Co-teaching Excellence for Achievement and Full Inclusion

Debra Cole

University of Missouri St. Louis

Abstract

This paper highlights the collaboration of a postdoctoral fellow and a PreK-5 education partner utilizing translational research to transform teacher preparation and improve classroom outcomes. Using a cycle of inquiry protocol focused on the school-identified problem of practice, school leaders and the postdoctoral fellow worked to improve the quality of co-teaching for all eight classrooms through professional development, team reflection, and goal setting (NCEE, 2019; State Support Network, 2019). This case study project collected evidence of co-teachers planning for and utilizing multiple approaches to co-teaching. When analyzing student achievement in classrooms where complex, more effective strategies for co-teaching were observed, it was also documented that students were more engaged and achieved more than in classrooms, continuing to depend heavily on the whole group, One Teach – One Assist approach.

Keywords: co-teaching, co-planning, Parallel Teach, Multiple Group, Station Teaching

Co-teaching has long been an effective way to provide more inclusive, differentiated instruction to meet the needs of the increasingly diverse students in classrooms today (Friend, 1995). Excellence in co-teaching is marked by a shared responsibility for all students, consistent co-planning, and the use of multiple models or approaches to co-teaching that allow for flexible and targeted small group instruction and more teacher-student interaction (Bouck, 2007; Dieker, 2001; Dove & Honigsfeld, 2017; Friend et al., 2010). Six approaches, defined and studied by Marylyn Friend and colleagues, formed the basic concept of co-teaching approaches: One Teach - One Observe, Station Teaching. Parallel Teaching, Alternative Teaching, Teaming, and One Teach - One Assist (Figure A1).

Enacting multiple and more complex co-teaching approaches such as Parallel Teaching and Station Teaching inherently allows for more small group instruction because both teachers are leading instruction to smaller groups. Choates (2020) of Teach Better suggests that Station Teaching, Parallel Teaching, Alternative Teaching, and Team Teaching can improve co-teaching effectiveness by up to 33%. However, in practice, there is often a lack of small group instruction and an overuse of whole group models, such as One-Teach- One-Assist (Volonino & Zigmond, 2007). As Friend notes regarding One Teach - One Assist, “This should be the least often employed co-teaching approach” (Friend, 2007, para. 6)

Most studies around co-teaching focus on co-teaching between a specialist for special education or English language learning partnered with a classroom teacher for one class per day. While there is little specific information about how general education teachers should co-teach together for the entire school day, principles for effective co-teaching may also apply in this

context. This case study will describe how one school increased its utilization of a range of co-teaching practices.

Case Description

The focus school for this case study was an urban, PreK-5 public charter school in St. Louis, Missouri, with 136 students in grades Kindergarten through Grade 5.. Approximately half of the students were female, and half were male. Students eligible for free or reduced-price lunch made up 16.29% of the school. Racial demographics showed that 63% of students were white, 16% were black, 15% were mixed race, and 6% were Hispanic. The organizational structure included five leadership roles and 16 co-teachers (PK-5) working in 8 classrooms: 2 PreK and 1 each in grades K-5. In addition, there were five extended core classes (e.g., Culinary Arts, PE, etc.). The extended core classes allowed co-teachers to have six 50-minute co-planning periods every week. Historically, the school was a private school, but it became a public charter school in 2018. The school's racial and economic diversity increased when it became a public charter school. In addition, a larger number of students with special education needs enrolled in the school.

The University of Missouri-St. The Louis (UMSL) Charter School Translational Fellows (UMSL-CSTF) program supported the UMSL Post-doctoral Fellow to collaborate two days a week with the principal and the eight co-teaching teams on this project.

Cycle of Inquiry

The framework for this project was a cycle of inquiry template adapted by the UMSL-CSTF program (National Center for Education Evaluation [NCEE], 2019; State Support Network, 2019) to a) Launch an Inquiry, b) Test Change Ideas, and c) Analyze, Interpret, and Discuss New Data.

Cycle of Inquiry Step 1: Launch an Inquiry

Before the UMSL Fellow was assigned to the school, the target school described challenges with co-teachers effectively implementing co-teaching strategies. In particular, co-teachers relied heavily on one whole group model of co-teaching instruction, namely the One Teach – One Assist model. Each teacher led in planning and instructing half of the lessons each day. While one teacher taught, the other monitored the classroom and provided individualized student support. According to school leaders, this approach did not meet the promise of a low student-teacher ratio for every lesson and better student achievement (Choate, 2020; Cole, 2022; Volonino & Zigmond, 2007).

The school tried several interventions before beginning the Cycle of Inquiry with the UMSL-CSTF program, including a one-day professional learning event where teachers learned about Friend's six models of co-teaching (Friend, 2007) and some basics on developing a successful co-teaching partnership. In addition, the school principal required each teacher to set an individual co-teaching goal for teacher evaluation. The principal also asked that teacher lesson plans include which co-teaching approaches they planned to use and provided an additional 60 minutes of co-planning time each week. The principal instituted a school-wide expectation that teams would utilize their extra co-planning time to purposefully plan multiple co-teaching approaches, specifically including smaller group instructional opportunities for every ELA and Math lesson. Despite these efforts, co-teachers continued to primarily plan for and use whole group instruction utilizing the One Teach - One Assist co-teaching approach.

Cycle of Inquiry Step 2: Set Goals and Plan for Change

The fellow began meeting weekly with the principal and executive director and observing co-teachers informally to clarify the school's problem of practice. The UMSL fellow reviewed

and shared the research related to co-teaching with school leaders and worked collaboratively with the school to set goals and develop a change plan. The researcher and school leaders established several goals for the project: a) 75% of co-teaching teams will *plan to use* multiple co-teaching approaches daily, b) 75% of co-teaching teams will *utilize* multiple co-teaching approaches, c) On average, students in 75% of classrooms will increase their academic performance in Math and ELA.

Cycle of Inquiry Step 3: Test Change Ideas

Professional Development

Co-teachers participated in professional development during whole staff meetings to increase teachers' understanding of best practices related to co-teaching. There were three 45-minute training sessions with all school staff from September to January. The content of the training sessions included a review of research-based co-teaching approaches. One session focused on the cycles of co-planning, namely pre-planning, face-to-face planning, and post-planning. Indicators of quality co-teaching, as described in *Are We Really Co-teachers* (Villa et al., 2004) were introduced in September and reviewed in January when co-teachers self-assessed individually to determine team agreement for which indicators still needed improvement.

Cognitive and Instructional Coaching

The purpose of both cognitive and instructional coaching was to support teachers in planning, implementing, and reflecting upon their co-teaching partnerships and practices. The fellow facilitated seven monthly coaching cycles with each of the eight teams. Coaching cycles consisted of three steps: Pre-Observation Planning, Observation or Recording the Planned Lesson, and debriefing of or Reflection on the Observed Lesson. During the Pre-Observation

Planning meetings, teams set goals for the lesson to be observed. The fellow then observed and/or recorded the lesson, or the co-teachers recorded themselves. Finally, the fellow met with co-teaching teams to review the lesson and provide feedback.

The goals for the first four cycles of cognitive coaching focused on individualized team goals. To identify their goals, co-teachers took the *Are We Really Co-teachers?* self-assessment together in the fall (Villa et al., 2004). Data from the surveys were used to inform the Cognitive Coaching Cycle. The fellow provided instructional coaching in the second and third trimesters for how to *co-plan* to use multiple co-teaching approaches, for *utilizing* multiple co-teaching approaches, and for *utilizing* parallel teaching instead of whole group instruction. The final two coaching cycles focused on planning for and implementing parallel teaching. The Parallel teaching approach was selected because it is known to be one of the most effective approaches to coteaching (Volonino & Zigmond, 2007). According to Choates (2020), "Station Teaching, Parallel Teaching, Alternative Teaching, and Team Teaching can increase co-teaching effectiveness by up to 33%."

Teams completed a co-teaching *Lesson Agenda* (Cole, 2020) to begin each coaching cycle, which led the team to identify the co-teaching approaches they were planning to use at the beginning, middle, and end of the Math or ELA 60-90 minute lesson, as well as a description of each coteacher's role throughout.

Data Collection Tools and Procedures

The UMSL fellow and principal met weekly to discuss progress and to share the collected evidence to determine if the goals were being met. They used multiple tools to evaluate the extent to which the cognitive and instructional coaching and professional development supported the school's attainment of its goals. These tools were 1) a review of the weekly teacher planning

survey, 2) a review of the monthly co-teacher lesson planning agenda, 3) a review of monthly observations/recordings of co-teaching, and 4) weekly 15-minute walk-through observations of each team's co-teaching approaches during Math and ELA, (e) review of student achievement data. While most data collection began in January through April, the fellow started collecting data regarding the percentage of students on task during each co-teaching approach.

To collect data about student engagement, the fellow used the *Assessing Time on Task* observation protocol developed by the Instructional Coaching Group (Instructional Coaching, 2012). Assessing on-task behavior involved selecting 15 students randomly to observe. If the randomly selected student was on-task, the fellow recorded "1," meaning that the student was on-task and moved to observe the next student. If the next student was not on task, the fellow observed for up to one minute or until the student changed to on-task behavior before recording "0" for off-task for the entire minute or "1" for moving to on-task behavior within one minute.

Table 1

Intervention Outcomes, Measures, Frequency, and Data Collected

Outcome	Measures	Frequency	Data Collected
Planning Co-Teaching	Survey of Planned Co-teaching Approaches	Weekly	Co-teaching approaches teachers planned to use in Math and ELA
	Co-teaching Lesson Agenda	Monthly	
Implementing Co-Teaching	Whole Lesson In-Person or Video Recorded Observations	Monthly	Types of co-teaching approaches used Implementation fidelity of Parallel Teaching

	15- Min. Walk-through Observations	Weekly	Types of co-teaching approaches used, and % of students engaged
Student Engagement	Assessing Time on Task Observation Protocol	Weekly for six weeks	% of students engaged during each type of co-teaching model
Student Achievement	STAR Student Benchmark Data	First and last of four STAR assessments–	Average growth of students per classroom in grade level equivalents

Note. The fellow conducted 55 total lesson observations and 167 fifteen-minute walkthrough observations for 222 observations. The number of observations per classroom ranged from 8 to 16 monthly observations from September to May.

Findings

Related to Goal A that 75% of teams would *plan* to utilize two or more co-teaching approaches in each Math and ELA lesson, the weekly survey of lesson plan forms indicated that five out of the eight teams were regularly planning to use multiple approaches, and more complex co-teaching approaches such as Multiple Groups, Parallel Teaching, daily. See Table A1.

Goal B was for 75% of teams to utilize two or more co-teaching approaches in each Math and ELA lesson. During observations from March 11 - April 5, nearly 80% of teams used two or more co-teaching approaches in each lesson. As expected, the teams that planned to do so utilized multiple co-teaching approaches. In addition, the PreK Age 3 co-teachers implemented various co-teaching approaches, even though their plans still need to indicate this.

A sub-analysis relating the use of various co-teaching approaches to the rate of on-task student behavior. Student on-task behavior was rated 100% during Parallel Teaching, 87% during Team Teaching, 87% during Station Teaching, and 68% during 1 Teach – 1 Assist. See

Appendix Table A2. These results mirror those found in studies reviewed by the fellow and school leaders (Bouck, 2007; Boudah et al., 2008; Friend et al., 2010).

Goal C was that, on average, students in 75% of classrooms would increase their academic performance in Math and ELA. Analysis of benchmarking tests showed that students in classrooms where co-teachers planned for and utilized multiple co-teaching approaches increased their academic performance by nearly 1.5 grade-level equivalents. See Table A3.

Discussion and Next Steps

This case study project was designed to collect evidence of co-teachers planning for and utilizing multiple approaches to co-teaching. When analyzing student achievement in classrooms where complex, more effective strategies for co-teaching were observed, it was also documented that students were more engaged than in classrooms continuing to use the One Teach–Assist approach. The school now has a foundation for co-teaching to support minor group instruction, resulting in higher on-task student behavior and a stronger answer to "Why?" The school has also begun the development of a co-teaching handbook to set out expectations for planning and utilizing multiple co-teaching approaches from the first day of school, as well as a plan for continued professional development and coaching geared to the needs of new teams.

Overall, the school has invigorated its commitment to collaborative instruction for all students, recognizing that teachers are better together when they collaborate throughout the entire instructional cycle, incorporate smaller-group instruction via Parallel teaching rather than whole group instruction, and regularly use small-group, multiple-group instruction for better differentiation and intervention.

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Appendix

Data Analyzed to Better Understand the Development of Effective Co-teaching

Table A1

% of Reviewed Plans Indicating Two or More Approaches for Math and ELA.

Week	PreK Age 3	PreK Age 4	K	1st	2nd	3rd	4th	5th	Overall
April 1-5	-	90%	95%	75%	80%	-	-	100%	88%

Note. By April 1, five out of eight teams (63%), planned to use multiple coteaching approaches daily. The overall % of reviewed plans with two or more approaches improved from 57% on February 12 to 88% by April 1.

Table A2

% of Observations from March 11 – April 8 Utilizing Multiple Co-teaching Approaches.

			Co-Teaching Approach Observed					
Grade	% Used Multiple Approach	# of Observations	None	1 Teach – 1 Assist	Team Teach	Alternate Teach	Multiple Group	Parallel Teach
PreK – Age 3	100%	2		2	2			
PreK – Age 4	100%	2		2	1		1	
KG	67%	5		5	1		2	1
1st	17%	3		3				
2nd	50%	5		5	1	1	1	
3rd	25%	4	2	2	1		1	
4th	29%	5	2	3	1		1	
5th	100%	5		5	1		1	1
	TOTALS		4	24	8	1	7	2

Note. All observed lessons, including 1 Teach - 1 Assist during at least part of the lesson.

Table A2

Summary of "On-Task" Behavior Observed from April 1 – 12

Co-Teaching Approach	Number of observations of this approach	Average % On Task during observations of this approach
1 Teach – 1 Assist	4	68%
Multiple Groups	5	87%
Parallel Teaching	3	100%
Team Teaching	5	87%

Note. Three of the five teams used parallel teaching (2 similar groups – 1 group per teacher).

Table A3

Student Achievement Using Grade Level Equivalent Scores on the STAR Benchmark Assessment at the Beginning and End of the School Year, with % of Observed Lessons Using Multiple Co-teaching Approaches

Grade	% of observations using 2+ approaches 3/11-4/8	Content	PRETEST Average Grade Level Equivalent Score	POST-TEST Average Grade Level Equivalent Score	GROWTH Average Grade Level Equivalent Growth
KG	67%	Literacy	0.03	1.17	1.14
1st	25%	Literacy	0.66	1.73	1.07
2nd	50%	Literacy	2.11	2.70	0.59
3rd	25%	Literacy	2.97	3.37	0.40
4th	33%	Reading	4.14	5.23	1.09
5th	100%	Reading	6.23	7.36	1.13
1st	50%	Math	1.11	2.04	0.93
2nd	50%	Math	2.17	2.79	0.62
3rd	50%	Math	3.2	4.18	0.98
4th	25%	Math	4.03	5.11	1.08
5th	100%	Math	4.8	6.44	1.64

Note. *Two to five observations per content area per class from March 11 to April 8.

Table A2

% of Lessons with Two or More Approaches. Data collected for Each Team Related to Goal C: 75% of Co-teaching teams Utilize Multiple Coteaching Approaches

	Coteaching Approaches Observed						
Week / Range	Parallel Teach two halves	Team teach whole Group	Station / Multiple Group	Alternative	1 Teach - 1 Assist	None (only 1 teacher present)	% using 2+ approaches
1/3-1/24	0	4	2	1	7	0	50%
2/21-2/28 MA	0	1	1	0	3	2	29%
2/21-2/28 ELA	1	1	1	0	2	0	60%
3/4-3/6 MA	1	1	1	0	3	3	33%
3/4-3/6 ELA	2	1	1	0	4	4	50%
3/11-3/13 MA	0	3	1	0	2	2	50%
3/11-3/13 ELA	0	2	1	0	8	3	21%
4/1-4/8 MA	1	3	2	0	1	0	86%
4/1-4/8 ELA	1	2	4	0	2	0	78%

Table A 4

Summary of "On-Task" Behavior Observed

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