Co-Teaching Alert UPDATE

In 2001, Naomi Zigmond and Kathleen Magiera authored a *Current Practice Alert* (CPA) on co-teaching that analyzed the research base examining whether co-teaching is effective for improving learning outcomes for students with learning disabilities (LD) in inclusive settings. Zigmond and Magiera concluded that special educators should "use caution" when considering co-teaching due to the dearth of evidence supporting co-teaching as effective. In this update to the co-teaching CPA, we review and analyze selected co-teaching literature published after 2001. The update is organized in two sections: (a) what is the same?, and (b) what has changed?

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What is the Same?

Many aspects of co-teaching have not changed susbtantively since Zigmond and Magiera wrote the original CPA in 2001. As described in the following sections, what co-teaching is, the target population for co-teaching, its essential components, the adequacy of it research base, and the practicality of co-teaching have remained largely the same.

What is it?

The definition and purpose of co-teaching remain largely the same. Zigmond and Magiera (2001) defined co-teaching as a service delivery model where a general education teacher and a special education teacher collaboratively plan, instruct, and assess a diverse group of students in a co-taught classroom. Co-teaching continues to draw on the strengths of the general education teacher, who is an expert in curriculum and pacing, and the special education teacher, who is an expert in adapting the curriculum and differentiating instruction to meet the individual needs of students. Co-teachers are still expected to co-plan, co-teach, co-assess, and co-manage students with and without disabilities in inclusive settings (Murawski & Lochner, 2011).

In sum, co-teaching provides a framework for implementing evidence-based practices and specially designed instruction by utilizing differentiated, small group instruction to meet the needs of all students in inclusive settings.

For Whom is it Intended?

Zigmond and Magiera (2001) suggested co-teaching is typically implemented with students with high incidence disabilities (e.g., students with LD, emotional and behavioral disorders, mild intellectual disabilities) and is most common in elementary and middle schools. Since the original CPA publication, co-teaching at the high school level has become increasingly popular in practice (Dieker & Murawski, 2003) and has received more attention in the professional literature (e.g., Dieker & Murawski, 2003; Keefe & Moore, 2004; Magiera, Smith, Zigmond, & Gebauer, 2005; Murawski, 2006; Murawski & Dieker, 2004; Tremblay, 2013). When determining whether a student with a disability should be placed in a co-taught classroom, the IEP team should examine the student's IEP goals, the student's specially designed instruction, and accommodations or modifications the student may need to determine whether those components can be appropriately addressed through collaboration between a general and special education teacher in a general education classroom.

How Does it Work?

Co-teaching is intended as a service delivery model to allow students with disabilities access to the general education curriculum while also providing them with special education services within a general education classroom setting. The theory underlying co-teaching is that when the two teachers collaborate, co-plan, and bring to bear their individual expertise, students with and without disabilities can meet both content area standards and individual

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learning goals within the general education classroom (Murawski & Dieker, 2004; Scruggs & Mastropieri, 2017). The five co-teaching models described by Zigmond and Magiera (2001)—one teach/one assist, station teaching, parallel teaching, alternative teaching, and team teaching—are still commonly used to describe the instructional arrangements used in co-teaching. To maximize the impact of co-teaching, co-teachers need to consider the various co-teaching models and determine which models are appropriate based on the goals of a given lesson and the individual needs of students. For example, in an English/Language Arts (ELA) classroom, teachers may decide that, because it allows for small group instruction, station teaching should be used to support students in planning and writing a research paper. At one station, the general education teacher may teach a small group lesson on distinguishing between reliable versus unreliable sources. At another station, the special education teacher may provide explicit instruction in using a graphic organizer. At an independent station, some students may work collaboratively to find information for their research topic.

It is also necessary for co-teachers to consider how they can integrate co-teaching models to provide individualized instruction to students with disabilities as outlined in their IEP. This is particularly important for students with disabilities who are served in co-taught settings for all or the majority of the school day; the co-teachers must be sure to provide specialized instruction that is designed to help the student meet IEP goals. For example, co-teachers may decide to use the alternative teaching (i.e., one teacher leads small group, one teacher leads larger group) model to provide specialized instruction for students with disabilities in target outcome areas. At the elementary level, the special education teacher might provide an intervention such as repeated reading to target IEP goals related to fluency. At the secondary level, the special education teacher could provide individualized support in identifying the main idea to support individuals who need specialized instruction to increase reading comprehension.

How Adequate is the Research Base?

Zigmond and Mageira noted that most of the research on co-teaching in 2001 was not designed to examine the effectiveness of co-teaching. Considerable research has been conducted on co-teaching since 2001; however, most recent research on co-teaching continues to be qualitative and case studies, which are not designed to determine whether there is a causal relationship between co-teaching and improved student outcomes.

Although not designed to determine the effectiveness of co-teaching, qualitative and case-study research can provide insights on (a) how co-teaching is being implemented, (b) perceptions of key players (teachers, students, parents, and administrators) related to perceived barriers and benefits of co-teaching, and (c) essential components of co-teaching. For example, in their metasynthesis of 32 qualitative studies on co-teaching, Scruggs, Mastropieri, and McDuffie (2007) identified four major themes: benefits, expressed needs, teacher roles, and instructional delivery. Overall, teachers had positive perceptions of co-teaching and conveyed that (a) co-teaching enhanced their professional development and (b) co-taught students received additional individualized attention and benefited

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from peer models of appropriate behavior. Scruggs et al. (2007) reported that administrative support, common planning time, training, compatibility among co-teachers, and allowing teachers to volunteer to co-teach were critical components for successful implementation. Furthermore, Scruggs et al. (2007) reported that "one teach, one assist" was the most commonly used co-teaching model, and that co-teaching typically involves of whole group strategies rather than individualized instruction. In summary, Scruggs et al. (2007) suggested that co-teaching can be very beneficial for students with and without disabilities; however, studies suggest that few co-teaching teams are implementing co-teaching the way it was intended (e.g., using various co-teaching models, small group instruction, differentiated instruction).

How Practical is it?

As Zigmond and Magiera (2001) pointed out, when a school decides to implement co-teaching it is a major commitment for the special education teacher. Specifically, the authors noted that co-teaching requires collaboration, a commitment to co-planning, regular presence in the general education classroom, and careful attention to student placement. This remains true today. The foundation of co-teaching relies on building a positive relationship between the general education and special education teacher. To collaboratively design instruction requires that co-teachers value and use the professional expertise of their partner. That is, it is essential that the general educator (content expert) and special educator (specialized instruction expert) establish parity. Co-teaching is not automatically effective because two teachers are in the classroom, but can be effective when co-teachers collaboratively use their professional expertise to enhance instruction for students with and without disabilities. Beyond establishing an equal partnership, co-teachers must commit to substantial co-planning of instruction. If parity is not established or not enough time is devoted to co-planning, differentiation of instruction can be difficult to plan and implement.

As Zigmond and Magiera (2001) mentioned, schools should continue to avoid composing co-taught classes with a disproportionately high number of students with and at risk for disabilities. In smaller schools with one or a few special education teachers, co-teaching can prove difficult because it commits the special education teacher(s) to working with a relatively small number of students with disabilities during co-teaching, meaning that other service-delivery options (e.g., resource rooms, self-contained classes) may not available. In addition, collaborative co-teaching relationships require administrators to provide co-teachers with sufficient planning time during the school day (Scruggs et al., 2007), which may further limit the time available to provide special education services in other settings.

What Has Changed?

Although much about co-teaching has remained relatively unchanged since 2001, more research has been conducted examining the effectiveness of co-teaching, additional questions have been posed regarding co-teaching, and new resources exist for successfully implementing co-teaching.

How Effective is it?

Zigmond and Magiera (2001) identified four studies examining the effectiveness of co-teaching (Bear & Proctor, 1990; Boudah, Shumacher, & Deshler, 1997; Martson, 1996; Schulte, Osborne, & McKinney, 1990). Because these studies did not find that co-teaching caused improved student performance, Zigmond and Magiera (2001) concluded that extant research did not support co-teaching as effective in improving academic outcomes for students with disabilities. We briefly review experimental studies identified in a review by Cook, Landrum, Oshita, and Cook (2017) that examined the effectiveness of co-teaching and were published after 2001.

Fontana (2005) examined effects of co-teaching on English and math grades for 32 seventh-grade students with LD. Whereas all students received one period of support in a resource room, 17 students were randomly assigned to co-taught English and math classes. The 16 students in the control condition were placed in English and math resource classes. At the end of the school year, grades for students in co-taught classes were significantly higher than their grades from the previous school year, but there were no significant changes for students in the control condition. However, Cook et al. (2017) recommended interpreting the results with caution because (a) the study did not objectively measure student performance, and (b) all students, including those in the co-taught condition, received resource room support. Moreover, limited information was reporting on the co-teaching methods, making findings difficult to apply or replicate.

Murawski (2006) compared reading and writing outcomes of 110 ninth-grade students (38 with LD) across four conditions: non-inclusive general education class, solo-taught inclusive class, co-taught class, and special education class. Although students with LD were assigned to inclusive or special education classes based on family preference, students with LD who were identified for inclusive settings were randomly placed in either the co-taught or solo-taught inclusive setting. Murawski found no significant differences between groups on standardized measures of academic performance in multiple outcome areas after the intervention. Cook et al. (2017) computed effect sizes for co-teaching compared to the solo-taught inclusive class. Whereas they found positive effects for spelling ($d = 1.15$) and reading comprehension ($d = 0.62$), negative effects for co-teaching were found in math ($d = -0.49$), vocabulary ($d = -0.51$), and spontaneous writing ($d = -0.95$). In addition, Murawski's observational data indicated that teachers' instructional techniques did not differ across conditions, including the use of specially designed instruction to meet the individual needs of students with LD.

Tremblay (2013) compared the effects of co-teaching on reading and math outcomes for first- and second-grade students in inclusive and resource settings. Teachers were provided two days of co-teaching training, but were "free to choose any teaching method" during the intervention (p. 253). Tremblay reported that although first-grade students in co-taught classrooms performed significantly better on the reading/writing measures, differences were not significant for second-grade students. Wilcoxon Rank-Sum Tests indicated that students with LD in the second grade inclusive classrooms made significant gains over the year in reading/writing measures whereas the ranks of students with LD in special education settings decreased

significantly over time for both first and second grade students in all areas (reading/writing and mathematics). Cook et al. (2017) suggested using caution in interpreting findings because of differences in the students and teachers between groups, and because the specific co-teaching models used were not described.

In 2001, Zigmond and Mageira did not identify any research that indicated that co-teaching was more effective than special education classes for students with disabilities. In the three additional studies reviewed by Cook et al. (2017), findings indicate that co-teaching can result in positive outcomes for some groups of students. However, (a) results varied across grade levels and content areas, and (b) the studies all had methodological shortcomings. Indeed, all studies failed to address multiple quality indictors required by the Council for Exceptional Children (2014) for methodologically sound studies (Cook et al., 2017). Thus, although the research base has expanded since 2001, due to the continued dearth of methodologically sound research we suggest co-teaching should continue to be used "with caution" for students with LD.

What Questions Remain?

Despite the dearth of methodologically sound research supporting its effectiveness, co-teaching continues to be a popular model to support students with disabilities in inclusive settings (Cook et al., 2017). As such, if co-teaching is viewed as an educational setting, rather than an intervention, it may be appropriate to shift research efforts from examining the efficacy of co-teaching generally to investigating methods and practices that generate desired outcomes within co-taught classrooms. For example, how can teachers embed evidence-based practices into various co-teaching models, and which combination of co-teaching models and evidence-based practices lead to improved outcomes for students with disabilities? Other questions may focus on examining outcome differences between specialized instruction provided in co-taught versus special education settings and student perceptions of receiving specialized instruction. For example, do students with disabilities respond to interventions (e.g., repeated readings, main idea instruction) differently across settings (e.g., inclusive co-taught settings vs. resource rooms)? Do students have preferences of where specialized instruction is received?

How Do I Learn More?

To learn more about co-teaching, please see:

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