

What is it?

Co-teaching is a special education service delivery model in which two certified teachers, one general educator and one special educator, share responsibility for planning, delivering, and evaluating instruction for a diverse group of students, some of whom are students with disabilities. Co-teaching has emerged as a very popular alternative to the more traditional Resource Room or pull-out special education service delivery models and as a way to support inclusion of students with disabilities in general education settings. Co-teaching draws on the strengths of both the general educator, who understands the structure, content, and pacing of the general education curriculum, and the special educator, who can identify unique learning needs of individual students and enhance curriculum and instruction to match these needs.

According to its advocates, co-teaching is supposed to accomplish three goals: First, co-teaching is expected to make available to all students, including those with disabilities, a wider range of instructional alternatives than would be possible with just one teacher. Second, co-teaching is expected to enhance the participation of students with disabilities as full classroom members. Third, co-teaching is expected to improve performance outcomes for students with disabilities. In theory, when co-teaching is implemented, both educators are delivering substantive instruction, and the instruction from both teachers occurs within the confines of a single classroom. In practice, when co-teaching is implemented, the roles and responsibilities of the general and special education teacher vary widely.

For whom is it intended?

Co-teaching is most often recommended for students with high-incidence disabilities - students with mild mental retardation, behavior disorders, or learning disabilities - whose Individualized Education Programs (IEPs) call for adapted instruction in the general education curriculum. To accomplish this, the student with disabilities and his/her special education teacher are both integrated into the general education classroom, and the two teachers share instructional responsibilities. Co-teaching has been imple-

mented at all grade levels, K-12, but is most commonly encountered in elementary and middle schools.

How does it work?

Many special education researchers, teacher educators, and practitioners have described ways in which general and special education teachers can co-teach in a single classroom. Most describe one or more of the following five "arrangements." Most also suggest that each of these arrangements has its strengths and drawbacks, and that different instructional goals and assignments within the general education curriculum may lead the same pair of teachers to select different arrangements at different times.

- **One teaching/one assisting.** One teacher takes the instructional lead, and the other teacher simultaneously observes, monitors, or tutors individual students. Theoretically, the general or special education teacher can assume either role, but in practice this arrangement usually finds the general education teacher teaching and the special education teacher assisting. One teaching/one assisting is often preferred in the initial phases of co-teaching when the special education teacher may be unsure of the rhythm, pacing, and content of the general education curriculum and does not feel confident enough to take on a substantive instructional role.
- **Station teaching.** The teachers divide the physical arrangement of the room into three sections, two that support teacher-directed instruction and one for independent seatwork. Course content and classwork are also divided into three distinct 'lessons' that do not have to be completed in a particular order. One lesson is taught by each of the two teachers, and the third lesson consists of a seatwork assignment that students will complete independently or with minimal supervision. The students in the class are assigned to three separate groups, and each group rotates through each of the three teaching stations. The composition of the groups can be homogeneous or heterogeneous. This co-teaching arrangement allows each of the two teachers to provide more individualized instruction to their small instructional group. The third group may be supervised by a paraprofessional or parent volunteer.

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- **Parallel teaching.** The class of students is divided into two heterogeneous groups of equal size (both groups containing students with disabilities). After jointly planning a lesson, each teacher teaches the same content, at the same time, to half of the students in the class. Each teacher is free to design practice assignments and explanations that uniquely suit his/her teaching style and his/her students' learning needs and capabilities. Parallel teaching requires that the two teachers pace their lessons so that both groups of students start and finish the unit of instruction at the same time with the same degree of mastery.
- **Alternative teaching.** The class of students is divided into two unequal groups - a larger group that can be engaged in a review or extension activity and a smaller group that needs to have concepts re-taught, a lesson previewed, or a particular skill re-emphasized. Either teacher may teach either group.
- **Team-teaching.** Both teachers are actively engaged in instruction to the entire class of students. While one teacher may take the instructional lead at one point in the lesson and the other teacher may assume the lead in another part of the lesson, both teachers are providing instruction together - finishing each other's sentences, clarifying each other's comments, or answering student questions.

How practical is it?

Co-teaching requires a working partnership between the general and special education teachers, and the key to developing that partnership is communication. The two teachers have to share a common, or at least compatible, philosophy and approach to the instructional process. They also need to plan together what each will teach during the shared instructional time. Finding common planning time is a challenge most teachers implementing co-teaching have been hard-pressed to meet. It requires a very sympathetic and supportive school administrator to design a schedule that will permit regular co-planning time during the school day.

For the special education teacher, commitment to a co-teaching model means commitment to being in a general education classroom every time a particular subject is being taught. Especially in a school served by a single special education teacher, this may leave little time for pull-out services for students whose IEPs stipulate intensive, remedial instruction outside

the general education classroom.

Co-teaching also requires careful attention to placements of students. Theoretically, in a co-taught class, students with IEP needs should constitute no more than one-third of the total; the remaining students should be a heterogeneous mix of high achieving, average achieving, and low achieving students. When the students without IEPs are all low achieving, the class is viewed by parents, teachers, and students, alike, as a 'dummy class,' stigmatizing all who are assigned to it. When the balance of students with and without IEPs is shifted such that most students in the class have disabilities (e.g., 20 with IEPs: 5 without IEPs), the presumed benefits of inclusion (e.g., higher expectation; more challenging curriculum content) cannot be achieved. When the balance is shifted in the other direction (e.g., 2 with IEPs: 23 without IEPs), it is difficult to justify the commitment of a special education teacher's time required in co-teaching the class.

How adequate is the research knowledge base?

Unfortunately, research on co-teaching is very difficult to conduct in a way that informs practice, for many reasons. For example, definitions of co-teaching roles vary, random assignment of teaching partners is very difficult, and matched samples are not actually possible because groups of students and teachers are not sufficiently "alike". As a result, co-teaching is not a phenomenon that lends itself to precise investigation, and validation research is not readily available.

As a result, most of the published literature on co-teaching takes the form of books or technical manuals on how to plan for and implement the model. Several articles in magazines and journals focus on the logistics of co-teaching, generally emphasizing that it is hard to do well without careful planning, ongoing co-planning, enthusiastic pairs of teachers compatible in teaching philosophy (as well as temperament and personality), and strong administrative (principal) support. Some published research provides rich descriptions of what co-teaching looks like when it is implemented in elementary, middle school, or high school classrooms, often concluding that teachers adopt a particular arrangement (usually the one teach/one assist arrangement, sometimes the team teaching arrangement) and use it exclusively.

Some researchers have collected interview or focus group data from parents, teachers, and/or students and report generally high levels of satisfaction among all constituents once a co-teaching model has been implemented.

How effective is it?

A search was conducted for research articles published within the last 20 years in refereed journals that compared teachers' instructional practices, student engagement rates, and/or student academic progress in co-taught classrooms with those in alternative special education service delivery models. Only four articles were found in which the effectiveness of co-teaching was measured empirically and compared statistically with a control condition. Three of these reported on studies conducted in elementary schools, one on a study conducted in a high school.

Elementary Level

- Bear and Proctor (1990) studied the achievement gains of 47 third graders with high-incidence disabilities taught in Team Approach to Mastery (TAM) classrooms, compared to the gains shown by 31 students with high-incidence disabilities served in resource rooms. In TAM classrooms, students with high-incidence disabilities are taught together with non-disabled peers for 100% of the school day, at the ratio of approximately one student with disabilities to every three without disabilities. Two teachers, one certified in general education, the other in special education, jointly provide instruction to all students in the same classroom. The researchers used scores from the Comprehensive Test of Basic Skills, available in students' permanent records, to show that achievement gains of students with disabilities in TAM classes were consistently greater than (in math) or equal to (in reading) the gains made by students in the resource room. They concluded that TAM classrooms are "at least as effective" as resource rooms.
- Schulte, Osborne, and McKinney (1990) randomly assigned students with learning disabilities in grades 1 to 4 to one of three service delivery models: one period of resource room services per day (n=19), consultative services to the general education teacher who had students with disabilities in his/her class (n=14), and consultative services with co-teaching (n=19). They measured students' academic progress using both standardized achievement tests in reading,

writing, and mathematics, and a criterion-referenced reading measure. Like Bear and Proctor, Schulte and her colleagues found that consultation plus co-teaching was "as effective as" the other service delivery models in producing academic gains.

- Marston (1996) compared reading progress of elementary students with high-incidence disabilities served in inclusion-only (n=33), pull-out only (n=171), and combined (n=36) service delivery models. In inclusion-only models, students with disabilities were provided all their IEP services in the general education classroom through co-teaching. In pull-out only, all special education services were delivered in a resource room. The combined model included pull-out resource room services and co-teaching provided jointly by the general and special education teacher in the general education classroom. By comparing curriculum-based measures taken in fall and spring, Marston demonstrated that reading progress of students served in the combined model was significantly greater than that of students served in either the inclusion-only (co-teaching) or pull-out only models. Once again, co-teaching was "as effective as" resource in producing reading growth, but this study also showed the value-added of combining both co-teaching and pull-out service delivery systems.

High School Level

- Boudah and colleagues (1997) studied the effects of co-teaching (referred to as collaborative instruction) on the performance of high school students with disabilities on content subject quizzes and test scores. They found that the performance of students with high-incidence disabilities (n=16) actually worsened during the experimental, co-teaching treatment. Furthermore, even with two teachers in the room, students in co-taught settings were only minimally engaged in instructional tasks.

Despite the current and growing popularity of co-teaching, research on student outcomes in this service delivery model is very limited. Only four studies could be found. In the three elementary studies co-teaching was just as effective in producing academic gains as resource room instruction or consultation with the general education teacher; in the high school study, students' quiz and exam grades actually worsened during the co-teaching experiment. If the goal of co-teaching is to allow students with high-incidence disabilities to access the general education curriculum and to "do no harm" to them in terms of academic achievement, then the three elementary studies provide modest support for a co-teaching model in elementary schools. If the

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goal, however, is to achieve greater academic gains than have been traditionally achieved in a resource program, then co-teaching has not yet proved itself useful. Furthermore, the research suggests that the prevailing assumptions about the effectiveness and usefulness of co-teaching for students with disabilities in inclusive classrooms need to be reexamined.

What questions remain?

The research base on the effectiveness of co-teaching is woefully inadequate. While there are many resources available to tell practitioners how to do it, there are virtually no convincing data that tell the practitioner that it is worth doing. Research is still needed to determine whether students with disabilities experience a wider range of instructional alternatives in co-taught classes than would be possible in a class taught by just one teacher; whether their participation and engagement levels increase in co-taught classes; and whether co-teaching enhances performance outcomes for students with disabilities. The jury is still out - but the research to date does not suggest any academic advantages to the co-teaching model.

How do I learn more?

The description of co-teaching arrangements provided in this ALERT draws heavily on:

Cook, L., & Friend, M. (1996). Co-teaching: Guidelines for creating effective practices. *Focus on Exceptional Children*, 28, 1-16.

Other descriptions of co-teaching arrangements and techniques include:

Adams, L.F., & Cessna, K. (1993) Metaphors of the co-taught classroom. *Preventing School Failure*, 37, 28-31.

Baker, J. & Zigmund, N. (1995). The meaning and practice of inclusion for students with learning disabilities. *The Journal of Special Education*, 29, 163-180.

Bauwens, J. & Hourcade, J.J. (1995) *Cooperative teaching: Rebuilding the schoolhouse for all students*, Austin Texas: Pro-Ed.

Rice, D. & Zigmund, N. (2000) Co-teaching in secondary schools. *Learning Disabilities Research and Practice*, 15, 190-197.

Vaughn, S., Schumm, J.S., & Arguelles, M.E. (1997) The ABCDEs of co-teaching. *Teaching Exceptional Children*, 30, 4-10.

Walther-Thomas, C., Bryant, M., & Land, S. (1966). Planning for effective co-teaching: the key to successful inclusion. *Remedial and Special Education*, 17, 255-265.

Walther-Thomas, C., Korinek, L., McLaughlin, V., & Williams, B. (2000) *Collaboration for inclusive education: Developing successful programs*. Needham Heights, MA: Allyn and Bacon.

Research studies cited:

Bear, G., & Proctor, W. (1990). Impact of a full time integrated program on the achievement of non-handicapped and mildly disabled children. *Exceptionality*, 1, 227-238.

Boudah, D., Schumacher, J., & Deshler, D., (1997). Collaborative instruction: Is it an effective option for inclusion in secondary classrooms? *Learning Disabilities Quarterly*, 20, 293-316.

Marston, D. (1996). A comparison of inclusion only, pull-out only, and combined service models for students with mild disabilities. *Journal of Special Education*, 30, 121-132.

Schulte, A., Osborne, S., & McKinney, J. (1990) Academic outcomes for students with learning disabilities in consultation and resource programs. *Exceptional Children*, 57, 162-172.

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Current Practice Alerts is a joint publication of the Division for Learning Disabilities and the Division for Research within the Council for Exceptional Children. The series is intended to provide an authoritative resource concerning the effectiveness of current practices intended for individuals with specific learning disabilities. Each Alerts issue will focus on a single practice or family of practices that is widely used or discussed in the LD field. The Alerts will describe the target practice and provide a critical overview of the existing data regarding its effectiveness for individuals with learning disabilities. Practices judged by the Alerts Editorial Committee to be well validated and reliably used are featured under the rubric of Go For It. Those practices judged to have insufficient evidence of effectiveness are featured as Use Caution. For more information about the Alerts series and a cumulative list of past Alerts topics, visit the Alerts page on the CEC/DLD website: <http://dldcec.org/alerts/>. Target practices for future issues: Class-wide Peer Tutoring, Social Skills Training, Reading Recovery, Phonological Awareness Training.