

Co-Teaching as a School System Strategy for Continuous Improvement

JAMES M. WALSH

Howard County Public School System, Ellicott City, MD, USA

Co-teaching has increasingly been implemented over the past 20 years as a shared responsibility alternative to more restrictive special education models for providing service to students with disabilities. Results of local school system research in Maryland during this 20-year period are reviewed suggesting that improved special education student performance is associated with increased access to general education classrooms through co-teaching support. System-level co-teaching implementation strategies are identified that result in successful participation by students with disabilities in co-taught general education classrooms and accelerated outcomes on state reading and mathematics assessments. The specific effect of co-teaching as a system-level strategy to close achievement gaps and promote continuous improvement for students with disabilities in Howard County, Maryland, over the past 6 years is described.

Keywords: coaching for school results, continuous improvement, co-teaching, inclusive practices, professional development, school system strategy

Twenty years have passed since the seminal work by Bauwens, Hourcade, and Friend (1989) described the rationale, benefits, and implementation options of cooperative teaching (co-teaching) as a service delivery model to replace the inadequate and unsuccessful practice of self-contained programming routinely used at that time to address the academic learning needs of students with disabilities. Bauwens et al. (1989) explained that co-teaching provided an alternative educational approach in which general and special education educators shared teaching responsibility and provided differentiated instruction for academically and behaviorally diverse students in the least restrictive setting of the general education classroom. Since that time, co-teaching has been widely accepted as the philosophical and pragmatic merger of general education and special education (Stainback & Stainback, 1984) that allows for all students to benefit from access to highly qualified content teachers while receiving direct learning support and instructional differentiation for diverse learning styles. In my experience as a special education administrator in Maryland during this 20-year period, co-teaching can be described as a high-leverage school system strategy that can result in continuous improvement for all students, and accelerated achievement for students with disabilities, when

implemented with the necessary system-level supports and strategies that are described in this article.

Although we continue to hear that more research is needed to determine definitively that students with disabilities learn at the same or a higher rate in co-taught classrooms (Friend & Hurley-Chamberlain, 2009), a meta-analysis of quantitative efficacy research (Murawski & Swanson, 2001) and a metasynthesis of qualitative research (Scruggs, Mastropieri, & McDuffie, 2007) have established that co-teaching has a demonstrated positive effect on student achievement, and that administrators, teachers, and students perceive co-teaching to be socially and academically beneficial to general and special education students. More important to me, as a coordinator of special education in Anne Arundel County, Maryland, in the 1990s, were the consistently beneficial effects demonstrated by students in co-taught classrooms who performed significantly better on state assessments as compared with students in similar general education classrooms without co-teaching (Walsh & Snyder, 1994). Moreover, co-taught teachers were observed to be more likely to provide instruction reflecting the general education curriculum than were teachers in special education classrooms (Walsh & Conner, 2004). These findings regarding the academic benefit of co-teaching supported earlier survey research in Anne Arundel County, Maryland, indicating that students with disabilities enjoyed school more, learned more, and felt better about themselves when they received special education services in a co-taught general education classroom as compared with a self-contained special education setting (Walsh, 1992).

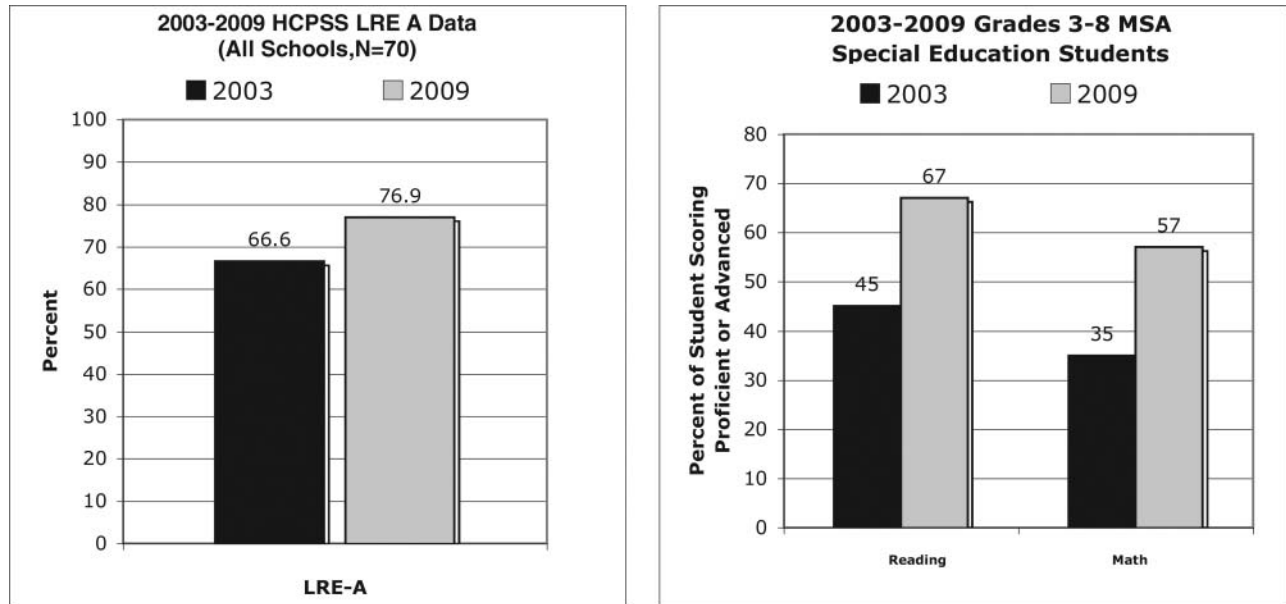


Fig. 1. Graphs compare less restrictive educational (LRE-A) services for students with disabilities in 2003 and 2009 with Grades 3–8 reading and mathematics proficiency on Maryland School Assessment for special education students. LRE A represents students with disabilities receiving services in general education class more than 80% of the school day.

More recently as a director of special education in Howard County, Maryland, since 2002, it has been found, as the aforementioned research has supported, that the performance of students with disabilities has improved markedly at all school system levels as access to general education for instruction has increased through co-teaching. These findings, represented in Figure 1, correlate the 22% increase in Grade 3 through 8 proficiency in reading and mathematics by students with disabilities on the Maryland School Assessments (MSA) from 2003 to 2009 with a 10% increase in placement of students with disabilities during the same time period in co-taught less restrictive settings, LRE A (Least Restrictive Environment A is a Maryland placement designation of students with disabilities that equals more than 80% of a school day in a general education classroom). Since the singular focus of professional development and support for school staff on less restrictive service options for students with disabilities in the Howard County Public Schools during the time period from 2003 to 2009 was on the co-teaching service model, the improvement in student performance is associated with the increased implementation of co-teaching in our schools.

System Strategies in Support of Co-Teaching Implementation

Several system-level strategies have contributed to the positive correlation between increased access to general education classrooms through co-teaching and improved per-

formance of students with disabilities on state reading and mathematics assessments in Howard County. Most significant was a systemic and continuous professional development program that provided support for co-teaching teams in all 70 comprehensive schools within the school system over the past 6 years demonstrating that professional development is truly an essential element to the continuous improvement of teachers and students (Killion & Harrison, 2006). The Designing Quality Inclusive Education (DQIE) program was developed in 2002 to provide professional development that demonstrated and modeled a variety of co-teaching approaches to use for different instructional purposes along with strategies for the differentiation of instruction essential for the diverse learners in co-taught classrooms. Emphasis on the “power of two” teachers (Friend, 2005) to implement a variety of grouping strategies to take full advantage of both teaching professionals and address the individualized needs of all students in the classroom was a focus of the DQIE professional development program. Strategies for co-teachers to tier assignments and scaffold supports for students with disabilities, along with activities and materials to promote increased student engagement, were demonstrated at each professional development session.

Recognizing that effective professional development must be sustained, intensive, and collaborative (Darling-Hammond & McLaughlin, 1995), the DQIE program worked with no more than 15 schools each school year, meeting with school teams including co-teachers and the school administrator off site on 4 days per school year. These representative teams functioned like a professional

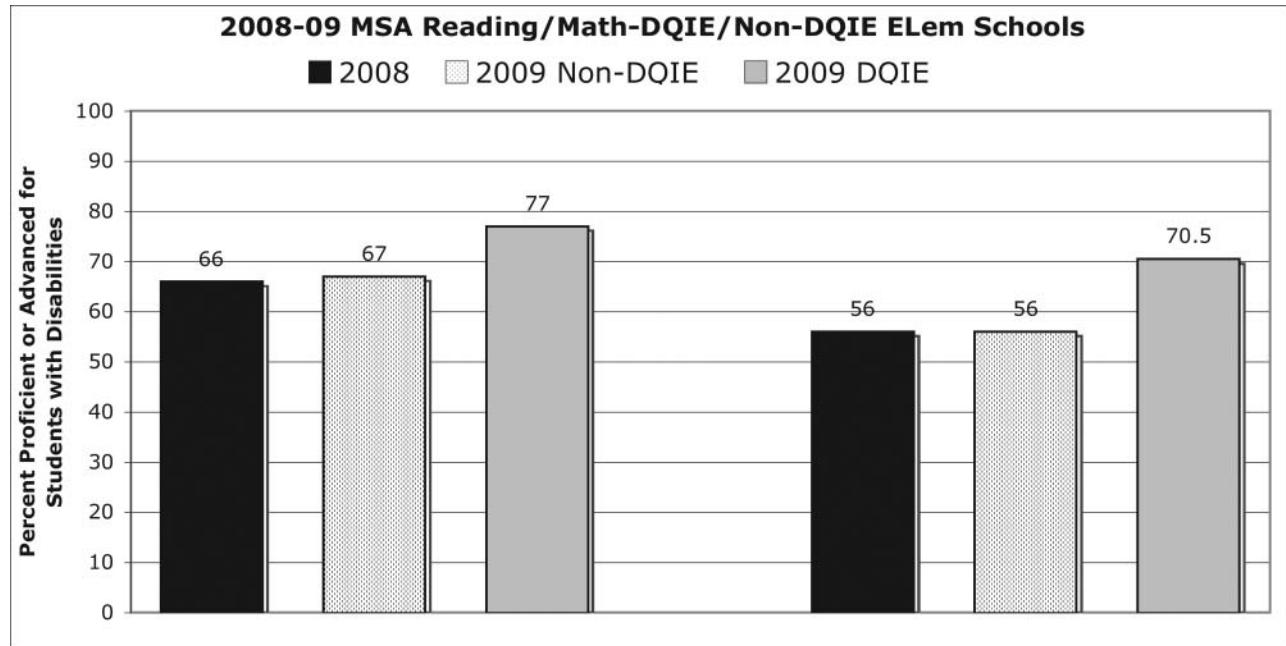


Fig. 2. Data graphs compare the proficiency of students with disabilities in reading and mathematics in elementary schools participating in DQIE Professional Development ($n = 8$) with the proficiency of students with disabilities in reading and mathematics in all other elementary schools ($n = 31$).

learning community focused on improving the frequency and quality of inclusive education in their schools. The positive results of their efforts in Howard County, Maryland, reflected the research finding that a professional learning community is a strategy capable of increasing student achievement (Hord, 2004).

Critical to the success of the DQIE professional development was the needs assessment that each participant completed to identify school supports, as well as teacher skills and strategies, essential to improve the quality of inclusive classrooms in their school. The most frequently identified support by school staff was funding to provide time for co-teachers to plan together on a regular basis. Individual school grants that are based on the needs assessment by school staff served as a means to provide school specific professional development to supplement the off-site professional development provided to all schools. The school system was able to provide ongoing funding for this purpose using state discretionary grants targeted for support of local school system least restrictive environment efforts. This funding support was maintained as all 70 schools participated in the DQIE program over 5 years (2003–2008) through a school system grant request procedure completed each year as a part of the school improvement plan process.

Upon completion of participation by all schools in the DQIE professional development program and related increases in less restrictive services for students with disabilities correlated with positive trends in performance of students with disabilities on state assessments, illustrated

in Figure 1, DQIE professional development has been used for the past year as a system-level strategy to accelerate the achievement of underperforming special education student groups in identified schools on the basis of state assessment data. Results of this strategy, demonstrated by the performance of the special education student groups in the eight elementary schools involved in DQIE professional development in 2008–2009, suggests that co-teaching can be considered a high-leverage strategy capable of accelerating achievement to close achievement gaps in reading and mathematics. Data analysis (Figure 2) demonstrates that students with disabilities in the eight elementary schools involved in DQIE professional development during 2008–2009 increased proficiency in reading by 11% and mathematics by 14.5% as compared with increases of 1% in reading and no change in mathematics by students with disabilities in all other elementary schools not involved in DQIE professional development.

The significant increases in the reading and mathematics performance of special education students in co-taught classrooms supported by DQIE professional development is correlated with the year-long professional development provided to co-teachers in these schools. The accelerated outcomes observed in these schools is partially attributed to the added strategy of instructional coaching provided to co-teachers by DQIE special education and curriculum staff during the 2008–2009 school year. Coaching is a form of collegial support for teachers to integrate learned skills and strategies into classroom instruction (Joyce & Showers, 1981). DQIE professional development

staff received 4 days of coaching training (“Powerful strategies,” 2005) and followed up off-site professional development sessions with classroom observations and feedback relative to the demonstrated co-teaching and differentiation strategies, which, in effect, individualized the professional development to address each teacher’s needs (Killion & Harrison, 2006). The accelerated student outcomes demonstrated the well-researched positive effect of professional development when combined with demonstration, practice, feedback, and coaching (Joyce & Showers, 1995) and when professional learning is clearly linked to student learning (Reeves, 2010).

It has long been established that a significant factor in the successful implementation of inclusive practices such as co-teaching throughout a school system is the active and intentional support of school system leadership (Bauwens & Hourcade, 1995; Scruggs et al., 2007). In Howard County, Maryland, this support is demonstrated through a system expectation that schools use a self-assessment tool, “Parameters for Successful Implementation of the Bridge to Excellence,” for school staff to reflect on best practices for accelerating student achievement as part of the school improvement planning process. Included in these best practices are indicators and expectations for inclusive education as the most desirable parameters for continuous improvement and accelerating student achievement. For example, as indicated in a partial snapshot of these parameters (see Appendix A) used for rating areas needed for school improvement, school leaders review to what extent the school improvement plan includes an objective to address students with disabilities receiving services in the least restrictive environment and whether adequate collaborative planning time between general education and specialty education teachers is evident. Likewise, school staff members are asked to indicate (a) to what extent administrators and instructional team leaders monitor the progress of all students, including student subgroups; and (b) to what extent professional development plans include training in effective practices for accelerating the achievement of student groups. Last, a most important parameter for an inclusive education service model such as co-teaching is assessed by the statement inquiring to what extent differentiated instruction to accelerate achievement for all students is evident in every classroom. Differentiated instruction is clearly essential to address the learning and behavioral needs of students with diverse abilities. It also provides teachers with an established methodology to adapt their practices of curriculum and instructional design so that all students achieve mastery of content standards (Halvorsen & Neary, 2009).

Having identified teacher feedback through collegial coaching as a critical factor in the implementation of co-teaching professional development in Howard County, it is also important to recognize the critical nature of teacher feedback through evaluation as a strategy for ongoing job embedded teacher improvement (Danielson & McGreal, 2000), as well as a means to address continuous school

improvement goals (Toch, 2009). To prompt and inform school administrators as to best practices to look for in their observation of teachers in co-taught classrooms, a brief observation guide was developed by the DQIE professional development staff, “Administrator Look Fors in a Co-taught Classroom” (see Appendix B). Using this guide to facilitate informal walk-throughs before formal observations, school administrators can communicate and reinforce clear expectations for both teachers in co-taught classrooms with particular emphasis on strategies and practices addressed in the DQIE professional development. Emphasized in the observation guide is the use of differentiation strategies on the basis of student learning needs, and the demonstration of a variety of co-teaching models in which each teacher provides direct instruction to the class and/or student groups. The need to improve the use of differentiated instructional strategies to address the wide range of Individualized Education Program needs of students with disabilities was a clear finding of previous research on the basis of 39 classroom observations of co-taught classrooms (Walsh & Conner, 2004).

Discussion

Twenty years have passed since co-teaching was introduced as a more beneficial alternative to providing service to students with disabilities through a shared responsibility of general education and special education teachers. Although there are continued calls for more efficacy research regarding co-teaching, quantitative and qualitative research over the past 20 years have consistently determined that students in co-taught classrooms learn more and perform better on academic assessments than do students in more restrictive service delivery models. My experience as a special education administrator since Bauwens et al. (1989) first described the rationale and multiple models of co-teaching has confirmed that students with disabilities demonstrate improved academic achievement trends as co-teaching is increasingly implemented across a school system. Moreover, it was found that effective professional development facilitated at the school level by professional learning communities was key to the positive effect of co-teaching and that these results were sustained by system-level parameters that reinforced factors supportive of co-teaching within the annual school improvement planning process. It was also found that providing guidance for administrators to look for and reinforce factors critical to successful co-teaching could ensure that strategies emphasized in professional development were implemented in co-taught classrooms.

In addition to the clear relation of increased access to general education classrooms with improved academic outcomes with students with disabilities, it was observed that significant value was added to the professional development offered to co-teachers through coaching and collaboration in the classrooms of professional development

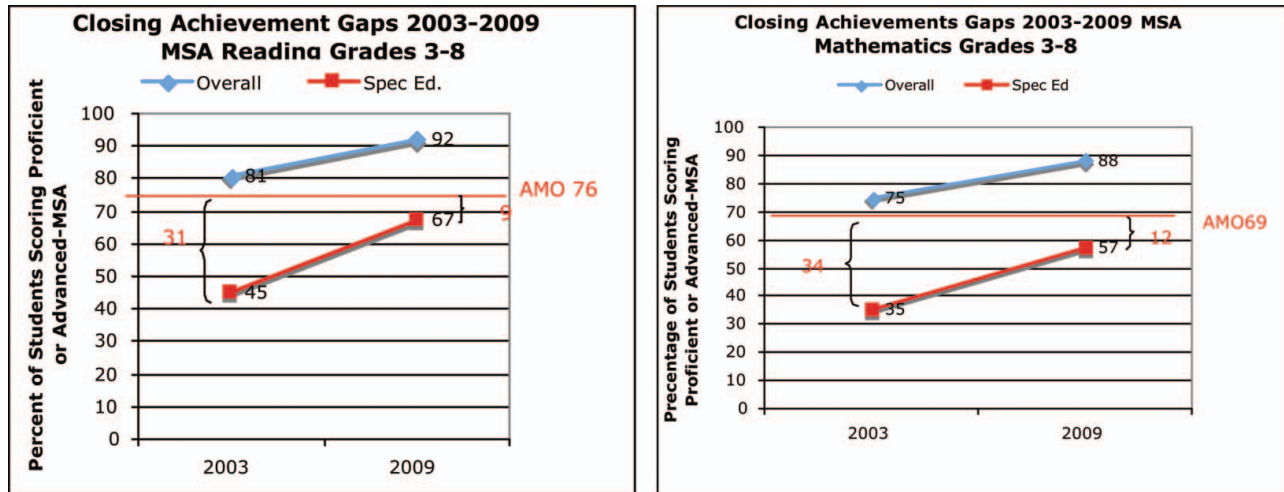


Fig. 3. Closing achievement gaps in reading and mathematics by special education students are illustrated by Grades 3 to 8 gains on Maryland School Assessments relative to Annual Measurable Objective and overall student gains from 2003 to 2009 (color figure available online).

participants. Accelerated outcomes were achieved in targeted Howard County schools by students with disabilities as a result of intensified co-teaching professional development using coaching strategies. The cumulative effects of co-teaching implemented with effective systemwide professional development, school-based coaching and administrative support is demonstrated by a comparison of performance with students with disabilities on state reading and mathematics assessments with the performance of students overall in the Howard County Public School system over the past 6 years (Figure 3).

The comparison of overall Grades 3–8 student performance by students with disabilities between 2003 and 2009 on state assessments indicates that students with disabilities increased proficiency in reading at twice the rate (22%) as did students overall (11%) and nearly twice the rate (22%) in mathematics compared with students overall (13%). The achievement acceleration demonstrated over this time period represents a true closing of the achievement gap for students with disabilities in Howard County, largely attributed to the implementation and support of co-teaching as a school system strategy for continuous improvement. The closing of the gap with the state annual measurable objective from 31% to 9% in reading proficiency and 34% to 12% in mathematics proficiency for the special education student group between 2003 and 2009 is noteworthy.

Co-teaching as a service delivery model has responded well to evolving educational policy requiring increased access to general education curriculum (Individuals With Disabilities Education Improvement Act, 2004), standards-based instruction for all students (Nolet & McLaughlin, 2000), and accountability by schools for the achievement of all student groups (No Child Left Behind Act, 2006). The requirements that all students are instructed by highly qualified, content certified teachers, that schools demonstrate

adequate yearly progress with all student groups, including students with disabilities, and that schools use research-based strategies that differentiate content, instruction, and assessments all but mandate the use of a co-taught service delivery model that provides special education supports and instruction in general education classrooms (Thousand, Villa, & Nevin, 2007). It is clear that the Howard County Public School System recognized these educational policy imperatives through its commitment in 2002 to the long-range implementation of a systemwide professional development program focused on fostering quality co-teaching, the establishment of school improvement accountability parameters that emphasized inclusive, collaborative teaching using differentiated instruction, and the institutionalization of teacher observation practices that focused on elements of quality co-teaching in classroom visits by school administrators.

No longer should co-teaching just be considered as a good way to make sure students with disabilities are exposed to the general education curriculum. Affirming the findings of 20 years of co-teaching observation and research in Anne Arundel County, Maryland, and Howard County, Maryland, Marilyn Friend recently asserted that there is now a much higher purpose for school systems to promote and support the implementation of co-teaching in classrooms, and that is higher student achievement for all students (“Need to make AYP,” 2009, p. 8). Accordingly, the Maryland State Department of Education has recently developed a co-teaching network for school systems such as Anne Arundel County and Howard County to share co-teaching tools and strategies to support systemwide efforts to make adequate yearly progress using co-teaching as a high-leverage strategy. Co-teaching has been recognized in Maryland as a school system strategy for continuous improvement.

Author note

James M. Walsh was the director of special education for the Howard County Public School System, Maryland, when this article was written. He is currently a supervisor in the Graduate Program of Education at Goucher University and a special education consultant in Maryland. His continuing research interest is in promoting high-quality inclusive practices through professional development.

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APPENDIX A

Parameters for Successful Implementation of the Bridge to Excellence

Howard County’s five-year Bridge to Excellence Master Plan describes the goals, objectives, and strategies designed to improve student achievement and meet State and HPSS performance standards for each segment of the student population. The following parameters align with the goals and targets described in the Master Plan and take into account the requirements set forth in No Child Left Behind legislation.

Howard County Public School System Goals:

Goal 1: Each child regardless of race, ethnicity, gender, disability or socio-economic status, will meet the rigorous performance standards that have been established. All diploma-bound students will perform on or above grade level in all measured content areas.

Goal 2: Each school will provide a safe and nurturing school environment that values our diversity and commonality

Directions: Please read each item below and check the box that best reflects your experiences at the school. Use the following scale:

- **Always Evident** – Evidence of this is seen regularly in the school, and where applicable, in all classrooms.
- **Somewhat Evident** – Evidence of this is seen sometimes in the school, or when applicable, in some classrooms.
- **Not Evident** – This is not seen in the school.

Always Evident Somewhat Evident Not Evident

Master Calendar

1. Administrators provide adequate collaborative planning time between general education and the following specialty areas: i.e. special education, ESOL, Title I, alternative education, and gifted and talented.

Leadership

1. Administrators ensure that the School Improvement Plan includes an objective to address students with disabilities receiving their services in the Least Restrictive Environment.

2. Administrators and ITLs monitor all students’ (and student subgroups) status and progress on a regular basis.

3. School-level professional development plans include training in effective practices for accelerating the achievement of subgroups.

Programmatic Issues

1. All instructional materials address and respect the needs of a multicultural classroom; are standards-based, and current.

2. All students have equal access to instructional materials (texts, calculators, lab equipment, etc.)

3. Referral patterns and participation in special programs (GT/AP classes, special education, extracurricular activities, and curricular programs) are proportionate to the student population.

4. All students with IEPs receive instruction in the least restrictive environment (LRE).

Instructional Delivery

1. All teachers use a structured lesson plan format that contains the components of an effective lesson.

2. Teachers establish a purpose for learning by building on students’ life experiences and academic assets.

3. Differentiated instruction to accelerate all students is evident in every classroom.

4. Instruction includes a variety of hands-on instructional activities with a limited use of worksheets.

APPENDIX B. Administrator “Look Fors” in a Co-taught Classroom

Always Evident Somewhat Evident Not Evident

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Cognitive Development of Students

- Data is used to determine current level of cognitive development to plan lessons.
- The needs of students are addressed through a variety of instructional strategies and co-teaching models.
- Teachers select co-teaching methods based on student needs and curriculum content.
- Instruction is differentiated based on student’s needs, strengths and learning styles.
- Cooperative learning activities are used within the lesson.
- Students are given a variety of specific purposes for learning that connect to their personal goals and interests and to the collective goals established by the class.

Always Evident Somewhat Evident Not Evident

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Planning and Implementation of Instruction

- Accommodations and modifications are observed (IEP/504).
- Teachers provide instruction on IEP goals within the curriculum
- There is evidence of preplanning that addresses essential curriculum, teacher and student expectations and teacher roles/responsibilities.
- Each adult is used effectively and is actively engaged in the delivery of instruction.
- Teachers use varied activities and groupings that are connected to learning modalities.
- Class time is used effectively.
- There is evidence of both adults implementing behavioral supports when appropriate.
- Teachers use a variety of ways to keep students engaged in a lesson.

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