedback, Kodkanon, Pinit, and Murphy (2018) finds an overall reduction in teacher-centred strategies such as lecturing, while Patel and Kramer (2013) find increased pedagogical fluency. Similarly, Embury and Dinnesen (2013) find that “teachers who plan more frequently and gear their planning toward co-teaching use more varied co-teaching strategies and implement those strategies more frequently” (p. 18).

### Co-taught classrooms foster learner engagement and development of pro-social skills

Frequently associated with improved learning outcomes, some believe that learner engagement in co-taught classrooms is often superior when students are acquiring and practising pro-social behaviours that result in greater inclusivity and a stronger sense of belonging (Conderman, 2011; Murdock et al., 2015). Stemming from these environments are findings that students are more confident and able to demonstrate superior study skills (Hepner & Newman, 2010), participate more in class activities (Patel & Kramer, 2013), and have improved social skills (Murawski & Lochner, 2011)

## Challenges

To realise many of the benefits of co-teaching, school communities arguably must understand and work with a range of challenges that vary in scope and complexity. Many of the challenges identified in this review require co-teachers to employ evidence-based strategies throughout the co-teaching cycle. The research suggests that co-planning is the most crucial stage of the cycle for identifying potential challenges and developing strategies, while co-debriefing and co-reflecting are crucial for developing a deeper understanding of the challenges encountered throughout co-planning and co-teaching and co-generating solutions to these challenges that can be turned into positive actions moving forward. Across the research, the review found that:

1. problems with the co-teaching relationship are detrimental to success
2. co-teachers grapple with time, workload, and resourcing issues
3. teacher parity is essential at every stage of the co-teaching cycle
4. professional learning must address skills, teacher efficacy, and teacher dispositions
5. unconducive learning environments are detrimental to success
6. unformalised agreements often lead to unsuccessful outcomes
7. poor perceptions of co-teaching will undermine success.

### Problems with the co-teaching relationship are detrimental to success

The co-teaching relationship is a foundational component in effective co-teaching, which is why problems with the relationship can often be so detrimental to the success of any initiative. Some regard the most fundamental aspect of a successful co-teaching relationship is the right partnering of teachers (Murawski & Bernhardt, 2015; Ricci et al., 2019), while others explore poor partnering often manifesting as:

* teachers with philosophies and values that are too different (Patel & Kramer, 2013)
* teachers with inflexible beliefs who do not respect one another (Hepner & Newman, 2010; Murawski & Bernhardt, 2015)
* teachers who have limited skills in conflict resolution (Brown et al., 2013; Ricci et al., 2019)
* teachers who have a tendency to undermine one another (Ricci et al., 2019).

### Co-teachers grapple with time, workload, and resourcing issues

As they relate to the co-planning cycle, time and workload are complex challenges requiring a multifaceted approach to solve. However, the research suggests that time-related challenges are most commonly associated with co-planning and that finding sufficient and uninterrupted time to co-plan is the single-best solution to this problem (Guise et al., 2017; Johnson & Brumback, 2013; Murawski & Lochner, 2011; Ricci et al., 2019; Strogilos & Tragoulia, 2013). When paired with the administrative efficiency of reported reduced workload, the research suggests that an investment in co-planning time is one that potentially yields greater efficiency in the long-run as co-teachers co-develop and share resources, assist one another with assessment, and combine their efforts to solve problems encountered in the classroom. However, DeMartino and Specht (2018) find that some teachers find the loss of personal planning time to be a significant issue to be overcome, while Murawski and Bernhardt (2015) report that co-teachers can find themselves “spread too thin” and more susceptible to burnout (p. 32).

### Teacher parity is essential at every stage of the co-teaching cycle

Just as parity between co-teachers can be viewed as a strength in creating a cohesive classroom where each co-teacher’s efforts are recognised and valued, the research strongly suggests that lack of parity can become an insurmountable issue for many co-teachers. Effective parity arguably must occur at every stage of the cycle. It should be established early on through co-teaching agreements in the co-planning stage, made visible to the wider school community in the co-teaching stage, and be debriefed and evaluated in co-debriefing and co-reflecting. As Hepner and Newman (2010) explain, “effective co-teaching partnerships report parity at every level, it is a shared class in every way; teachers share planning and grading responsibilities, the physical space is shared, both names appear on student schedules, students feel that both teachers are ‘their’ teachers” (p. 70).

One key area where a lack of parity manifests is in co-teachers not having an equal presence in the classroom and this may eventuate through the choice of co-teaching structures that are employed. For example, Embury and Kroeger (2012) find that although the *one teach, one assist* structure is commonly employed in many co-taught classrooms, an overreliance on this structure often leads to students’ perceptions of one teacher as “the real teacher” and the other as the “helper” and that “when teachers’ roles are reduced to that of an assistant or aide in the classroom, the students show an awareness of that power differential and status” (p. 102).

### Professional learning must address skills, teacher efficacy, and teacher dispositions

Related to both the absence of professional learning and lack of preparation for co-teaching, skills deficits become an issue in many co-teaching initiatives that may, if unaddressed or poorly addressed, result in unsuccessful outcomes. In their study of inclusive and collaborative practices in co-taught classrooms, Stroglios and Tragoulia (2013) also found that a lack of co-teaching professional learning for many teachers had an impact on their ability to “understand the process of co-teaching practice and thus to adopt the required perspectives in sharing the class under a co-teaching relationship which [in turn] could promote inclusion” (p. 88). This finding points to the relationship between training, skills, and dispositions and strongly suggests that co-teachers need high quality professional learning to develop necessary co-teaching skills, a greater sense of self-efficacy and collective efficacy, and ensure a positive disposition towards co-teaching.

### Unconducive learning environments are detrimental to success

For many teachers, co-teaching becomes difficult and at-times impossible in unconducive learning environments. Across the research, the most common issues cited are:

* students who are not used to co-teaching (Ricci et al., 2019)
* an overloading of high-risk and/or high-needs students to the point where their needs dominate those of other students (DeMartino & Specht, 2018; Murawski & Bernhardt, 2015; Nierengarten, 2013)
* increased classroom noise (Moorehead & Grillo, 2013)
* behaviour management issues (DeMartino & Specht, 2018)
* learning issues for high-needs students such as issues with perseveration, language issues, reasoning issues, perceptual limitations, and/or memory problems (Rexroat‐Frazier & Chamberlin, 2019)
* general overcrowding of co-taught classrooms making some structures difficult to employ (Brown et al., 2013).

Although co-teachers often have influence over many learning environment issues typically encountered, further support from school leaders is needed to ensure that issues can be managed effectively and are not compounded by poor leadership decisions.

### Unformalised agreements often lead to unsuccessful outcomes

Given the importance of co-teaching agreements in the co-planning stage, research finds that unformalised agreements are often correlated with unsuccessful outcomes. Murawski (2012) suggests that the issue is often that co-planning time has not explicitly addressed important agreement issues such as workload, assessment, roles, and responsibilities. Similarly, Patel and Kramer (2013) identify the negative impact of different expectations that are not discussed, inconsistent grading, and uncertainty about how to handle disagreements. Sinkkonen and Kyttälä (2014) find that due to a lack of agreements, co-teachers are often unprepared for sharing responsibilities and investing sufficient time into making co-teaching work. In addition to neglecting to formalise robust and comprehensive co-teaching agreements, the research also references the impact of unorganised and unfocused co-planning sessions (Murawski, 2012), poor scheduling (Johnson & Brumback, 2013), and sporadic and fragmented planning times (Strogilos & Tragoulia, 2013)

### Poor perceptions of co-teaching will undermine success

The research strongly suggests that sometimes the biggest factor undermining the success of co-teaching is the damage that poor perceptions can have on teacher efficacy and the supportiveness of the wider school community. Poor perceptions are well documented in the research and include:

* co-teaching being seen as a “special education thing” or “fly by night” thing (Murawski & Bernhardt, 2015)
* the assumption that co-teaching is merely the physical presence of two or more teachers in the classroom (Johnson & Brumback, 2013)
* parental concern and/or skepticism (Murdock et al., 2015; Strogilos & Tragoulia, 2013)
* perceptions of one teacher as the real or better teacher and the other as the inferior “helper” (Embury & Kroeger, 2012; Guise et al., 2017; Murawski & Lochner, 2011)
* dichotomous teacher thinking around “my kids” vs “your kids” (Murawski & Lochner, 2011)
* the “I don’t know” reflex (Seglem & VanZant, 2010)
* flagging and stigmatising groups within the classroom — for example, the “remedial group” (Hepner & Newman, 2010)
* valuable people in the school such as teacher librarians not being seen as having an instructional role (Santos Green et al., 2013).

Part of the challenge when working with poor perceptions is to understand the perspectives of educational stakeholders and seek to establish greater levels of trust. For example, as Stroglios and Tragoulia argue with respect to parental engagement, “we need to view them as experts in their children and by listening to their stories we can learn about the consequences of our practices within their lives” (p. 89).

## Conclusion

Although co-teaching arguably has a vast history that spans time, place, and culture, this review sought to cast light on the recent popularity of co-teaching in contemporary school communities across the last decade. Even with the limited selection criteria in place, the research examined presents an in-depth picture of what works well and the pitfalls that need to be avoided. By examining the research through the lens of the co-teaching cycle, this review supports a more holistic view of co-teaching as a vehicle for collective teacher efficacy. Such a view somewhat stands in contrast to the still at-times dominant focus on co-teaching for inclusive education. Nonetheless, it could be argued that encouraging two teachers with differing backgrounds, interests, and areas of expertise to work alongside each other continues the legacy of inclusion at the same time as enriching professional capital and furthering the vision—held by great educators both past and present—of communities of practice that work together to make all the difference.

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