

Collective teacher efficacy and student achievement in inclusive classrooms:
Kansas co-teachers' perspectives for leadership practice

by

Nichole C. Honeywell

B.A., Benedictine College, 2006
M.A., Benedictine College, 2010

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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Abstract

Co-teaching is a widely used service delivery model for supporting students with disabilities in inclusive classrooms; however, its impact on student achievement remains debated. Although associated with increased access and student engagement, variability in implementation raises questions about its effectiveness. Collective teacher efficacy (CTE), defined as educators' shared belief in their ability to positively influence student learning, has been strongly linked to improved student outcomes, yet limited research has examined its development within co-teaching partnerships. This basic qualitative study explored the experiences of general and special education teachers co-teaching in Kansas public schools, focusing on their perceptions of CTE and interpretations of co-teaching's influence on student learning outcomes. Data were collected through pre-interview questionnaires, individual semi-structured interviews, and dyadic interviews with co-teaching pairs and analyzed using inductive thematic analysis, including In Vivo and pattern coding. Findings revealed eight interrelated themes emphasizing relational trust, collaborative professional learning, student growth as reinforcement of collective teacher efficacy, instructional responsiveness, student engagement and belonging, structural and organizational conditions, and leadership engagement. These themes informed a cyclical conceptual framework illustrating how CTE develops through the interaction of relational, instructional, and organizational factors, reinforced by evidence of student growth. This study contributes to understanding how collective teacher efficacy emerges within co-teaching partnerships and highlights the importance of leadership, collaboration, and organizational supports in strengthening inclusive instructional practices and improving student outcomes.

Keywords: co-teaching, collective teacher efficacy, inclusive classrooms, educational leadership, student growth

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Approved by:

Major Professor
Dr. William T. Holmes

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Table of Contents

List of Figures	xiv
List of Tables	xv
Acknowledgements	xvi
Dedication	xvii
Chapter 1 - Introduction.....	1
Vignette One	1
Vignette Two	3
Problem Statement.....	6
Purpose of the Study	6
Significance of the Study	7
Research Questions	10
Conceptual Framework.....	10
Collective Teacher Efficacy.....	11
Co-Teaching.....	13
Student Achievement	16
Co-Teaching and Collective Teacher Efficacy	17
Research Design	19
Participants.....	20
Definition of Terms.....	21
Assumptions.....	24
Limitations	25
Delimitations.....	25
Organization of the Study	26
Chapter 2 - Review of Literature	27
Co-Teaching.....	28
Co-Teaching Defined.....	29
Approaches to Co-Teaching	30
Supportive	32
Cautions.	32

Parallel	33
Cautions.	34
Complementary.....	35
Cautions.	35
Team	36
Cautions.	36
Usage of Co-Teaching Approaches	37
Origin of Co-Teaching.....	37
Least Restrictive Environment (LRE)	39
Placement Determinations.	42
Inclusion.....	44
Impact of Inclusion.	47
<i>Inclusion and SWD.</i>	47
<i>Inclusion and SWOD.</i>	48
What happens in segregated classrooms?	49
Where are students with disabilities educated?	50
Co-teaching to achieve inclusion	52
Creating Conditions for Successful Co-teaching.....	52
Professional Development/Preparation.....	53
Administrative Support.....	53
Parity	54
Common Planning Time	54
Communication and Agreements.....	55
Tools to Support Co-Teaching.....	55
Potential Benefits of Co-Teaching.....	58
Students.....	58
Increased Instructional Time.....	58
Reduced Stigma.	58
Social Emotional.....	58
Teachers	59
Enhanced Professional Development.	59

Criticisms and Critical Questions About Co-Teaching	59
School Administrator’s Role in Co-Teaching.....	61
Other Applications of Co-Teaching.....	62
Summary	63
Collective Teacher Efficacy.....	64
Self-Efficacy	64
Sources of Efficacy	65
Teacher Efficacy	67
High-Efficacy vs. Low-Efficacy Teachers	70
High Efficacy.....	71
Low Efficacy.....	72
Teacher Efficacy Scales.....	73
Teacher Efficacy and Inclusive Practices	74
Collective Efficacy.....	76
Impact of CTE.....	80
Enabling Conditions for Collective Teacher Efficacy	83
Mastery Experiences.....	83
Vicarious Experiences/Modeling.....	84
Social Persuasion.....	85
Affective Conditions/States	86
Evidence of Impact.....	86
Cognitive Processing of Enabling Conditions.....	87
Collective Efficacy Cycle	87
School Leader’s Role in Collective Teacher Efficacy	90
Collective Teacher Efficacy for Inclusive Practices.....	94
Summary	95
Student Achievement.....	96
Achievement Gap.....	96
Kansas Assessment Data Trends	97
Achievement Defined	102
Attainment vs. Improvement	103

Testing vs. Assessment	104
Grades	104
Points.	106
Types of Learning.	106
Standards-Based Grading.....	107
Mastery Assessment.....	108
Student Outcomes and Co-Teaching	109
Assessment in Co-Taught vs. Special Education Settings.....	109
SWD and SWOD	110
Co-Teacher Perceptions of Student Outcomes	111
Effect Size of Co-Teaching.....	113
Collective Teacher Efficacy and Student Achievement	114
Summary	115
Chapter 2 Summary	116
Chapter 3 - Methodology	118
Purpose of Study and Research Questions	118
Research Design and Rationale	119
Researcher Positionality	121
Personal and Professional Background in Co-Teaching.....	122
Leadership and State-Level Influence.....	123
Reflexivity and Research Considerations	124
Participant Recruitment and Sampling Strategy	125
Participant Demographics	127
Sample Size.....	129
Pilot Study.....	130
Data Collection Procedures	132
Sources of Data	132
Pre-Interview Questionnaire	133
Semi-Structured Interviews	134
Individual Interviews.	134
Dyadic Interviews.	135

Data Analysis Procedures	142
Managing and Organizing the Data	143
Reading and memoing emergent ideas	146
Analytic Memos.....	146
Describing and Classifying Codes into Themes	148
First Cycle Coding (In Vivo)	148
Second Cycle Coding (Pattern Coding).....	149
Theme Development.....	150
Developing and Assessing Interpretations.....	151
Representing and Visualizing the Data.....	153
Delimitations.....	153
Limitations	154
Trustworthiness.....	156
Credibility	156
Dependability	157
Confirmability.....	157
Transferability.....	158
Ethical Considerations	159
Summary of Methodology	160
Chapter 4 - Findings.....	162
Participant Profiles.....	163
Dyad A: Riley and Jordan.....	163
Dyad B: Taylor and Casey	165
Dyad C: Avery and Quinn	166
Dyad D: Alex and Peyton	166
Dyad E: Rowan and Cameron.....	167
Skyler	168
Dakota	169
Elliot.....	170
Parker	171
Presentation of Themes.....	172

Theme 1: Relational Trust as the Foundation for Shared Instructional Ownership in Co-Teaching.....	174
Relational Trust as the Foundation of Co-Teaching Partnerships	175
Enacting Shared Instructional Ownership through Joint Practice	176
Negotiating Instructional Roles and Parity within Co-Teaching Partnerships	178
Shared Commitment to Student Success as an Outcome of Collaborative Practice.....	180
Theme 2: Co-Teaching as a Mechanism for Reciprocal Professional Learning.....	181
Complementary Expertise.....	182
Reciprocal Professional Growth	183
Embedded Mentoring.....	183
Embedded Professional Learning and Shared Instructional Leadership	184
Variability in Instructional Leadership within Co-Teaching Partnerships	186
Theme 3: Student Growth as a Reinforcement of Collective Teacher Efficacy	188
Academic Growth	188
Multiple Measures of Student Growth.....	190
Non-Academic Growth.....	191
Interpreting Evidence of Student Growth.....	193
Theme 4: Expanding Instructional Access and Responsiveness through Co-Teaching	195
Expanded Instructional Access	195
Differentiated Instruction and Flexible Grouping.....	198
Theme 5: Fostering Student Engagement and Belonging within Co-Taught Classrooms .	200
Classroom Culture and Belonging.....	201
Student Confidence and Participation.....	203
Theme 6: Structural and Organizational Supports Enabling Co-Teaching and Collective Teacher Efficacy	204
Structural Supports for Co-Teaching.....	205
Professional Learning.	205
Shared Planning Time.....	207
Collaborative Planning Practices.	208
Theme 7: Structural and Organizational Constraints Limiting Co-Teaching and Collective Teacher Efficacy	209

Structural Constraints Affecting Co-Teaching	210
Staffing Shortages.....	210
Classroom Complexity.....	212
<i>High Concentration of SWD</i>	213
Teacher Workload.....	214
Scheduling Instability.....	215
Theme 8: A Continuum of Leadership Engagement and Understanding Influencing Co- Teaching Implementation	216
Minimal or Indirect Leadership Engagement	216
Limited Leadership Understanding and Visibility.....	217
Leadership Engagement as a Factor Influencing Collective Teacher Efficacy	219
Findings	222
Chapter Summary	223
Chapter 5 - Conclusions.....	225
Discussion by Research Question.....	226
Central Research Question.....	226
Sub-Research Question 1	231
Sub-Research Question 2	236
Synthesis of Findings.....	240
Co-Teaching as a Mechanism for Collective Teacher Efficacy	241
Conceptual Integration of Findings	243
Implications for Practice	246
Implications for School Leadership	246
Step 1: Prioritize Structures That Support Collaborative Planning	248
Step 2: Provide Ongoing Professional Learning Focused on Co-Teaching	248
Step 3: Foster Leadership Practices that Promote Collective Teacher Efficacy.....	249
Step 4: Support Inclusive Classroom Practices Through Strategic Staffing and Resource Allocation.....	250
Step 5: Encourage Relationship Development Within Co-Teaching Partnerships.....	251
Implications for Co-Teaching Partnerships	251
Recommendations for Future Research	254

Conclusion	255
References	257
Appendix A - Recruitment Email and Interest Form.....	279
Appendix B - Confirmation of Participation Email.....	281
Appendix C - Pre-Interview Questionnaire	282
Appendix D - Semi-Structured Interview Protocol (Individual)	287
Appendix E - Semi-Structured Interview Protocol (Dyads)	289
Appendix F - Research Question and Data Source Alignment.....	291
Appendix G - Invitation and Informed Consent	297
Appendix H - IRB Approval.....	299
Appendix I - Audit Trail	300
Appendix J - Codebook	310

List of Figures

Figure 1.1	<i>Conceptual Framework</i>	11
Figure 1.2	<i>Collective Teacher Efficacy and Student Achievement</i>	13
Figure 1.3	<i>Co-Teaching and Student Achievement</i>	16
Figure 1.4	<i>Co-Teaching and Collective Teacher Efficacy</i>	19
Figure 2.1	<i>LRE Decision Tree</i>	43
Figure 2.2	<i>Educational Environments of SWD</i>	51
Figure 2.3	<i>Teachers' Sense of Efficacy Measurement Model (Ashton et al., 1983)</i>	69
Figure 2.4	<i>Cyclical Nature of Teacher Efficacy</i>	70
Figure 2.5	<i>Model of the Formation, Influence, and Change of CTE in Schools</i>	80
Figure 2.6	<i>A Collective Efficacy Cycle</i>	89
Figure 2.7	<i>Model for Leading Collective Teacher Efficacy</i>	91
Figure 2.8	<i>Virga (2024) CLEAR Process Graphic</i>	93
Figure 2.9	<i>Kansas State Math Assessment Data for SWOD</i>	99
Figure 2.10	<i>Statewide Math Assessment Data for SWD</i>	100
Figure 2.11	<i>Statewide ELA Assessment Data for SWOD</i>	101
Figure 2.12	<i>Statewide ELA Assessment Data for SWD</i>	102
Figure 2.13	<i>Grading Scale according to Mastery of Standards (Feldman, 2018)</i>	106
Figure 2.14	<i>Complex Competencies and Mindframes for Successful Co-Teaching</i>	114
Figure 3.1	<i>Central Research Question: Data Source Alignment</i>	137
Figure 3.2	<i>Sub-Question 1: Data Source Alignment</i>	139
Figure 3.3	<i>Sub-Question 2: Data Source Alignment</i>	141
Figure 3.4	<i>Data Analysis Spiral</i>	143
Figure 3.5	<i>Research Questions Reference</i>	147
Figure 4.1	<i>Co-Teaching as a Mechanism for Collective Teacher Efficacy</i>	224
Figure 5.1	<i>Conceptual Integration: Co-Teaching, CTE, Student Outcomes</i>	245
Figure 5.2	<i>Leadership Actions to Support Co-Teaching and Collective Teacher Efficacy</i>	247
Figure 5.3	<i>Checklist for Effective Co-Teaching Practice</i>	253

List of Tables

Table 2.1	<i>Similarities in Approaches/Models to Co-teaching</i>	31
Table 2.2	<i>Sample Tools to Facilitate Successful Co-Teaching</i>	57
Table 2.3	<i>Factors Influencing Teacher Self-Efficacy to Teach in Inclusive Classrooms</i>	76
Table 3.1	<i>Co-Teacher Demographic Summary Data</i>	128
Table 3.2	<i>Data Collection and Analysis Timeline</i>	145
Table 3.3	<i>Emergent Themes: Riley & Jordan</i>	152
Table 4.1	<i>Summary of Themes and Sub-Themes</i>	173
Table 5.1	<i>Sources of Collective Teacher Efficacy Reflected in Participant Descriptions</i>	242

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Last, but certainly not least, to my family, friends, and loved ones who supported and sacrificed alongside me in so many ways – especially those who stood beside me through the long nights and challenges – I love you, and I look forward to spending more time together.

Dedication

To my children, Aiden and Adelyn: you are my favorite people in the world, my heartbeat outside my body, and my greatest source of pride and joy. Being your mom has shaped me into the educator and leader I am today. You have sacrificed alongside me throughout my career and during every moment of this dissertation journey. On many late nights, you were my motivation to just keeping going—even when you didn’t know it. I hope you remember more of the good moments than the cranky ones and see a strong, hardworking mom whose example inspires you to pursue your dreams, share your unique gifts with the world, and never give up.

To my parents, who nurtured my love of learning from an early age—including serving as willing participants at the Mickey Mouse chalkboard—and who taught me that “college” meant choices. To my sister, whom I tried to boss around. And finally, in loving memory of my cousin, Elizabeth “Cubby” Fish: your presence in my life expanded my heart and ignited my passion for special education before I even understood it. Your impact on my life is present every day.

Chapter 1 - Introduction

Vignette One

Grade-level teams at Sunnyside Elementary¹ include three general education teachers and one special education teacher. Each team shares a daily common planning period while students attend enrichment classes (e.g., physical education, music, art). At least twice per week, this time is used for collaborative planning, and twice per month, the school provides additional time for professional learning and collaboration. During planning, a shared document outlining standards, learning intentions, and success criteria guides discussion. Conversations focus on increasing student engagement, selecting co-teaching models, and determining formative assessments. The special education teacher contributes expertise in supporting access to grade-level curriculum for students with disabilities and others who may require additional support. The three classroom teachers bring varying levels of experience and content knowledge.

Grade-level team collaboration is supported by established agendas, planning documents, and data protocols. While each team operates in a unique way, teachers across the school demonstrate a shared commitment to collaboration. Planning documents and protocols are shared with building administrators, who facilitate monthly meetings with team leaders to examine schoolwide data, identify trends, and model effective processes. On a Tuesday morning, one of the grade-level teams at Sunnyside worked through their agenda while the principal briefly stopped in, offering support through presence and visibility.

“What do you think about using parallel co-teaching and stations after we introduce and practice adding fractions with like denominators?” June, team leader and veteran teacher, asked.

¹ All names of schools and individuals are pseudonyms.

“We could divide up our paraeducators to support all students when Nikki is not co-teaching.”

“I like that idea,” Nikki, the team’s special education teacher said. “That will allow students who need it to work on number sense in small groups, while those demonstrating mastery can engage in the challenge problems we identified. We could use Thursday’s exit ticket as a formative assessment and build stations based on those results.”

The team nodded in agreement.

“We would still keep students in mixed-ability groups for direct instruction, right?” asked first-year teacher Marla.

“Exactly right,” June responded. “Mixed-ability groups allow students to learn from one another, and then we can use flexible grouping during stations based on skill needs.”

“Great,” Marla replied. “I’d be happy to lead a small group focused on number sense. I have some ideas for using manipulatives to make the concept more concrete.”

“I’ll update the planning document,” said Isaac, the third general education teacher. “Nikki and I will add our co-teaching details after our shared planning time on Wednesday.” Principal Abrams smiled as she interjected. “Have you shared the data from your last ELA unit with the team?”

“That’s next on the agenda,” Marla responded.

“Your commitment to co-teaching and supporting every learner is evident in your data,” Principal Abrams said. “I look forward to seeing how your planning continues to impact student outcomes.”

Vignette Two

Just ten miles away from Sunnyside, another team of teachers at Sour Street Middle School prepared to meet during a shared planning period. Located within the same district, each teacher had two planning periods per day and met as a grade-level team three times per week. The team consisted of four content area teachers responsible for English/language arts, mathematics, science, and social studies, along with one special education teacher who served as case manager and co-taught in designated classrooms.

At 9:34 a.m., team leader Sandy sat waiting, her eyes fixed on the blinking cursor of the team's shared planning document. Only three of the five teachers were present - an all-too-familiar occurrence. Timothy, the special education teacher, and Peyton, the social studies teacher, sat nearby, waiting quietly for the meeting to begin. Gina, the English teacher, and Holly, the math teacher, entered several minutes late, engaged in a frustrated exchange about student behavior.

"I've just had enough," Holly was saying. "How many pencils am I supposed to give these kids?"

"Just send them to the office," Gina replied. "If they're not prepared, that's not our problem."

"Let's get started," Sandy interjected, attempting to redirect the conversation.

As the teachers settled in, Gina turned toward Timothy. "By the way, *your* students were really unprepared for class today."

"My students?" Timothy asked, surprised.

“Yes,” Gina replied. “I honestly don’t even know why they’re in my class. They’re clearly not ready. Why don’t you just pull them out? It would be better for the students who actually want to learn.”

Sandy glanced at the clock—9:42. Nearly ten minutes of the meeting had already been lost.

“It would be more appropriate to discuss individual students at another time,” Timothy replied, his voice even but his face flushed. “Students with disabilities have a right to be in the classroom just like everyone else.”

Sandy nodded and attempted to move the meeting forward. “We’ll add that to a future agenda. For now, let’s focus on today’s plan.”

Holly hesitated. “I forgot my computer. Do I really need it for the meeting?”

“Yes,” Sandy replied calmly. “Please go get it. We’ll begin.”

As Holly left the room, Sandy looked back at the agenda she had carefully prepared. With increasing pressure from building and district leaders regarding the team’s use of collaboration time – and the school’s declining performance data – she could not help but wonder whether these meetings were contributing to the problem.

Meanwhile, Timothy sat quietly, reflecting. A second-year teacher, he had entered the profession eager to make a difference. Despite forming strong relationships with students and supporting their progress, the ongoing tension within the team had begun to erode his sense of purpose. He found himself reconsidering his future in the profession.

“We’ll continue,” Sandy said, attempting to regain focus. “Next item on the agenda...”

The vignettes above illustrate two distinct versions of educator collaboration within similar school contexts. Despite operating within the same district, the actions, interactions, and underlying beliefs of the educators stand in stark contrast. This “tale of two teams” reflects fundamentally different approaches to collaboration, co-teaching, and student support, highlighting the role of collective teacher efficacy (CTE) in shaping instructional practices and student outcomes. These scenarios demonstrate how variations in collective teacher efficacy may influence the implementation of co-teaching and, ultimately, impact student learning outcomes.

Collective teacher efficacy refers to educators’ shared belief in their collective ability to positively influence student learning (Tschannen-Moran & Barr, 2004). When teachers believe their combined actions can make a difference, this belief becomes a powerful predictor of student achievement (Eels, 2011; Goddard et al., 2000; Hattie, 2023). In fact, collective teacher efficacy is cited as the number one factor influencing student learning outcomes – at a rate three times that of student socioeconomic status (Eels, 2011; Hattie, 2023).

In schools where collective teacher efficacy beliefs are strong, educators persevere through challenges, collaborate to implement effective instructional strategies, and monitor student data for evidence of effectiveness (Donohoo, 2018). Educator productivity and collaboration are driven by the sense that together, they have the skills necessary to make a difference for student learning (Hite & Donohoo, 2021). In contrast, where there is a lack of collective teacher efficacy, educators tend to identify the reasons they cannot be successful, focus on problems within students, or look to external factors outside of their control rather than within themselves and their team (Hite & Donohoo, 2021).

Problem Statement

Co-teaching is a popular service delivery model for students with disabilities (SWD) in inclusive classrooms, yet its impact on student achievement is debated (Cook et al., 2017; King-Sears et al., 2021; Stefanidis et al., 2023). Research suggests that co-teaching enhances student outcomes by lowering student-to-teacher ratios, increasing student engagement, and improving students' social emotional skills (Beninghof, 2020; Cook & Friend, 1995; Scruggs et al., 2007; Villa et al., 2013; Walther-Thomas, 1997). However, inconsistencies in implementation such as variations in teacher collaboration, fidelity to co-teaching models, and disparities in teacher roles raise concerns about its effectiveness (Conderman & Liberty, 2018; Harbort et al., 2007; Scruggs et al., 2007; Strogilos et al., 2023; Wilson & Blednick, 2011).

Collective teacher efficacy (CTE), the shared belief among educators in their ability to positively impact student learning, has been linked to improved student outcomes across various instructional settings (Eels, 2011; Goddard et al., 2000; Hattie, 2023; Tschannen-Moran & Barr, 2004). Despite its significance, little is known about how co-teachers experience and perceive CTE in inclusive classrooms or during co-planning, co-instructing, and co-assessing within this collaborative instructional method (Krammer et al., 2018; Pizana, 2022). Insight into the role of CTE in co-teaching may enable school leaders to take specific actions to enhance collaboration and the instructional effectiveness of co-teaching. This gap in the literature underscores the need for further research exploring how co-teachers describe their experiences and perceptions of CTE and student learning outcomes.

Purpose of the Study

The purpose of this basic qualitative study was to understand the experiences of general education and special education teachers who co-teach in inclusive classrooms within public

school districts in Kansas. Specifically, this study sought to investigate how co-teachers perceive and describe the presence or development of collective teacher efficacy (CTE) within co-teaching partnerships and how they interpret the influence of this collaborative instructional model on student learning outcomes. Using a pre-interview questionnaire and semi-structured interviews with individuals and co-teaching pairs, this study analyzed emerging themes related to CTE and student learning outcomes in co-teaching teams. Findings provide school leaders with insight into how to support effective collaboration between general and special educators to meet the diverse needs of students. Additionally, this study addressed a gap in the research concerning the relationship between CTE, co-teaching, and student outcomes in inclusive settings.

The central research question guiding this study was: How do co-teachers make sense of and describe their experiences co-teaching? Sub-questions further examined co-teacher perceptions of CTE and perceived influence of co-teaching practices on student learning outcomes.

Significance of the Study

Although research has examined individual teacher efficacy for inclusive practices (Sharma et al., 2012; Sharma et al., 2024), minimal research has explored collective teacher efficacy and co-teaching as a specific inclusive instructional practice (Krammer et al., 2018; Pizana, 2022; Rimpola, 2014; Shoulders & Krei, 2016). An individual teacher's efficacy perception impacts student achievement through its impact on instructional decisions (Bandura, 1993). For instance, teachers with high perceptions of efficacy prioritize and protect classroom time for academic learning, provide more support to struggling learners (Ashton et al., 1983; Tschannen-Moran & Barr, 2004), and offer appropriate praise to students for their accomplishments (Gibson & Dembo, 1984). Significant associations have been found between

teacher self-efficacy and the use of inclusive teaching practices (Savolainen et al., 2022; Sharma & Sokal, 2016; Sharma et al., 2024).

While individual teacher efficacy refers solely to perceptions of self-competence, collective teacher efficacy (CTE) is defined as the “collective self-perception that teachers in a given school make an educational difference to their students over and above the educational impact of their homes and communities” (Tschannen-Moran & Barr, 2004, p. 190). In this way, CTE encompasses what educators believe they can accomplish together. This shared belief in the collective competence and efforts of a school staff drive productive collaboration, persistence in the face of challenges, and a unified commitment to student success (Donohoo & Katz, 2018). In fact, significant correlations between CTE and student achievement have been continuously identified across multiple contexts (Bandura, 1993; Eels, 2011; Goddard et al., 2000; Hoy et al., 2002; Moolenaar, et al., 2012; Ramos et al., 2014).

Collective teacher efficacy is indicated as the single most influential in-school factor affecting student achievement. With an effect size of 1.34, CTE has nearly three times the impact of a student’s socioeconomic status (Hattie, 2023). While educators and school leaders have little control over many factors influencing student achievement, CTE reflects a collective belief system that can be shaped through collaboration, shared practice, and supportive leadership (Donohoo, 2017a; Goddard et al., 2000; Hattie, 2023). Given the positive association between individual teacher efficacy and inclusive instructional practices, as well as the established impact of CTE on student achievement, further exploration of the constructs of CTE and co-teaching is warranted (Krammer et al., 2018; Pizana, 2022; Rimpola, 2014; Sharma et al., 2024; Shoulders & Krei, 2016).

This qualitative study sought to explore how educators described the presence or development of CTE within their co-teaching experiences, as well as how co-teaching practices influenced student learning outcomes, thereby addressing a critical gap in the existing literature. Understanding co-teachers' experiences, perceptions of CTE, and the perceived impact of co-teaching on student achievement held important implications for both educational research and leadership practice. School leaders play a pivotal role in fostering inclusive learning environments and ensuring equitable outcomes for all students (DeMatthews et al., 2020; McLeskey & Waldron, 2015; USDOE, 2025a). Furthermore, federal and state guidelines require that students with disabilities are educated in inclusive with appropriate supports before more restrictive placements are considered (IDEA, 2004; KSDE, 2024). In addition, school and district leaders are charged with maintaining high expectations and promoting academic achievement for every student (USDOE, 2025a). Notably, administrative support has been consistently identified as a critical factor in the successful implementation and sustainability of co-teaching models (Cook & Friend, 1995; McTigue et al., 2023; Scruggs et al., 2007; Strogilos et al., 2023; Villa et al., 2013; Walther-Thomas, 1997). Insights from this study inform how school leaders can support and enhance co-teaching partnerships to better serve diverse learners.

Since Bandura's (1993) foundational work established CTE as a stronger predictor of student achievement than socioeconomic status (SES), subsequent research consistently reinforced its significance (Donohoo, 2017; Eels, 2011; Goddard et al., 2000; Moolenaar, 2012). However, limited research existed on how CTE manifested within co-teaching partnerships and its potential role in supporting inclusive education (Krammer et al., 2018; Pizana, 2022; Sharma et al., 2024). Findings provide guidance for educational leaders to foster collaborative cultures that promote collective efficacy and, in turn, enhance student learning outcomes. Additionally,

this research had the potential to inform efforts to expand and improve inclusive learning opportunities for SWD. This deeper understanding of co-teachers' experiences and perceptions of CTE provided actionable insights for district and school leaders to advance inclusive and equitable education through resource allocation, strategic planning, and instructional improvement.

Research Questions

The following central research question guided this basic qualitative study: What are the experiences of Kansas general and special education co-teachers who serve students in inclusive classroom environments? In addition, the following sub-research questions were examined:

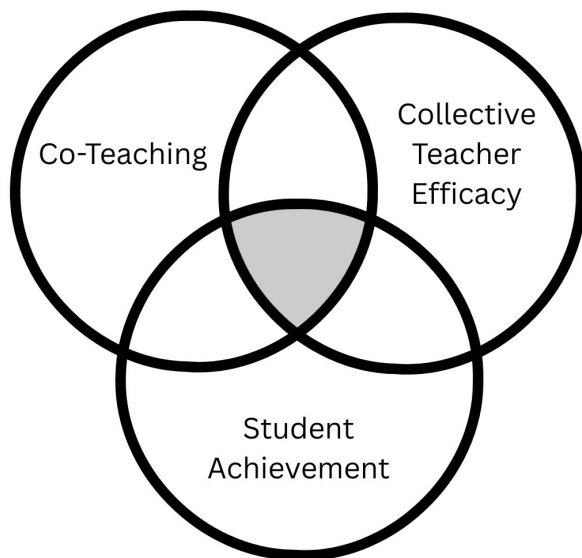
Sub-Question 1: How do co-teachers perceive and describe the presence or development of Collective Teacher Efficacy (CTE)?

Sub-Question 2: How do co-teachers interpret the influence of their co-teaching practices on student learning and outcomes?

Conceptual Framework

The conceptual framework for this study is presented in Figure 1.1, illustrating the constructs of collective teacher efficacy (CTE), co-teaching, and student achievement. These three concepts are depicted in a three-way Venn diagram, reflecting the study's purpose of exploring their potential intersections and mutual influences. The central overlap—where all three constructs intersect—symbolizes the primary area of inquiry for this study.

Figure 1.1
Conceptual Framework



Note. Figure 1.1 represents the conceptual framework for this study. By exploring educators' perceptions of co-teaching in relation to collective teacher efficacy and student achievement, this study aimed to uncover overlapping themes or potential points of influence among the three constructs.

Collective Teacher Efficacy

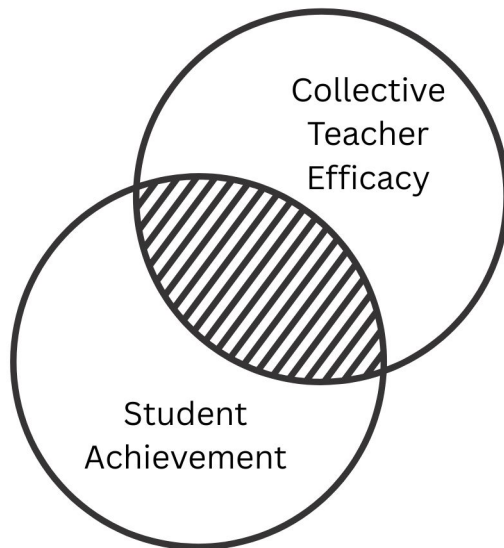
Collective teacher efficacy (CTE) is defined as the shared belief that teachers within a group or school have the collective ability to meet the needs of all learners, regardless of circumstance or challenge (Donohoo, 2017b; Tschannen-Moran & Barr, 2004). CTE gained the interest of educational researchers when it was established as a stronger predictor of student achievement than socioeconomic status (Bandura, 1993). Subsequent research reinforced this finding (Donohoo, 2017; Eels, 2011; Goddard et al., 2000; Moolenaar, 2012). In fact, CTE has been identified as one of the most influential in-school factors affecting student achievement, surpassing influences such as home environment and parental involvement (Donohoo, 2017a; Hattie, 2023).

These findings have significant implications for school leaders, who can take deliberate steps to cultivate environments in which CTE is more likely to thrive (Donohoo et al., 2018). Through the implementation of structural and organizational supports such as professional learning structures that promote meaningful collaboration and embedded reflective practices centered on student outcomes, leaders can shape the conditions under which CTE develops (Hite & Donohoo, 2021). However, CTE extends beyond a positive mindset and does not emerge simply because teachers meet (Hattie, 2023). Rather, leaders must intentionally build a culture of trust and establish expectations for “formal, frequent, and productive teacher collaboration” driven by “evidence of impact” (Hattie, 2023, p. 228). In doing so, administrators create conditions that support a culture of safety and provide time and space for meaningful, team-based examination of instructional practice using measures of student learning.

Figure 1.2 presents a portion of the study’s conceptual framework, highlighting the relationship between CTE and student achievement. Bandura (1977) identified mastery experiences as a key source of efficacy. In educational contexts, prior student achievement serves as a critical mastery experience that shapes a faculty’s CTE (Ross et al., 2004). As previously discussed, research consistently supports a reciprocal relationship between CTE and student achievement (Bandura, 1993; Donohoo, 2017; Eels, 2011; Goddard et al., 2000; Hattie, 2023; Moolenaar, 2012). While CTE contributes to improved student outcomes, teachers’ perceptions of collective efficacy are further reinforced when they see clear evidence that their instructional efforts have led to student success (Hattie, 2023).

Figure 1.2

Collective Teacher Efficacy and Student Achievement



Note. Figure 1.2 includes the constructs of Collective Teacher Efficacy and Student Achievement within a Venn diagram. The reciprocal nature of the two constructs is well-established through research, indicated by a striped pattern where the two circles intersect (Bandura, 1993; Donohoo, 2017; Eels, 2011; Goddard et al., 2000; Hattie, 2023; Moolenaar, 2012).

Co-Teaching

Co-teaching is a service delivery model in special education used to achieve inclusion, a philosophy grounded in the belief that all students deserve a sense of belonging and access to instruction in the general education classroom (Gerrard, 1994; Villa et al., 2013; Yell et al., 2020). Scholars suggest that co-teaching can be integrated into school improvement efforts, as it leverages the unique strengths of two educators to address a wider range of student needs than a single teacher alone (Villa et al., 2013; Walsh, 2012). Decades of research have demonstrated the positive impact of inclusive educational settings on both students with and without disabilities (Blackorby et al., 2007; Causton-Theoharis et al., 2012; Cole et al., 2023; Cosier et al., 2013;

Hehir et al., 2016; Kart & Kart, 2021; Kurth et al., 2024; National Council on Disability, 2018; Wang & Baker, 1985). However, comparatively less research has examined the specific effects of co-teaching as an inclusive practice on the academic achievement of all students.

Across studies, the impact of co-teaching on student outcomes remains mixed. Some research indicates that co-teaching contributes positively to student learning across diverse populations (Bottge et al., 2015; King-Sears et al., 2021; Murawski & Swanson, 2001; Strogilos et al., 2023; Tremblay, 2013). In contrast, critics highlight the limited generalizability of these findings due to a lack of rigorous experimental designs (Cook et al., 2017), while others point to the continued underperformance of SWD on standardized measures such as the National Assessment of Educational Progress (Fuchs et al., 2018).

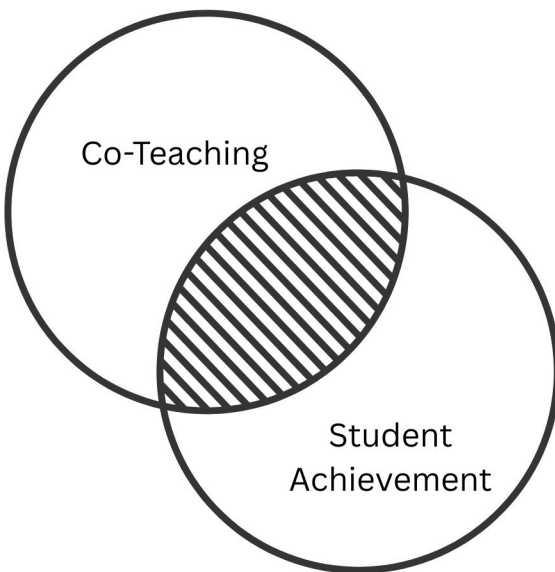
In a meta-analysis of 3,714 SWD, King-Sears et al. (2021) reported a moderate positive effect size (0.47) for students in co-taught classrooms compared to those in separate special education settings. However, a larger meta-analysis including 21,717 students with and without disabilities in general education settings found no statistically significant differences in academic outcomes based on the number of instructors (Stefanidis et al., 2023). In other words, the addition of a second instructor did not yield measurable academic gains for either group. In contrast to these quantitative findings, a recent meta-synthesis, alongside earlier work by Scruggs et al. (2007), highlights that co-teachers consistently report benefits such as enhanced learning experiences for students and professional growth for educators (Strogilos et al., 2023). These findings suggest that the value of co-teaching may lie in qualitative outcomes that are not fully captured by traditional measures of achievement.

Themes in the literature consistently indicate that effective co-teaching implementation depends on several key conditions. First, establishing parity between co-teachers is essential to

ensure shared responsibility and mutual respect (Conderman & Liberty, 2018; Cook & Friend, 1995; Villa et al., 2013). Second, both initial and ongoing professional development are critical for developing co-teaching skills and collaborative instructional practices (Mastropieri et al., 2005; Pratt, 2014; Scruggs et al., 2007; Strogilos et al., 2023; Walsh, 2012; Walther-Thomas et al., 1996). Third, administrative support plays a vital role in sustaining co-teaching through the provision of resources, leadership, and organizational support (Mastropieri et al., 2005; Moin et al., 2009; Murawski & Swanson, 2001; Pratt, 2014; Scruggs et al., 2007; Strogilos et al., 2023; Walsh, 2012). Additionally, common planning time is widely recognized as essential for instructional alignment and effective collaboration (Bouck, 2007; Friend, 2010; Kohler-Evans, 2006; Mastropieri et al., 2005; Moin et al., 2009; Murray, 2004; Pratt, 2014; Scruggs & Mastropieri, 1996; Scruggs et al., 2007; Stefanidis et al., 2019; Strogilos et al., 2023; Walsh, 2012; Villa et al., 2013). Finally, clearly defined roles and responsibilities help prevent ambiguity and ensure that both teachers contribute meaningfully to instruction (Dieker, 2001; Hang & Rabren, 2009; Keefe & Moore, 2004; Mastropieri et al., 2005; Pratt, 2014; Sileo, 2011).

Figure 1.3

Co-Teaching and Student Achievement



Note. This Venn diagram depicts the constructs of co-teaching and student achievement, with the overlapping intersection identified in a striped pattern. While decades of research supports the achievement outcomes of SWD who are included in general education classrooms (Blackorby et al., 2007; Causton-Theoharis et al., 2012; Cole et al., 2023; Cosier et al., 2013; Hehir et al., 2016; Kart & Kart, 2021; Kurth et al., 2024; National Council on Disability, 2018; Wang & Baker, 1985), researchers debate the academic impact of the specific inclusive instructional model of co-teaching (Bottge et al., 2015; Cook et al., 2017; King-Sears et al., 2021; Murawski & Swanson, 2001; Scruggs et al., 2007; Stefanidis et al., 2023; Strogilos et al., 2023; Tremblay, 2013).

Student Achievement

District and school leaders are held accountable for the achievement and success of all students (USDOE, 2025b). In the 2023–2024 school year, approximately 7.9 million students in the United States received special education services, the majority of whom were assessed using

the same rigorous academic standards as their nondisabled peers (USDOE, 2025b). Among students with disabilities (SWD) ages five through 21, 66.7% spent 80% or more of the school day in general education classrooms (USDOE, 2024). Despite increased access to inclusive settings, the academic achievement gap between SWD and SWOD, as measured by the National Assessment of Educational Progress (NAEP), remains “significant, ongoing, and long standing” (USDOE, 2025a, p. 2).

State-level data further underscore these concerns. In Kansas, a persistent achievement gap between SWD and SWOD is evident in both mathematics and English language arts (ELA). Additionally, overall student performance remains low. Between 2019 and 2024, assessment results for students without disabilities indicate that:

- 65% to 70% scored at Levels 1 and 2 (below grade level) in mathematics;
- 60% to 63% scored at Levels 1 and 2 (below grade level) in ELA (KSDE, n.d.-a).

Although these findings are concerning, academic achievement is a multidimensional construct that extends beyond performance on end-of-year standardized assessments. Student outcomes can be measured in a variety of ways, including growth, skill development, and meaningful participation in learning experiences. For the purposes of this study, student achievement is defined as the context-specific ways in which a learner demonstrates growth, attains success, or benefits from their educational experience (Erkins et al., 2017; Guskey, 2020; Jung, 2024).

Co-Teaching and Collective Teacher Efficacy

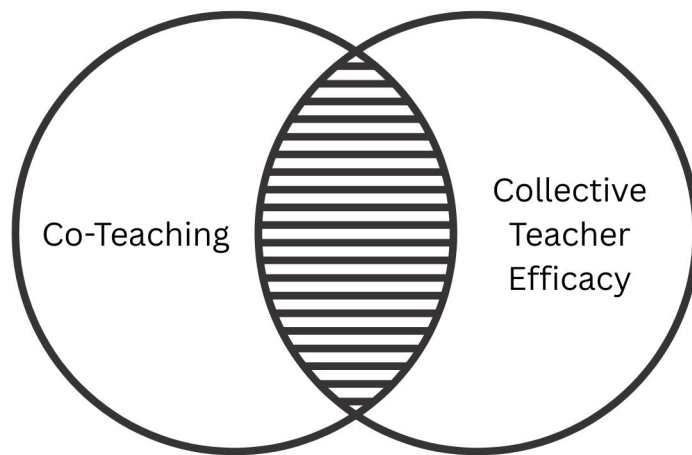
Although collective teacher efficacy (CTE) has been widely examined in relation to teachers’ shared beliefs at the school or team level, limited research has explored its development within co-teaching partnerships (Krammer et al., 2018; Pizana, 2022). Specifically,

how CTE emerges or is enacted among co-teachers - who collaboratively plan, instruct, and assess a diverse group of learners in a shared classroom - remains largely underexplored. CTE is shaped through ongoing professional learning and collaborative processes in which educators engage in critical reflection on student work and data (Hite & Donohoo, 2021). DeWitt (2019) proposed a “collective efficacy cycle” designed for use within teams or schools, consisting of co-constructing goals, implementing instructional strategies, evaluating impact through data, and celebrating success. This process is intended to strengthen shared beliefs in educators’ collective capacity to influence student outcomes.

Given the inherently collaborative nature of co-teaching, it is plausible that similar cycles of inquiry may occur within co-teaching partnerships, potentially contributing to the development of CTE. However, this relationship remains insufficiently examined in the literature. While the academic impact of co-teaching itself remains debated (Cook et al., 2017; King-Sears et al., 2021; Murawski & Swanson, 2001; Scruggs et al., 2007; Stefanidis et al., 2023; Strogilos et al., 2023), CTE has been consistently associated with improved student achievement (Bandura, 1993; Goddard et al., 2000; Eels, 2011; Hattie, 2023; Moolenaar, 2012; Donohoo, 2017). This contrast underscores the importance of examining how co-teaching and CTE may intersect, particularly as a potential mechanism for enhancing student outcomes.

Figure 1.4

Co-Teaching and Collective Teacher Efficacy



Note. This Venn diagram contains the concepts of co-teaching and collective teacher efficacy (CTE). The striped area where the constructs intersect has yet to be thoroughly examined.

Research Design

This study aimed to understand how co-teachers described their experiences with co-teaching, including their perceptions of CTE and student outcomes. This investigation employed a basic qualitative research methodology, a common approach among practitioners in the field of education (Merriam & Tisdell, 2015). The underlying premise of qualitative research is that meaning is constructed through human experiences and interactions, rather than representing objective knowledge that exists independently and awaits discovery (Merriam & Tisdell, 2015). This study focused on participants' experiences within the co-teaching instructional model, including their interactions across all aspects of teaching both inside and outside the classroom. Qualitative methods enabled participants' voices to illuminate the topic, allowing words to be developed into themes that generated a rich description in response to the research question (Merriam & Tisdell, 2015).

Data were collected through pre-interview questionnaires and semi-structured individual and dyadic interviews guided by interview protocols. Interviews are an appropriate method when the researcher seeks to understand experiences or phenomena that are not directly observable (Merriam & Tisdell, 2015). Semi-structured interviews were particularly well-suited to this study, as they utilized open-ended and flexible questions while allowing the researcher to probe and adapt in response to participants' emerging perspectives (Merriam & Tisdell, 2015). Individual interviews revealed authentic, personal perspectives of the co-teachers, while dyadic interviews illuminated relational and collaborative processes (Szulc & King, 2025). Together, these methods provided a richer, more nuanced understanding of co-teacher experiences and CTE.

An inductive approach to data analysis was used to identify recurring themes that emerged from participants' responses. Data analysis in qualitative research begins during the data collection process and continues throughout the study (Creswell & Poth, 2025; Merriam & Tisdell, 2015). This study employed coding and analytic memos to support the development of themes and to enhance the credibility and trustworthiness of the findings.

Participants

Participants in this study included Kansas general and special education co-teachers affiliated with the Kansas Co-teaching Project, an initiative supported by the Kansas State Department of Education (KSDE) Technical Assistance Support Network (TASN) as part of the High-Quality Inclusive Learning Environments (HQILE) initiative. This affiliation increased the likelihood that participants had received professional development in co-teaching, which has been consistently identified in the literature as critical for effective implementation (Beninghof, 2020; Chatzigeorgiadou & Barouta, 2022; Mastropieri et al., 2005; Pancsofar & Petroff, 2013;

Pratt, 2014; Scruggs et al., 2007; Strogilos et al., 2023; Walsh, 2012; Walther-Thomas et al., 1996).

Qualitative research aims to illuminate meaning rather than produce generalizable results; therefore, it prioritizes in-depth engagement with a smaller number of participants over broad population sampling (Creswell & Poth, 2025). Participant selection is context-specific and should support data saturation through in-depth interviews (Tisdell et al., 2025). Accordingly, this study aimed to include four to six co-teaching dyads (eight to twelve teachers). Purposeful sampling was used to identify participants who met the following criteria:

- Had at least one year of experience as a co-teacher;
- Fulfilled the role of a general education or special education teacher; and
- Worked in a school district participating in the Kansas Co-Teaching Project.

Convenience sampling involves selecting participants who are readily accessible and geographically proximate (Creswell & Poth, 2025). While I initially considered limiting the sample to my own school district, this approach was expanded due to the potential for unintended power dynamics associated with my role as a district-level administrator (Tisdell et al., 2025). As a result, participation was opened to eligible co-teachers across the state, including those within the researcher's district. Additional details are provided in Chapter 3.

Definition of Terms

1. *Collective Teacher Efficacy (CTE)*: the shared belief of all the teachers in a school or group in their individual and collective abilities to meet the needs of learners despite challenges (Donohoo, 2017b; Tschannen-Moran & Barr, 2004).
2. *Co-Teaching*: Co-teaching, for the purposes of this study, is defined as two teachers who “co-plan, co-instruct, and co-assess” (Murawski & Lochner, 2017) a diverse group of

learners with and without disabilities in a shared, physical space. While co-teaching can occur across many disciplines, this study centers around the partnership between a grade level or content area general education teacher and a special education teacher equally responsible for meeting the needs of all learners in the classroom (Villa et al., 2013).

3. *Free, Appropriate Public Education (FAPE)*: Under federal law, state and local education agencies are required to provide a free, appropriate public education to all students with disabilities (IDEA, 2004).
4. *General education*: the curriculum and physical classroom environment established for all students at a particular grade level and/or content area; for instance, a fourth-grade classroom or a high school chemistry class (Cook et al., 2021); also referred to as regular education in law (IDEA, 2004).
5. *Heterogeneous*: a school or classroom composed of students with various abilities, demographic traits, and needs (Villa et al., 1996).
6. *Inclusion*: a value, issue of equity, or philosophy that embraces that all learners, regardless of ability level or background, deserve to be included with their same-age peers in all facets of the school day (Gerrard, 1994; Villa et al., 2013; Yell et al., 2020).
7. *Individual Education Plan (IEP)*: the written statement describing the educational program of a student with a disability, developed and revised in accordance with special education laws and regulations. IEPs must be developed in accordance with student strengths and disability-related needs to promote independence (KSDE, 2024).
8. *Individuals with Disabilities Education Act (IDEA)*: federal legislation that guarantees a free and appropriate public education for all students with disabilities, including the

provision of special education services in the least restrictive environment (Wehmeyer et al., 2021).

9. *Least Restrictive Environment (LRE)*: the legal principle that requires schools to educate students with disabilities alongside their same age, typically developing peers to the maximum extent appropriate (Yell et al., 2000).
10. *Special education*: defined in law as the specially designed instruction students with disabilities require to make progress in and benefit from public education, including related services and supports (Wehmeyer et al., 2021). In Kansas, students are found eligible under IDEA in at least one of 13 categories of exceptionalities: developmental delay (ages 3-9); specific learning disability; orthopedic impairment; visual impairment, including blindness; hearing impairment, including deafness; multiple disabilities; other health impairment; emotional disability; Autism; intellectual disability, speech or language impairment; traumatic brain injury; or deaf blindness (KSDE SETS, 2024).
11. *Students with disabilities (SWD)*: students who are eligible under part B of the Individuals with Disabilities Education Act (IDEA) to receive specially designed instruction based upon their disability and its impact on academic and/or social emotional progress (KSDE, 2024).
12. *Students without disabilities (SWOD)*: students who do not qualify as having a disability under the definition indicated above (Stefanidis et al., 2023).
13. *Teacher Efficacy (TE)*: an educator's context-specific belief in their ability to meet the needs of learners in the classroom (Tschannen-Moran et al., 1998).

Assumptions

All qualitative research is grounded in underlying assumptions that shape the design, data collection, and interpretation of findings (Creswell & Poth, 2025; Tisdell et al., 2025). In this study, several assumptions were acknowledged. First, it was assumed that participants responded honestly and candidly during interviews and in the pre-interview questionnaire, providing authentic representations of their experiences within co-teaching partnerships. It was also assumed that participants had sufficient experience with co-teaching to reflect meaningfully on their practices and perceptions.

Additionally, this study assumed that co-teachers were implementing recognized co-teaching approaches (Villa et al., 2013) and were actively engaged in shared instructional practices, including co-planning, co-instructing, and co-assessing (Murawski & Lochner, 2017). While the degree of implementation may have varied across participants, it was assumed that all participants were engaged in collaborative instructional roles within inclusive classroom settings. The study also assumed that participants' descriptions of student outcomes and instructional practices were grounded in their experiences, even though these perceptions were not verified through quantitative measures. For this reason, participant perspectives were treated as valid and meaningful representations of their lived experiences within co-teaching contexts.

Regarding the role of the researcher, it was assumed that data were interpreted with integrity and care, recognizing that complete objectivity is neither possible nor expected in qualitative research (Tisdell et al., 2025). Engagement in ongoing reflexivity occurred throughout the study, with acknowledgement of personal biases related to co-teaching. This reflexivity was maintained and documented through analytic memos and journaling, which are

included in the appendix as part of the audit trail described in Chapter 3 (Saldaña, 2025; Tisdell et al., 2025). These practices supported transparency and trustworthiness in the analytic process.

Limitations

Data in this study were collected through participant self-reports, including pre-interview questionnaires, individual interviews, and dyadic interviews with co-teaching partners. Self-reported data are inherently limited by participants' ability to accurately perceive and communicate their experiences (Polkinghorne, 2005). Additionally, participation in this study was voluntary, and it is possible that participants represented co-teaching partnerships with more positive or successful experiences. As a result, findings should be interpreted as reflective of participants' lived experiences and may not represent the full range of co-teaching practices (Tisdell et al., 2025). Furthermore, because the study is qualitative and context-specific, the findings are not intended to be generalized but may have limited transferability to other educational settings.

Delimitations

This study utilized purposeful sampling to ensure that all participants had direct experience with co-teaching, the central phenomenon of inquiry (Merriam & Tisdell, 2015). Participants were limited to general and special education teachers engaged in co-teaching within Kansas, providing a consistent state-level policy context for inclusive education. The study focused specifically on co-teachers' perceptions of their experiences. As such, the perspectives of administrators, students, and other educational stakeholders were not included. Data were collected through pre-interview questionnaires and semi-structured interviews, with optional dyadic interviews to capture shared perspectives (Szulc & King, 2025). The purpose of the study

was to provide a detailed, contextualized understanding of co-teaching experiences rather than to establish a universal truth (Tisdell et al., 2025).

Organization of the Study

This chapter introduced the study, including the problem statement, purpose, research questions, conceptual framework, and a brief overview of the research design. Chapter 2 provides a comprehensive literature review of the key components of the conceptual framework: co-teaching, collective teacher efficacy (CTE), and student achievement. Chapter 3 presents an in-depth, detailed description of the study's methodology. Results of data collection and analysis are described in Chapter 4. Finally, Chapter 5 includes a discussion of the study's major findings as well as implications and recommendations for future research.

Chapter 2 - Review of Literature

The purpose of this basic qualitative study was to explore the experiences of Kansas general and special education teachers participating in co-teaching as a collaborative instructional model to meet the needs of students in inclusive general education learning environments. The overarching goal was to better understand how co-teachers described their experiences co-teaching; in particular, how co-teachers experienced collective teacher efficacy and what, if any, perceived impact co-teaching had on student outcomes. Co-teaching is defined as the partnership between two educators who are jointly responsible for the planning, instruction, and assessment of all learners in an inclusive, shared learning environment (Cook & Friend, 1995; Karten & Murawski, 2020; Villa et al., 2013). The co-teaching partners studied were general and special education teachers who participated in co-teaching in general education classrooms including students with and without disabilities. Collective teacher efficacy is defined as the combined beliefs of teachers in their unified ability to make a positive impact on student outcomes despite challenges (Goddard et al., 2000). A systematic review of the literature was conducted to explore three key topics: co-teaching, collective teacher efficacy, and student achievement. The literature review revealed a void around co-teacher collective teacher efficacy and student outcomes, as well as the lived experiences of educators' collective self-efficacy and the co-teaching phenomena.

The literature reviewed for this chapter was retrieved through various academic databases, including ERIC, ProQuest, ProQuest Theses and Dissertations Global, EBSCOHost, Education Full Text, and Academic Search Premier. A combination of search terms included *co-teaching*, *co-teach*, *collaborative teaching*, *cooperative teaching*, *team teaching*, *inclusion*, *special education*, *students with disabilities*, *Kansas*, *Kansas co-teaching project*, *student*

outcomes, academic achievement, teacher efficacy, collective teacher efficacy, administrator, principal, school leader.

This literature review is organized around each of the following themes: co-teaching, teacher efficacy, collective teacher efficacy, and student achievement. The role of the school leader in relation to co-teaching, collective teacher efficacy, and student achievement is also explored.

Co-Teaching

This section analyzes the literature to provide a thorough description of co-teaching as a collaborative instructional model to serve students with and without disabilities in the general education classroom, focusing on the four approaches to co-teaching as described by Villa et al. (2013). Cautions for each approach are discussed, as well as a review of the most common approach in the research. Next, the origin of co-teaching is examined, beginning with a summation of the historical and legal foundations of special education, inclusion, and co-teaching. The legal principle of least restrictive environment (LRE) and guidance specific to educating learners with disabilities in Kansas are explored to provide context for the setting of the study. Then, a summary of the evidence of the impact of inclusion and data regarding where students with disabilities (SWD) are educated is presented. The necessary components for effective co-teaching as described by prominent co-teaching authors and researchers are reviewed, including tools to support co-teachers. Following, exploration of the potential benefits of co-teaching for teachers and students as well as critical questions about the practice. Finally, the role of school administrators in evaluating and promoting successful co-teaching practices is examined.

Co-Teaching Defined

While slight variations exist among authors, the selected definition of co-teaching for this study includes two educators, a general education and special education teacher, who are responsible for collaborating, instructing, and assessing all students in an inclusive, general education shared classroom environment (Bauwens et al., 1989; Cook & Friend, 1995; Cook & McDuffie-Landrum, 2000; Dieker, 2001; Kloo & Zigmond, 2008; Mastropieri et al., 2005; Villa et al., 2013). Though designed as a service delivery model for students with disabilities (SWD), authors assert that co-teaching is an effective way to meet the needs of diverse groups of students with and without disabilities, including students who are multilingual or those who have skill deficits (Cook & Friend, 1995; Scruggs et al., 2007; Villa et al., 2013).

In building an understanding of the concept of co-teaching, it is helpful to have clarity around what co-teaching is not, using non-examples. According to Cook and Friend (1995) and Villa et al. (2013), Co-teaching is **not**:

- One person teaching while the other makes copies or gets a cup of coffee;
- One person teaching while the other watches;
- One person dominating all of the ideas for planning lessons, including what is taught and how it will be taught;
- Assigning one educator to act as a tutor for one student;
- Two teachers engaging in co-planning, yet providing instruction in separate physical spaces;
- Two teachers supervising a study hall period or a guest speaker;
- All the students with disabilities seated in one location, receiving separate instruction from the special education teacher or provider (an ‘island in the mainstream’).

In contrast, the premise behind co-teaching is that the general education teacher (e.g., a grade level elementary school teacher or content area secondary teacher) brings knowledge and expertise related to content area and/or grade level standards (Villa et al., 2013), including curriculum pacing (Cook & Friend, 1995). Additionally, the general education teacher typically possesses experience and knowledge related to large group instruction and classroom management (Bauwens et al., 1989). The special education teacher, in contrast, is experienced and knowledgeable in identifying unique learning needs, as well as how to facilitate student access to the content and standards, including variations in which concepts can be presented and enhanced (Bauwens et al., 1989; Friend & Cook, 1995; Kloo & Zigmond, 2008; Villa et al., 2013; Wilson & Blednick, 2011). While some declare that co-teaching partnerships should be composed of certified educators (Cook & Friend, 1995), others suggest that with the proper professional development and support, anyone can co-teach - educators, paraprofessionals, and even students (Villa et al., 2013).

Approaches to Co-Teaching

Cook and Friend (1995) initially identified five models of co-teaching that were later expanded into six (Friend et al, 2010). Similarities exist between the six models and the four main approaches described by Villa et al. (2013) as indicated in Table 2.1. The setting of this study includes co-teaching pairs at school districts in the state of Kansas. The Kansas Technical Assistance System Network (TASN) is the publicly funded agency selected by the Kansas State Department of Education (KSDE) Special Education and Title Services (SETS) team to structure improvement and facilitate support through both direct and indirect services to school districts. One of those services includes facilitation of the co-teaching project, which is nestled under the umbrella of High-Quality Instruction in Inclusive Learning Environments (Kansas Technical

Assistance Systems Network, 2024b). The co-teaching model described by Villa et al. (2013) was utilized in the development of the TASN project in the creation of professional development, sustainability coaching, and technical assistance (Kansas TASN, 2024a). As such, this literature review focuses on the four approaches as described by Villa et al. (2013): Supportive, Complementary, Parallel, and Team. However, given the prevalence of research and literature describing the models as defined by Cook & Friend (1995), this comparison is included to add clarity.

Table 2.1

Similarities in Approaches/Models to Co-teaching

Approach <i>Villa et al.</i> <i>(2013)</i>	Model <i>Cook & Friend</i> <i>(1995)</i>	Description
Supportive	– One teach/one observe – One teach/one assist	– One teacher takes the lead role while the co-teacher assists; general or special educator may lead
Parallel	– Station teaching – Parallel teaching – Alternative	– Both teachers work with different groups of students; only approach that does not include whole group instruction – Station teaching incorporates students rotating between teachers; some stations may include tasks not led by an instructor
Complementary		– One teacher leads while the co-teacher does something to enhance the instruction - e.g., visual representation, facilitating access, purposeful monitoring, etc.
Team	– Teaming	– Both teachers serve in the lead teaching role, presenting content in tandem

Note: Co-teaching approaches/models adapted from Cook & Friend (1995) and Villa et al. (2013).

Supportive

The first approach to co-teaching, supportive, entails one educator taking the lead on lesson delivery while the other acts in a supportive role, as the name suggests (Villa et al., 2013). Either the general or special educator may take the lead (Villa et al., 2013), while the educator acting in the supportive role is circulating the room and using proximity to redirect student behavior or answer individual student questions (Wilson & Blednick, 2011). Teachers may move in and out of the supportive role within one lesson. This approach requires the least amount of planning, preparation, and collaboration by co-teachers, which may make for simple early implementation in a new co-teaching partnership (Karten & Murawski, 2020; Villa et al., 2013). For this reason, it is typical for co-teaching partners who have limited or no common planning time to utilize the supportive approach (Karten & Murawski, 2020; Villa et al., 2013; Wilson & Blednick, 2011).

Further, this method is utilized when one of the educators in a co-taught team does not have curriculum content area expertise, and new content is being presented to students (Villa et al., 2013; Wilson & Blednick, 2011). For instance, a team of co-teachers in Physics might leverage the content strength of the general education teacher during direct instruction, especially if the special education teacher is new to the content area. As reflected in Table 2.1, two models fit under the umbrella of the supportive approach - ‘one teach, one observe’ as well as ‘one teach, one assist’ (Cook & Friend, 1995).

Cautions. When using the supportive approach, co-teaching pairs should be mindful that both educators take turns acting in the lead role to communicate to students that both are teachers in the classroom (Cook & Friend, 1995; Villa et al., 2013). Over time, this approach should become the least utilized as co-teachers grow in comfortability and experience (Villa et al., 2013;

Wilson & Blednick, 2011). The expertise of the teacher in the supportive role is not fully utilized and accessibility to learning is not enhanced when this is the dominant approach (Cook & Friend, 1995; Wilson & Blednick, 2011). As such, resentment from both educators may grow as the educator in the supportive role feels highly trained and underutilized, while the teacher leading instruction may be overwhelmed and identify a sense of an unequal partnership (Cook & Friend, 1995; Villa et al., 2013; Wilson & Blednick, 2011).

Of equal importance, the supportive method should not be used in a way that continually pairs one adult (e.g., special education teacher, paraprofessional) with one student (Villa et al., 2013). Referred to as “velcroing” an adult to a student, this practice does not allow co-teaching to be fully realized and impedes success for the student (Villa et al., 2013, p. 76). Moreover, the practice of attaching an adult to a student may limit both classroom teacher and peer interaction with the student, inhibit independence, and create student perceptions that the adult and student are not part of the classroom (Giangreco et al., 1997).

Parallel

During a parallel co-taught lesson, each co-teacher is presenting, monitoring, or facilitating a separate group of students simultaneously (Villa et al., 2013), providing an opportunity for co-teachers to experience parity (Wilson & Blednick, 2011), a sense of an equal partnership. The lessons and/or activities might be the same or different, or based upon identified student needs. Educators may split the group of students in half or have one co-teacher work with a small group. As indicated in Table 2.1, several models fit as examples of the Parallel approach (Villa et al., 2013). Station teaching is one example (Friend & Cook, 1995; Villa et al., 2013; Wilson & Blednick, 2011). During station teaching, each co-teacher might take the lead at a different station or center, utilizing a paraeducator or independent activities at the others.

Students then circulate between stations within the course of a lesson or over a few days, interacting with each co-teacher separately (Wilson & Blednick, 2011). Station teaching may increase the response rate of students and allow for more personalized adult attention (Wilson & Blednick, 2011).

The only approach to co-teaching that is not whole group instruction, parallel leverages the number of adults in the classroom, reducing the adult to student ratio and allowing for students to receive more frequent feedback (Cook & Friend, 1995; Wilson & Blednick, 2011). Individualization, differentiation, and collection of data to meet student needs is a benefit of the parallel approach (Villa et al., 2013).

Cautions. Co-teachers must be mindful that classroom noise levels do not become too distracting and should ensure that both educators possess strong content knowledge, as these are common cautions noted with this approach (Villa et al., 2013; Wilson & Blednick, 2011). Most importantly, consistently placing students in homogenous (same ability) groups with the same co-teacher (e.g., all the students on IEPs or who are low achieving are always in a group with the special education teacher or paraprofessional) can lead to stigmatization and lower academic achievement (Villa et al., 2013). Instead, students should be placed in heterogeneous, or mixed ability, groups for the majority of the time (Villa et al., 2013; Wilson & Blednick, 2011). While co-teachers may use assessment data to form intentional small groups for targeted instruction, it is critical to monitor group composition carefully. Ensuring that the same students are not repeatedly placed with the same teacher helps maintain equity and avoids reinforcing labels or low expectations when implementing this approach (Villa et al., 2013; Wilson & Blednick, 2011).

Finally, while co-teaching can create opportunities for small group instruction during designated intervention times, group composition should be based on students' skill needs rather than labels (Villa et al., 2013). Groups should remain fluid rather than fixed, allowing for flexibility in instructional planning. Additionally, co-teachers should share equal responsibility for addressing the needs of all learners (Villa et al., 2013, p. 44; Wilson & Blednick, 2011).

Complementary

In the complementary co-teaching approach, one educator enhances or supports the instruction provided by the other to make content more accessible for all learners (Villa et al., 2013). Typically, one teacher leads the direct instruction while the co-teacher augments the lesson by incorporating visual aids, completing a graphic organizer in real time, or offering analogies to clarify key concepts (Villa et al., 2013). Again, the co-teachers may alternate who takes the lead in direct instruction, ensuring shared instructional responsibility (Villa et al., 2013). A simple yet effective use of this is for one teacher to ask questions that check for understanding related to directions or content, which reinforces comprehension and promotes student engagement (Villa et al., 2013).

Cautions. Ensuring that student talk is balanced with teacher talk, rather than co-teachers dominating classroom discourse, is one caution of the complementary approach (Villa et al., 2013). Actively monitoring students throughout the lesson is also critical to maintaining engagement and addressing learning needs in real time. Additionally, intentionally planning for both educators to alternate instructional roles helps prevent the perception that one teacher is the “real teacher” while the other is merely supporting (Villa et al., 2013).

Team

In a team co-taught classroom, “equity and parity” are visibly present as both educators collaborate to lead all aspects of instruction and classroom management (Villa et al., 2013, p. 62; Wilson & Blednick, 2011). Parity refers to both co-teachers contributing equally, yet in different ways, to the instructional process (Conderman & Liberty, 2018). Nonverbal demonstrations of parity may include listing the names of both co-teachers’ names on the grade card, classroom door, and on all correspondence with families (Cook & Friend, 1995). Responsibilities such as planning, instructing, and assessing are shared fully, both inside and outside of the classroom (Murawski & Lochner, 2011). Instruction flows naturally between the two educators, with co-teachers alternating roles and supporting each other and their students in real time. During the team approach, both educators “teach and support each other and the students at the same time” (Wilson & Blednick, 2011, p. 37).

It stands to reason that the team approach may take time to implement effectively, and that co-teachers with more experience working together are more likely to use this approach effectively (Villa et al., 2013; Wilson & Blednick, 2011). This approach is particularly effective when instructional standards call for demonstrating multiple ways of thinking or presenting various solutions to a problem (Wilson & Blednick, 2011).

Cautions. As with the complementary approach, co-teachers using the team-teaching approach should monitor the balance between teacher and student discourse to ensure students remain actively engaged. A common pitfall is becoming so focused on interactions between co-teachers that student engagement and purposeful monitoring are unintentionally neglected. Additionally, a strong understanding of one another’s instructional style and clear communication are essential to avoid overlapping or interrupting each other during instruction

(Villa et al., 2013). Rather than simply “tag-team teaching” (Wilson & Blednick, 2011, p. 38), the true utilization of the team approach involves dynamically adjusting instruction in response to students’ needs.

Usage of Co-Teaching Approaches

Multiple authors and/or researchers advise that co-teachers should aim to move in and out of each of the approaches/models, using professional judgment in selecting the approach that best fits during lesson planning, concentrating on alignment with the content, lesson, and needs of the students (Cook & Friend, 1995; Scruggs et al., 2007; Villa et al., 2013). However, a meta-synthesis identified that the supportive approach was the most common model used by co-teachers (Scruggs et al., 2007). As stated earlier, this model should ultimately be the least utilized approach, as it is the least effective use of two educators in the classroom (Villa et al., 2013). Likewise, this approach “does not provide the intensity of instruction and support that co-teachers can ideally provide” (Wilson & Blednick, 2011, p. 33).

In contrast, an updated meta-synthesis identified that while the supportive approach was commonly observed, in-depth research studies with co-teachers demonstrated that co-teachers were utilizing a variety of approaches (Strogilos et al., 2023). Further, co-teacher perceptions of the approaches varied. While some special educators reported feeling underutilized or used in the capacity of a paraeducator (Besette, 2008), others found the supportive approach to be of benefit to students, and indicate it fits as an effective entry point into the lesson (Strogilos & King-Sears, 2019).

Origin of Co-Teaching

An examination of the origin of co-teaching provides important context for understanding the historical and legal foundations that support its use as a service delivery model for SWD.

Given that school administrators are responsible for ensuring positive outcomes for all students, a foundational understanding of special education is paramount (Causton & Theoharis, 2014). The question of where students with disabilities should receive their education has been a longstanding debate (Biklen, 2020; Causton-Theoharris et al., 2011; Fuchs & Fuchs, 1994; Kaufman & Badar, 2016; Zigmond, 2015). In fact, before access to public education was federally legislated for students with disabilities, many families were forced to choose between educating their children with disabilities at home, in institutions, or consider costly private education options (Biklen, 2020; Zigmond, 2015). In the early 1950s, while some special education programs were available in some public schools, students with disabilities were often perceived as incapable of learning the same academic content as their typically developing peers. As such, students with disabilities were often assigned to separate schools or classes, where they engaged in activities vastly different from their same-age, non-disabled peers - stringing beads and weaving baskets, for example (Zigmond, 2015).

In 1954, the United States Supreme Court changed the trajectory of public education with a landmark, unanimous ruling in *Brown v. Board of Education* (Yell, 2022). While specifically related to segregation of students based on race, the court's ruling that "separate educational facilities are inherently unequal" (*Brown v. Board of Education*, 1954) established education as a civil right, prohibiting denial of education "solely on the basis of a person's unchangeable characteristics" (Yell, 2022, p. 199). This ruling set the stage for several prominent legal cases related to securing education for SWD (Yell, 2022). However, even in the early 1970s, public schools in the United States still educated just one in five children with disabilities, with some states continuing to exclude entire groups of children, such as those with intellectual disabilities and visual or hearing impairments (U.S. Department of Education, 2024a; National Council on

Disability, 2018). Court rulings in both *Pennsylvania Association for Retarded Citizens (PARC) v. Commonwealth of Pennsylvania* (1971) and *Mills v. Board of Education of the District of Columbia* (1972) upheld that practices and laws excluding SWD from access to public school were a violation of the constitution (National Council on Disability, 2018; Yell, 2022). These rulings aligned with views of disability advocates who argued that segregation of students based on their perceived ability or disability category was no different than discrimination on the basis of race, setting the precedent for similar legal cases that followed (Yell, 2022; Zigmond, 2015).

Access to a free, appropriate public education (FAPE) was officially established as a federally protected right for children with disabilities in 1975, when Congress enacted The Education for All Handicapped Children Act (EAHCA), or Public Law 94-142. Largely driven by dissatisfaction from parents of SWD related to institutionalization and lack of access to public education (Wehmeyer, 2021), for the first time, federal law gave an answer to where students with disabilities should receive their education - in the public school, with all other children (Zigmond, 2015). In addition to prohibiting schools in every state from denying the enrollment of a student based on their disability, this act established that a student's FAPE includes the provision of individualized special education and related services needed for the student to benefit from public education (EAHCA, 1975). Further, the act provided the protection of certain rights for SWD and their parents, established oversight and assessment of education efforts for SWD, and enacted provision of support to states and local districts regarding the education of SWD (USDOE, 2024a).

Least Restrictive Environment (LRE)

Even upon its inception in 1975, PL 94-142 “codified the preference” (Zigmond et al., 2009) for educating students with disabilities in the general education classroom, specifying that

to the maximum extent appropriate, a student's special education and related services must be provided in the least restrictive environment (LRE), alongside other students without disabilities (EAHCA, 1975; Wehmeyer et al., 2021). In the 1980s, research related to student outcomes for those taught in separate special education classrooms or schools brought attention once again to the question of "where" students are best served (Zigmond, 2015). In 1986, the Assistant Secretary for the Office of Special Education Programs declared:

Although well-intentioned, this so-called 'pull out' approach to the educational difficulties of students with learning problems has failed in many instances to meet the educational needs of these students and has created, however unwittingly, barriers to their successful education (Will, 1986, p. 413).

Pull-out special education refers to a service delivery model where students with disabilities are removed from the general education classroom to receive instruction in a separate setting, typically exclusively with other students who also have disabilities (Causton-Theoharis et al., 2011; Cook & Friend, 1995).

After multiple reauthorizations, EAHCA was renamed the Individuals with Disabilities Education (IDEA). In particular, the 1997 and 2004 reauthorizations re-emphasized the importance of educating students with disabilities in general education environments as much as possible (Murawski & Swanson, 2001; National Council on Disability, 2018) yet renewed the focus on what students with disabilities needed access to in those general education environments. Prior, the emphasis was on providing access to the student's typically developing peers without disabilities. In contrast, the reauthorization emphasized the need for students to access the general education curriculum standards and general education teacher (Gilmour et al., 2019; Zigmond, 2015, p. 201). Specifically, IDEA (2004) states:

to the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are non-disabled; and special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily (IDEA, 2004, §300.502).

Wehmeyer et al. (2021) emphasize the importance of the terms ‘regular education environment’ and ‘supplementary aids and services’ in the language of IDEA. The regular, or general, education environment includes classrooms, facilities, playgrounds, gyms, and other spaces where a student without a disability would attend (Wehmeyer, 2021, p. 37). Although the LRE provision infers a focus on the location where students receive their education by using the term ‘environment’, it also encompasses the decisions about what services are needed and how those services will be implemented most effectively (IRIS Center, n.d.).

Supplementary aids and services, as defined in IDEA (2004), refer to the “aids, services, and other supports that are provided in regular education classes, other education-related settings, and in extracurricular and nonacademic settings, to enable children with disabilities to be educated with nondisabled children to the maximum extent appropriate” (IDEA, 2004). These supports and services are the “companion” to the specially designed instruction that is provided through special education, meant to enable SWD to be successful and make progress in the general education environment (Wehmeyer, 2021, p. 37). Examples include special educators, paraeducators, technology tools, modified activities or tests, enlarged text, pacing of instruction, pre-written notes, and many other options (IRIS Center, n.d.; Villa et al, 2013; Wehmeyer,

2021). Co-teaching, then, may be considered a supplementary service. The use of these supplementary supports, aids, and services within the general education environment must be considered prior to the determination that a student will receive their education in a separate setting (Wehmeyer, 2021).

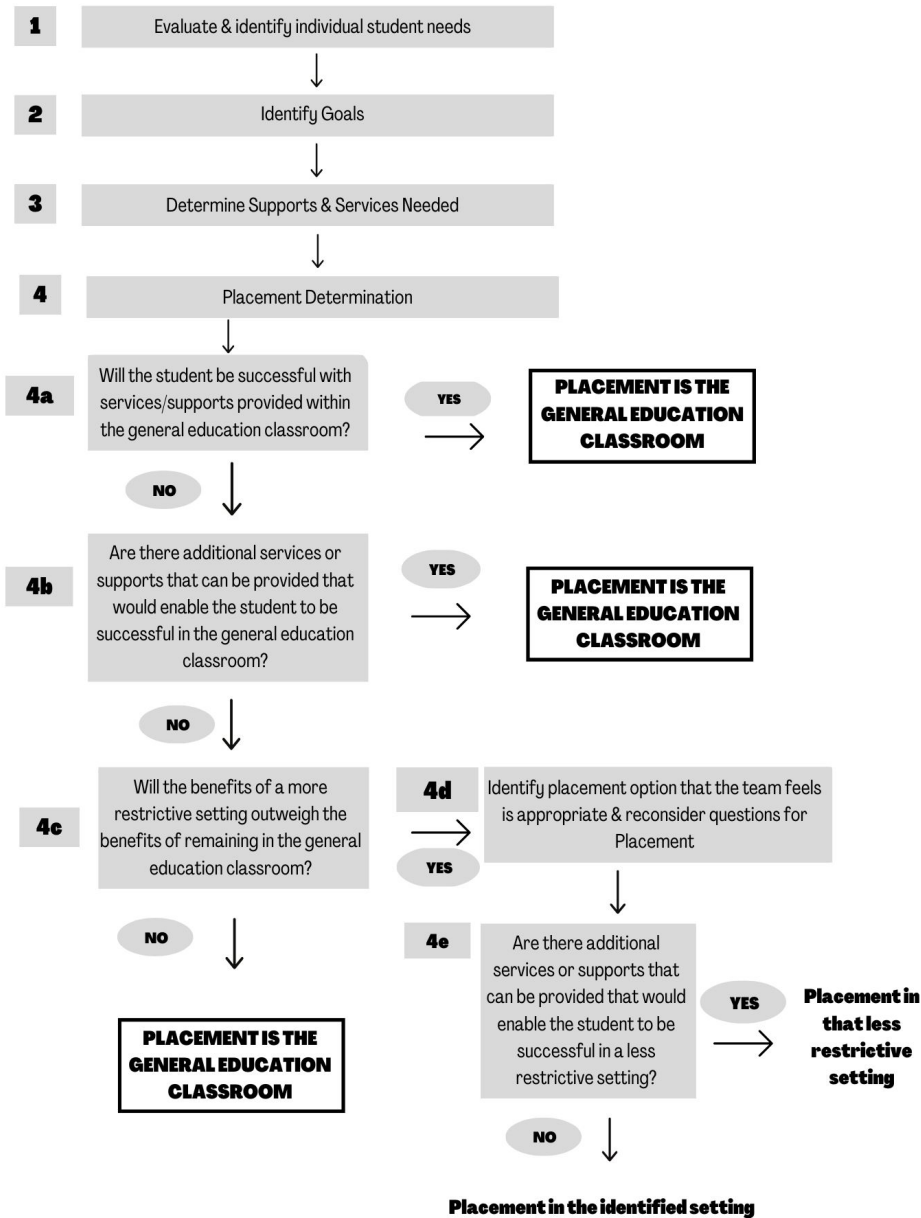
In the implementation of PL 94-142 and in alignment with the principle of LRE, special educators facilitated a continuum of placements for SWD ranging from the least restrictive, full day placement in a general education classroom, to the most restrictive, a separate special day school or hospital, in order to “ensure the where of service delivery matched the what and how based on the students’ unique intellectual, physical, and emotional needs” (Zigmond et al., 2009, pp. 191-192). With this emphasis on inclusion for students with disabilities and increased accountability measures for all students with other federal legislation such as No Child Left Behind (2001) and Every Student Succeeds Act (ESSA, 2015), the preferred service delivery model for students with disabilities was in the general education classroom (Zigmond, 2015). The 2004 reauthorization of IDEA brought even more accountability through required reporting of SWD participation and performance in state assessments (Gilmour et al., 2019).

Placement Determinations. Chapter six of the Special Education Process Handbook of the Kansas State Department of Education (KSDE) outlines the steps teams are expected to take in the consideration of where a student’s services will be provided. The decision-making guide, replicated in Figure 2.1, reinforces that placement in general education is where determination discussions must begin, followed by the consideration of support brought into the classroom (KSDE, pp. 125-126). KSDE acknowledges that full time placement in a general education setting may not be most appropriate for every student, referencing the need for “individualized inquiry” (KSDE, 2024, p. 115).

Figure 2.1

LRE Decision Tree

Least Restrictive Environment (LRE) Decision Tree



Note. Decision-making flowchart for determining student placement. From Kansas State Department of Education, Special Education and Title Services (2024). *Kansas special education process handbook*.

Placement decisions should remain fluid and individualized based upon student needs, which may change over time (IRIS Center, n.d.). IEP teams, including principals, must document their “good faith” efforts taken to educate a SWD in the general education environment, including modifications to the curriculum as well as the implementation of supplementary aids and services, to ensure legally defensible placement decisions are made for SWD (Yell et al., 2020, p. 295).

Inclusion

While the terms LRE, mainstream, and inclusion are often used interchangeably, each has a distinct meaning (Yell et al., 2020). LRE, as described previously, is a legal principle rooted in the IDEA (2004) that requires that SWD receive their education alongside typically developing, non-disabled peers to the maximum extent appropriate (Yell et al., 2020). Mainstreaming, a more dated term, entails physical placement or integration in a general education classroom (Yell et al., 2020; Zigmond et al., 2009), while inclusive education is defined by proponents to be “an issue of social justice in which separate education of special education students is not only unequal, but detrimental to the development of all students” (Gerrard, 1994, p. 58). In this way, inclusion is also described as a value, issue of equity, or philosophy that embraces the inherent worth and dignity of all learners (Gerrard, 1994; Villa et al., 2013; Yell et al., 2020). Though not mentioned specifically in IDEA, ‘inclusion’ is also a term used in the field of education to describe the education of diverse groups of students, including those with disabilities, in the general educating setting alongside their typically developing peers with the provision of appropriate services and supports (Murawski & Swanson, 2001).

An expanded definition states: “Inclusion is built on the premise that all students should be valued for their unique abilities and included as essential members of a school community. Inclusion is not a place; it is a way of thinking” (Causton-Theoharris & Theoharris, 2008, p. 25). Further, in their 1984 call to merge special and general education into one unified system, assert that all students have variable needs, and that categorizing students as ‘special’ and ‘regular’ assumes that only a certain group of students has individual differences and needs that should be met (Stainback & Stainback, 1984). In fact, as early as 1968, Dunn questioned the efficacy of continuing to operate two distinctly separate education systems for SWD and SWOD.

Inclusive education that leverages the expertise of both general and special educators offers a means of addressing the needs of all students—including those who struggle academically but are not eligible for special education under traditional eligibility criteria (Stainback & Stainback, 1984). When educators intentionally structure collaboration among students with and without disabilities, the experience becomes mutually beneficial (Gerrard, 1994). Such environments foster empathy, reduce stigma, and normalize diversity in ways that benefit the entire student body (Gerrard, 1994). A central aim of inclusion is to integrate evidence-based practices from special education into general education classrooms to enhance instructional quality for all learners (Shoulders & Krei, 2016). Further, truly effective co-teaching influences “how materials are constructed, how content is presented, and how assignments and exams are created” (Wilson & Blednick, 2011, p. 38), thus providing differentiated support that benefits every learner.

Advocates for inclusion argue that it is not only an educational approach but also a civil right and a matter of social justice for students with disabilities (Biklen, 2020; Causton-Theoharris et al., 2011; Cole et al., 2023; Gerrard, 1994; Lipsky & Gartner, 1994; Stainback &

Stainback, 1984). They emphasize the evidence indicating that students with disabilities experience both academic and social benefits in inclusive settings (Baker et al., 1994; Biklen, 2020; Cole et al., 2004; Cole et al., 2023; Fisher et al., 1998; Hehir, et al., 2016; Waldron & McKleskey, 1998; Walsh, 2012). However, critics argue that inclusive education must be accompanied by increased support for both teachers and students, and question what continues to make special education special within the general education setting (Fuchs & Fuchs, 1995; Zigmond, 2015). Concerns persist that SWD may be placed in general education classrooms without adequate support (Gerrard, 1994). Others contend that the focus should shift from a focus on the learning environment to the quality of instruction itself (Hornby & Kauffman, 2024). In other words, for these critics, the “what” is more important than the “where”.

Interpreting inclusion as a one-size-fits-all model is flawed in and of itself, contradicting the foundational principles of special education. A core tenant of special education lies in the development of individualized education plans (IEPs) tailored to meet each student’s unique needs. As such, assuming that all SWDs should be placed in the same setting undermines the very concept of individualization (Zigmond, 2015).

In contrast, proponents of inclusion contend that students with disabilities should not have to earn or prove their right to be present in the general education classroom (Biklen, 2020; Lipsky & Gartner, 1994). Rather, all schools should strive to create learning environments that are welcoming to all students, grounded in the presumption of competence and a commitment to fostering belonging (Biklen, 2020; Causton-Theoharis et al., 2011).

In reflection of this perspective, the National Council on Disability (2018) asserts, “inclusion is not a place, but rather a systemic approach to uniquely addressing student learning and social engagement within the same instructional frameworks and settings designed for the

whole school community” (p. 12).

Impact of Inclusion. The effects of student placement in general education settings have been extensively studied for both SWD and SWOD. Research consistently highlights the positive academic and social outcomes of inclusive environments for SWD (Baker et al., 1994/1995; Barrett et al., 2020; Carlberg & Kavale, 1980; Cole et al., 2023; Cosier et al., 2013; Fisher & Meyer, 2002; Hehir et al., 2016; Wang & Baker, 1985/1986) and for SWOD (Kalambouka et al., 2007; Kart & Kart, 2021; Oh-Young & Filler, 2015; Staub & Peck, 1994/1995; Szumski et al., 2017).

Inclusion and SWD. SWD experience both higher academic achievement and more positive social-emotional outcomes in inclusive classrooms as opposed to more restrictive settings (Baker et al., 1994/1995; Carlberg & Kavale, 1980; Cole et al., 2004; Fisher & Meyer, 2002; Rea et al., 2002; Waldron & McLeskey, 1998; Wang & Baker, 1985/1986). Student performance on state assessments is one way to measure academic impact. Barrett et al. (2020) examined student time spent in general education environments and state assessment scores in English/Language Arts and Math. Using cumulative time spent in general education over three school years, the study found that SWD who spent more time in an inclusive setting achieved higher scaled scores on state assessments in both English/Language Arts and Math. Barrett et al. (2020) hypothesize that additional time spent in inclusive settings “increases exposure to the core curriculum and, therefore, the content covered on the state assessment” (p. 507).

Other studies investigating the relationship between amount of time spent in inclusive general education environments and achievement for SWD have found consistent positive associations, suggesting that increased access to inclusive settings is linked to improved

academic outcomes – even when accounting for varying levels of support (Cole et al., 2004; Cole et al., 2023; Cosier et al., 2013; Lombardi et al., 2012; Oh-Young & Filler, 2015).

Similarly, Rojewski et al. (2015) analyzed national longitudinal transition data to examine the relationship between inclusive high school student placement and postsecondary enrollment. Their findings revealed that SWD who earned 80% or more of their academic credits in general education settings were “twice as likely to enroll and persist through postsecondary education” (Rojewski et al., 2015, p. 214). Likewise, Lombardi et al. (2012) analyzed data from the National Longitudinal Transition Study-2 to explore the relationship between instructional setting and postsecondary participation. Their findings showed that SWD who received math instruction in inclusive settings were “two times more likely to participate in 2 and 4-year programs” (Lombardi et al., 2012, p. 170).

In addition, Fryxell and Kennedy (1995) examined the relationship between educational placement and social relationships for students with severe disabilities. Their findings revealed that students educated in inclusive settings had “substantially larger friendship networks composed primarily of peers without disabilities” (p. 259) compared to SWD educated in more restrictive environments. Increased time spent in general education classrooms was also associated with higher levels of social interaction, as well as greater social support both received from and extended to peers without disabilities (Fryxell & Kennedy, 1995).

Inclusion and SWOD. A growing body of research also examines the impact of inclusion on SWOD. In a meta-analysis involving nearly 5 million students across seven countries, a small but positive effect was found on both academic and social growth for SWOD educated in inclusive settings (Szumski et al., 2017) At the very least, research indicates that SWOD experience neutral outcomes when learning alongside SWD (Staub & Peck, 1994/1995),

suggesting that the presence of SWD in an inclusive environment is not to the detriment of their peers without disabilities (Hehir et al, 2016).

In a more recent review, academic and social outcomes for SWOD were examined across international contexts (Kart & Kart, 2021). At the elementary level, academic outcomes were generally positive or neutral, while findings at the secondary level were more mixed, including some neutral or negative academic effects. However, across both levels, social outcomes were consistently positive: SWOD demonstrated increased tolerance, acceptance, and understanding of individual differences as a result of education in inclusive settings (Kart & Kart, 2021).

What happens in segregated classrooms?

An alternative to education in an inclusive learning environment with support and services is to educate students in a separate, or segregated, setting (Will, 1986). This is more commonly referred to as “pull out,” as mentioned previously, indicating that students spend some time in the general education classroom, and then leave to receive instruction somewhere else (Causton-Theoharis et al., 2011; Cook & Friend, 1995; Wang et al., 1986). While the pull-out model is commonly used to serve students with disabilities, it is also used for students presenting with skill deficits or language needs, particularly in schools where title services are employed based upon the socioeconomic status of the students in the school (Frattura & Topinka, 2006). One of the premises behind providing special education services in a separate setting is to reduce the number of students (Causton-Theoharis et al., 2011). However, in an investigation of instructional reading practices in special education resource classrooms, special education teachers most often employed whole group instruction, rarely using time for individual or small group instruction (Vaughn et al., 1998). Anywhere from five to nineteen students were identified in the resource room for reading instruction (Vaughn et al., 1998). Conducting

multiple observations of fourteen special education teachers across thirteen different schools, very few lessons incorporated the use of differentiated materials or instructional methodologies, despite the range of reading abilities of the students in the room (Vaughn et al., 1998).

Where are students with disabilities educated?

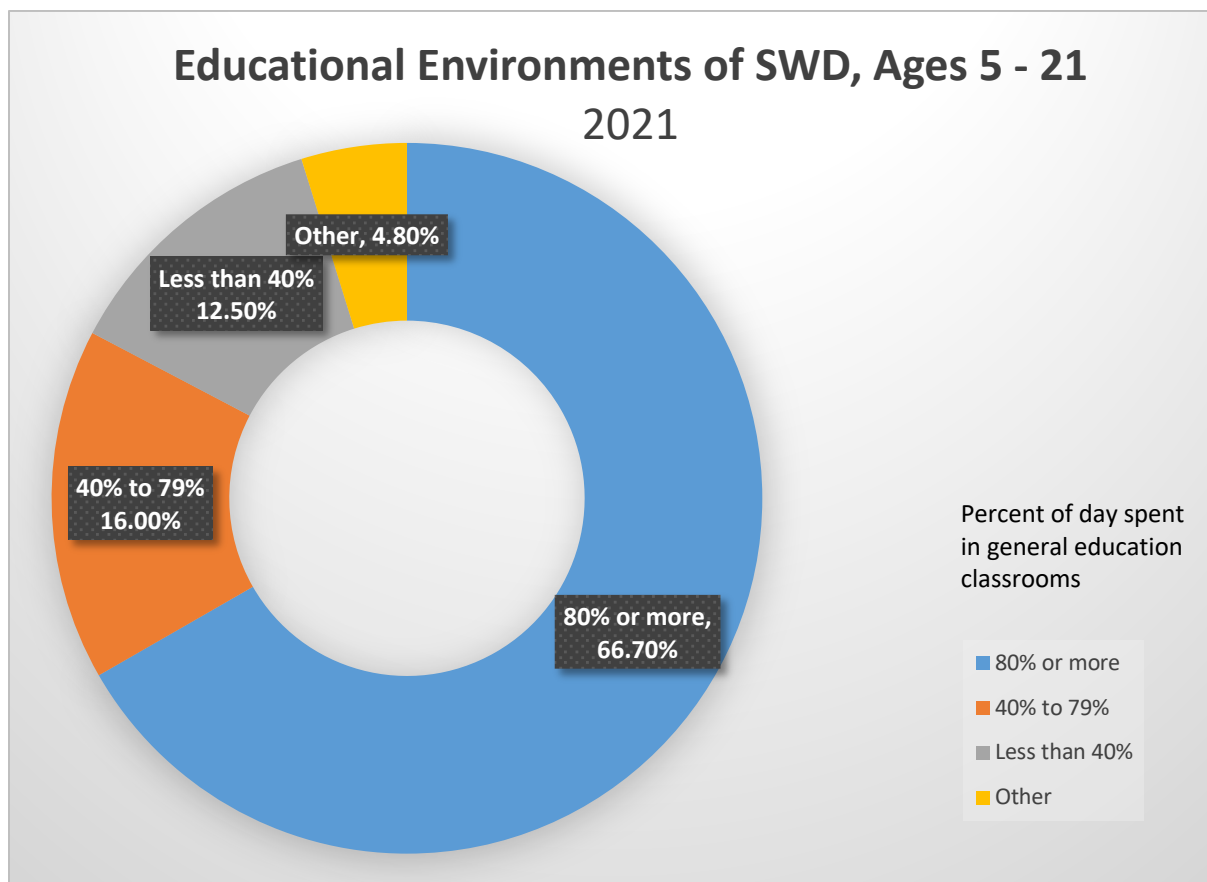
Annual reports to Congress highlight the importance of where SWD are educated along the placement continuum, incorporating state and local agency data on IDEA implementation and SWD educational environments (Zigmond et al., 2009). The U.S. Department of Education's *45th Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act* (2023) detailed the educational environments of students with disabilities, ages 5 (school-age) through 21, served under IDEA Part B. 'Educational environments' refers to the settings where these students receive instruction, including special education and related services. This data is illustrated in Figure 2.2, which identifies that in 2021:

- 95.2% of SWD ages 5 through 21 spent at least some of their educational day in the general education classroom;
- 82.7% of SWD of the same age range spent at least 40% of the day in general education;
- 66.7% of SWD ages 5 through 21 spent 80% or more of their school day in a general education classroom - only a slight increase of 5.6% over the last ten years, as the amount reported for 2011 was 61.1% (USDOE, 2014);
- 16% of school-age SWD spent between 40% to 79% of the school day in the general education setting, spending time in a separate setting for special education services for academics, behavior, or related services such as speech/language, physical therapy, or occupational therapy;

- 12.5% of SWD spent less than 40% of their school day in the general education classroom, suggesting that a self-contained special education classroom is where the majority of the educational day occurs;
- Less than 5% of SWD were educated in “other environments,” such as parentally placed private schools, separate or special day schools, hospital/homebound, residential facilities, or correctional facilities. (USDOE, 2024, pg. 55).

Figure 2.2

Educational Environments of SWD



Note. Graph depicts the Percentage of students ages 5 (school age) through 21 served under IDEA, Part B, by educational environment, expressed as the percentage of time students spend in the general education classroom: Fall 2021 (U.S. Department of Education, 2024).

Co-teaching to achieve inclusion

The concept of co-teaching can be traced to the 1960s when team teaching, not necessarily centered around a partnership between general and special educators, was implemented as a type of “progressive education” for secondary schools (Cook & Friend, 1995; Villa et al, 2012, p. 11). Initially termed ‘cooperative teaching’ (Bauwens et al., 1989) and shortened to ‘co-teaching’ to clear up confusion (Cook & Friend, 1995), by the 1980s, the term co-teaching was most often used to describe a service delivery model for special education. Bringing together general and special education teachers to provide direct services to students in one physical space, this was also viewed as an instructional model to aid in serving an increasingly diverse population of learners in a heterogeneous group (Bauwens et al., 1989; Cook & Friend, 1995; Villa et al., 2013). As students with disabilities were increasingly educated in more inclusive environments, co-teaching grew in popularity as a cost-effective way to meet the needs of learners (Cook & McDuffie-Landrum, 2020; Keefe & Moore, 2004; Mastropieri et al., 2005; Murawski & Lochner, 2011; Villa et al., 2013; Wilson & Blednick, 2011; Zigmond, 2015).

Creating Conditions for Successful Co-teaching

Decades of research and co-teaching literature identify recurring themes in elements that enhance successful co-teaching partnerships (Mastropieri et al., 2005; Murawski & Swanson, 2001; Walsh, 2012). Additionally, authors have presented tools to facilitate communication and collaboration amongst co-teaching teams and those who support them (Villa et al., 2013; Wilson & Blednick, 2011). The key themes in the research are described below.

Professional Development/Preparation

Professional development or preparatory training is consistently identified as essential for effective implementation of co-teaching (Mastropieri et al., 2005; Pratt, 2014; Scruggs et al., 2007; Walsh, 2012; Walther-Thomas et al., 1996), and continues to emerge in more recent literature (Strogilos et al., 2023), particularly among educators who are new to the co-teaching model (Rivera et al., 2014). For example, one study identified that co-teachers with access to ongoing professional development expressed greater positivity, interest, and confidence in the collaborative instructional model (Pancsofar & Petroff, 2013). Conversely, a lack of training or professional development has been widely cited as a barrier to successful co-teaching (Mastropieri et al., 2005; Moin et al., 2009; van Hover et al., 2012). Effective secondary co-teaching teams extended beyond the professional development provided to them (Pratt, 2014). These teams actively pursued ongoing learning by seeking out additional resources and opportunities, demonstrating a commitment to the success of their co-teaching partnership through personal initiative and continuous growth.

Administrative Support

Including school principals in professional development is key in establishing a shared understanding of co-teaching and ensuring effective implementation at the building level (Murawski & Swanson, 2001; Scruggs et al., 2007). Principal support, like professional development, is repeatedly identified as a critical factor in the successful implementation and sustainability of co-teaching initiatives (Mastropieri et al., 2005; Moin et al., 2009; Murawski & Swanson, 2001; Pratt, 2014; Scruggs et al., 2007; Strogilos et al., 2023; Walsh, 2012). Specific actions that administrators can take to support co-teaching are addressed in greater detail in a later section.

Parity

Ensuring both educators in a co-taught relationship are seen as equal teachers in the eyes of the students is important, particularly early on in a co-taught relationship (Cook & Friend, 1995). As referenced earlier, the literature refers to this as ‘parity’ (Conderman & Liberty, 2018; Cook & Friend, 1995; Villa et al., 2013). Another aspect of parity involves elevating the expertise and voice of each professional (Conderman & Liberty, 2018). Other strategies to impact parity include reinforcement through visuals, such as displaying the names of both teachers on the door, classroom roster, and on any materials that go home to families (Cook & Friend, 1995; Villa et al., 2013).

Effective co-teaching teams established parity by recognizing and valuing the unique expertise each partner brings to the classroom (Pratt, 2014). However, establishing true parity also required teachers to “believe they were equals in planning, instructing, classroom management, and grading” (Pratt, 2014, p. 9). Co-teachers in secondary settings fostered parity by equitably dividing lesson planning responsibilities and presenting a united front to students, which helped build trust (Pratt, 2014). Furthermore, effective secondary co-teachers extended the concept of parity beyond shared instructional duties to include mutual “respect, trust, and care beyond the classroom” (Pratt, 2014, p. 11).

Common Planning Time

Prioritizing and embedding common planning time for co-teachers is another persistent element in supporting successful co-teaching practices (Bouck, 2007; Friend, 2010; Kohler-Evans, 2006; Mastropieri et al., 2005; Moin et al., 2009; Murray, 2004; Pratt, 2014; Scruggs & Mastropieri, 1996; Scruggs et al., 2007; Stefanidis et al., 2019; Strogilos et al., 2023; Walsh, 2012; Villa et al., 2013). While specific recommendations vary, a general guideline for the

amount of collaborative planning time needed, particularly for partners new to co-teaching or to each other, is approximately one hour of planning per week for each subject they co-teach (Villa et al., 2013). Lack of planning time is consistently identified as a barrier to successful co-teaching implementation (Strogilos et al., 2016).

Communication and Agreements

The establishment of specific roles and responsibilities for each co-teacher and front-loading collaboration around common expectations and classroom routines is paramount to ensure successful partnerships (Dieker, 2001; Hang & Rabren, 2009; Keefe & Moore, 2004; Mastropieri et al., 2005; Pratt, 2014; Sileo, 2011). For example, successful co-taught teams engaged in preplanning that included discussion of teacher philosophies of inclusion, curricular expectations, and the role each teacher would assume (Dieker, 2001). Other essential topics to address prior to implementing co-teaching include determining how student success and the co-teaching partnership will be evaluated, establishing when and how planning will take place, and developing a shared approach for responding when students do not meet academic or behavioral expectations (Dieker, 2001; Pratt, 2014).

Tools to Support Co-Teaching

A variety of tools have been developed to support co-teaching partnerships. Designed for both new and experienced co-teachers, these tools reflect research-based practices essential to successful implementation and aim to address common barriers to effective collaboration (Murawski & Karten, 2020; Villa et al., 2013) Table 2.2 summarizes some of the key tools recommended by leading co-teaching authors and researchers (Dieker, 2001; Gately & Gately, 2001; Pratt et al., 2017; Villa et al., 2013; Wilson & Blednick, 2011). While these resources offer practical guidance for planning, communication, and instructional design, some researchers have

raised concerns about the emphasis on logistical tools over outcomes-based research. They argue that the field needs a stronger evidence base on the impact of co-teaching practices on student achievement (Murawski & Swanson, 2001; Friend et al., 2010; Wilson & Blednick, 2011).

Table 2.2*Sample Tools to Facilitate Successful Co-Teaching*

Name of Tool	Source	Description
Co-Teaching Planning Meeting Agenda Format	Villa et al., 2013, p. 221	Sample form to facilitate efficient use of time and guide co-teachers through lesson planning
Self-Assessment: Are We Really Co-Teachers?	Villa et al., 2013, p. 222	Created to help co-teachers self-evaluate planning and instructional practices against the intentions of co-teaching
Co-Teaching Tracking Form	Villa et al., 2013, p. 229	Designed as a way for co-teaching teams to track the approaches used over time
Co-Teaching Rating Scale (general/special educator formats)	Gately & Gately, pp. 45-46	Designed for teachers or observers to evaluate co-teaching effectiveness based on teacher and student behavior
Quick Co-Teaching Plan; Co-Teaching Frame	Wilson & Blednick, 2011, pp. 89-90	Short- and long-term lesson planning tools 'Co-teaching plan' for quick planning with co-teaching model selection. 'Co-teaching frame' for unit or school year planning
Rating Scale for Teaching Materials; Task and Lesson Rating Scale	Wilson & Blednick, 2011, pp. 145-148	Tools to help identify difficulty levels of materials and lessons to help co-teachers plan for learner differentiation
Sample Monthly Planning Calendar (p. 245), Sample Co-Planning Template (p. 247)	Pratt et al., 2017, pp. 245 & 247	Asynchronous and synchronous co-planning tools; varying levels of specificity from unit plans to monthly overviews
Secondary Co-Teaching Practices Checklist (p. 21)	Dieker, 2001, p. 21	Checklist of practices to be used prior to or during co-teaching as a self-evaluation tool

Note. Table presenting a variety of tools proposed by various authors to help facilitate varying aspects of co-teaching, from planning to instructing.

Potential Benefits of Co-Teaching

Students

Increased Instructional Time. Co-teaching can be utilized as an instructional model for the benefit of all students, increasing instruction and support in the classroom (Villa et al., 2013). Two educators offer possibilities that could never be accomplished with one teacher, as the student to teacher ratio is reduced, and students are exposed to “instructional variety” (Cook & Friend, 1995, p. 3). Further, this approach allows for increased student engagement (Beninghof, 2020) and more timely feedback (Villa et al., 2013) because of the decreased student to teacher ratio. Additionally, instructional time for SWD is increased as students remain in one classroom rather than transitioning in and out of the general education classroom (Cook & Friend, 1995; Frattura & Capper, 2006). Students who receive even one daily pull-out special education service lose an estimated 75 minutes of instructional time each week due to transitions (Cook & Friend, 1995).

Reduced Stigma. In the pull-out model of special education, students may experience stigmatization, isolation, and embarrassment as they routinely leave the classroom to receive services (Beninghof, 2020; Cook & Friend, 1995). Conversely, when services are brought into the general education classroom and routinely made available to all learners, SWD are more likely to experience a sense of belonging (Beninghof, 2020; Cook & Friend, 1995). As co-teachers move in and out of approaches and tailor instruction to the specific needs of all learners in the classroom, it sends the message that everyone needs differing levels of support at different times, reinforcing the idea that variability is the norm (Villa et al., 2013).

Social Emotional. Both students with and without disabilities were viewed as more cooperative with one another in co-taught classes, and students with disabilities had increased

attention and access to peer models (Cook et al., 2017; Scruggs, et al., 2007). Additionally, administrators, teachers, and students reported that co-teaching contributed to more positive student behavior (Hang & Rabren, 2009; Walther-Thomas, 1997; Wischnowski et al., 2004). In one study, teachers reported that SWD exhibited increased self-confidence, self-esteem, better social skills, and improved peer relationships in co-taught classes (Walther-Thomas, 1997).

Teachers

Enhanced Professional Development. Educators participating in co-teaching described attainment of enhanced skills resulting from their partnership, ranging from increased content mastery to strategies for curricular adaptation (Beninghof, 2020; Chatzigeorgiadou & Barouta, 2022; Scruggs et al., 2007). Simply put, “learning from each other” was the common relevant theme identified in an updated meta-synthesis of co-teaching data (Strogilos et al., 2023).

Another study reported that co-teaching led to experiences of professional growth, personal support, and increased collaboration among teachers (Walther-Thomas, 1997).

Criticisms and Critical Questions About Co-Teaching

In contrast to the research that highlights the benefits of co-teaching for students and teachers, critics argue that what is occurring in practice often falls short of the model’s intended outcomes (Harbort et al., 2007). For example, numerous studies report that educators are most often engaged in the supportive approach to co-teaching (Bottge et al., 2015; Friend et al., 2010; Harbort et al., 2007; Moin et al., 2009; Scruggs et al., 2007; Strogilos et al., 2016). However, this approach is consistently identified as the least effective form of co-teaching (Villa et al., 2013). The persistence reliance on this model raises concerns about educators’ ability to effectively differentiate instruction or leverage the presence of two professionals in the classroom (Harbort et al., 2007).

Moreover, lack of common planning time, or the inefficient use of it, has been cited as a significant barrier to successful co-teaching (Keefe & Moore, 2004; Scruggs & Mastropieri, 1996; Strogilos et al., 2016; Walther-Thomas, 1997). This is particularly concerning given the consistent emphasis on co-planning as essential for meaningful collaboration and student success (Chatzigeorgiadou & Barouta, 2022; Hang & Rabren, 2009; Wilson & Blednick, 2011).

It is critical that the distinct roles of each co-teacher are defined and maximized (Cook et al., 2017; Harbort et al., 2007). If these roles are not clearly utilized, the effectiveness of co-teaching may need to be reconsidered (Harbort et al., 2007). Similarly, maintaining traditional instructional methods without innovation or shared responsibility will likely result in stagnant student outcomes (Cook et al., 2017).

The issue of parity is another critical concern. An imbalance in co-teaching responsibilities can lead to resentment, particularly when the general education teacher perceives that the special education teacher is not equally involved in planning, instruction, or assessment (Conderman and Liberty, 2018). This lack of parity can also prevent the full utilization of the special education teacher's expertise, ultimately limiting student learning opportunities (Conderman and Liberty, 2018). Moreover, when co-teaching does not reflect true collaboration, it may draw scrutiny administrators, school boards, and parents regarding the cost-effectiveness of placing two certified teachers in a classroom (Conderman & Liberty, 2018).

Further, some researchers raise questions about the rigor of co-teaching and inclusion research due to methodological flaws (Cook et al., 2017; Hornby & Kauffman, 2024). The lack of experimental studies poses challenges to establishing causal claims. For instance, random assignment of SWD to co-taught classrooms is often unfeasible, as placement decisions are made by IEP teams based on individualized needs (Cook et al., 2017).

Finally, the relatively low effect size of 0.21 reported for team teaching, a term used to describe co-teaching, raises important questions about the model's practical impact (Hattie & Zierer, 2025). Rather than attributing the limited effect to the instructional model itself, the findings point to the need for closer examination of implementation fidelity. This perspective suggests that co-teaching outcomes may be more closely linked to the quality of execution than to the structure of the model alone (Hattie & Zierer, 2025).

An example from Austria highlights concerns regarding the implementation of co-teaching, where the model was colloquially referred to as “radiator teaching” due to one teacher often standing passively while the other led instruction (Hattie & Zierer, 2025). This pattern reflects a turn-taking approach rather than true collaboration, undermining the potential effectiveness of the model. As noted by the authors, when co-teaching is reduced to alternating instruction without active co-engagement, its impact is unlikely to exceed that of a single-teacher classroom (Hattie & Zierer, 2025).

Although the reported effect size for co-teaching is relatively low, evidence suggests that its impact may be significantly greater when implemented with fidelity and supported by specific educator competencies (Hattie and Zierer, 2025). Effective co-teaching relies on a combination of emotional intelligence, interpersonal communication skills, and a willingness to engage in professional risk-taking (Hattie & Zierer, 2025). It also requires flexibility and shared decision-making between partners. When these conditions are met, co-teaching has the potential to produce a stronger positive effect on student learning outcomes (Hattie & Zierer, 2025).

School Administrator's Role in Co-Teaching

Creating the conditions for all students to achieve success requires an instructional leader who brings skill, vision, and heart to the role (DiPaola et al., 2004). The supervision and

observation of co-teachers align directly with the school administrator's responsibilities as an instructional leader. What occurs in a co-taught classroom with two certified educators should look markedly different from instruction in a traditional classroom with a single teacher or one assisted by a paraeducator (Murawski & Lochner, 2011). Accordingly, improved student outcomes should follow, and school leaders have a responsibility to closely monitor relevant data (Walther-Thomas, 1997).

When student outcomes fall short of expectations, it is the principal's role to investigate the root causes and identify the supports the co-teaching team may require (Murawski & Lochner, 2011). In addition, sustaining ongoing professional development, ensuring the master schedule includes dedicated co-planning time, and maintaining balanced classroom rosters in terms of student needs and numbers all fall within the administrator's scope of responsibility (Causton & Theoharis, 2014; Walther-Thomas, 1997). School leadership practices that support effective co-teaching and collaboration, focusing specifically on teams participating in the Kansas Co-Teaching Project, were in one dissertation (Howser, 2015). The study identified three key themes: (1) principals ensure co-teachers have protected planning time, (2) principals intentionally pair compatible educators to form co-teaching teams, and (3) principals foster a culture of ongoing professional learning (Howser, 2015).

Other Applications of Co-Teaching

While the focus of this study is on the partnership between general and special educators collaborating in co-teaching partnerships as a service delivery model in the general education classroom, co-teaching has expanded into other educational applications. From supporting the diverse needs of English Learners (Dove & Honigfeld, 2010) to pre-service teacher training in

higher education (Thomspon & Schademan, 2019), variations of co-teaching have expanded beyond the partnership between general and special education teachers.

Summary

Co-teaching is the partnership between a general and special education teacher who plan, instruct, and assess all of the students in a shared classroom space (Cook & Friend, 1995; Murawski & Lochner, 2011; Villa et al., 2013). Originally intended as a service delivery model to meet the needs of SWD in the least restrictive environment, authors posit that co-teaching is an effective way to meet the needs of all learners (Cook & Friend, 1995; Scruggs et al., 2007; Villa et al., 2013). During the 2021-2022 school year, 95.2% of SWD in the United States spent at least some of their educational day in the general education classroom, and 66.7% of SWD spent 80% or more (USDOE, 2024). The four main approaches to co-teaching include supportive, complementary, parallel, and team (Villa et al., 2013) and were adopted by the Kansas co-teaching project, which serves school districts across the state to provide training, coaching, and sustainability (KSDE TASN, 2024). Key supports for the implementation of effective co-teaching identified in research include school administrator support, educator parity, provision of common planning time, and the facilitation of regular communication and agreements (Mastropieri et al., 2005; Murawski & Swanson, 2001; Walsh, 2012). Several tools have been developed to aid co-teachers and school leaders, from forms to facilitate new co-teaching pairs in communication, agreements, and planning to more advanced measures like data collection and analysis (Dieker, 2001; Gately & Gately, 2001; Pratt et al., 2017; Villa et al., 2013; Wilson & Blednick, 2011).

Collective Teacher Efficacy

This section examines the literature in exploration of the construct of self-efficacy, specifically as it relates to educators and schools. It begins with an overview of the foundation of the efficacy construct, including theoretical roots and the evolution of educational research related to teacher efficacy. The impact of low and high levels of teacher efficacy are discussed. Following, collective teacher efficacy is described. Then, the role of school leaders in creating enabling conditions for high levels of collective efficacy is synthesized. Last, the impact of collective teacher efficacy on teachers and students is examined.

Self-Efficacy

The concept of self-efficacy, introduced by Bandura (1977), refers to an individual's belief in his or her ability to carry out the necessary actions to achieve a desired result. In the initial explanation of self-efficacy, outcome expectancies and efficacy expectations are defined (Bandura, 1977). An outcome expectancy is the belief that a certain course of action will end in a specific result, while an "efficacy expectation is the conviction that one can successfully execute the behavior required to produce outcomes" (Bandura, 1977, p. 193). For example, a person might possess the outcome expectancy that a healthy diet and exercise will result in weight loss. The personal efficacy expectation reflects one's belief in being able to adopt a healthy diet and exercise regularly to achieve that weight loss and may differ from the outcome expectancy.

While self-efficacy is a belief about one's capabilities, it is not synonymous with self-esteem, as self-esteem reflects an individual's overall feelings of worthiness, while efficacy relates to beliefs of capability for a specific task (Bandura, 2006, p. 309). Further, self-efficacy is context-specific (Donohoo, 2017), meaning that it varies depending on the task. For instance, a person's self-efficacy for pursuing a college degree may vary from the same person's self-

efficacy for changing a tire on a vehicle. While belief alone does not guarantee success, perceptions of self-efficacy have a large influence on the level of effort and persistence put forth toward completion of a task (Bandura, 1977).

Bandura (1993) remarks that, “among the mechanisms of agency, none is more central or pervasive than people’s beliefs about their capabilities to exercise control over their own level of functioning and over events that affect their lives” (p. 118). In this way, perceived self-efficacy has a significant impact on human functioning and behavior directly, as well as through the way it influences goals, optimism, perseverance, resilience, and more (Bandura, 2000). Beyond statements of affirmation or the power of positive thinking, self-efficacy beliefs are built through complex cognitive processes and experience (Bandura, 1993).

Higher levels of self-efficacy perceptions in children have been associated with stronger academic performance, elevated educational aspirations, and broader consideration of career options (Bandura et al., 1996). Students who perceive themselves as socially efficacious are also more likely to be engaged in school, experience fewer instances of social rejection, and report lower levels of depression (Bandura et al., 1996). These findings suggest that a strong sense of self-efficacy contributes to academic success not only directly but also by shaping students’ motivation and long-term goals (Bandura et al., 1996).

Sources of Efficacy

Four sources form the basis for a person’s self-efficacy beliefs (Bandura, 1977), and the perception of efficacy is most largely rooted in one’s prior experiences (Adams & Forsyth, 2006; Bandura, 1977). The four sources of efficacy include mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal (Bandura, 1977). Prior mastery experiences are the most impactful source of efficacy (Bandura, 1977, 1993). A mastery experience is defined as a

time when an individual attained a specific goal or achievement of a desired outcome after intentional actions (Bandura, 1977). In other words, a mastery experience is a time when an individual was successful. Prior mastery experiences are highly influential and serve as a building block for efficacy beliefs (Bandura, 1997). Mastery experiences can also include times when a person felt capable or self-assured in relation to the tasks presented (Krammer et al., 2017).

The second main source of efficacy, vicarious experience, refers to an individual's observation of someone with whom they perceive as having similar abilities and competence achieving success (Bandura, 1977; Tschannen-Moran & McMaster, 2009). Although less impactful than personal experiences of success, vicarious experiences are a type of modeling that can influence efficacy expectation to varying degrees (Bandura, 1977). Efficacy is built as the observer identifies with the model achieving the mastery experience, particularly if the model is observed overcoming a difficulty through persistent effort (Bandura, 1977).

Social or verbal persuasion represents a third source of efficacy development and involves receiving feedback related to one's performance (Donohoo, 2017). When delivered by a credible and trusted source, such feedback can positively influence an individual's belief in their capabilities (Donohoo, 2017). Although this form of persuasion is generally less influential than mastery experiences, it can still play a meaningful role in helping individuals develop confidence in situations that previously posed challenges (Bandura, 1977; Donohoo, 2017).

The fourth and final source of efficacy, affective states, encompasses the emotional and physiological responses individuals experience while engaging in an activity (Bandura, 1977). These internal states contribute to individuals' perceptions of their ability to succeed in a given activity (Bandura, 1977). Favorable affective states such as enjoyment, satisfaction, or a sense of

accomplishment can strengthen efficacy beliefs, whereas unfavorable states such as anxiety, frustration, or perceived failure may undermine them (Hite & Donohoo, 2021).

Building on the broader construct of self-efficacy, researchers have extended its application to the field of education by examining how educators' beliefs in their own capabilities influence teacher practices and student outcomes (Bandura, 1993; Tschannen-Moran et al., 1998). This body of work has led to the development of the construct known as teacher self-efficacy.

Teacher Efficacy

Teacher Efficacy (TE), a specific application of self-efficacy within the educational context, refers to an educator's belief in his or her capacity to influence student learning outcomes through instructional actions (Donohoo, 2017; Ross et al., 1996). Expanded definitions of TE emphasize the conviction that meaningful learning is possible even in the face of student-related challenges. This includes the belief that educators can impact the achievement of students who may be unmotivated or struggle academically (Guskey & Passaro, 1993).

As with general self-efficacy, teacher efficacy reflects an educator's self-perception rather than their actual competence or instructional effectiveness (Protheroe, 2008). It is a belief about one's ability to influence student outcomes, not a measure of demonstrated teaching skill. To reduce the risk of conflating efficacy beliefs with teacher effectiveness, some researchers recommended using more precise terms such as perception of efficacy, sense of efficacy, or efficacy judgements (Goddard et al., 2004).

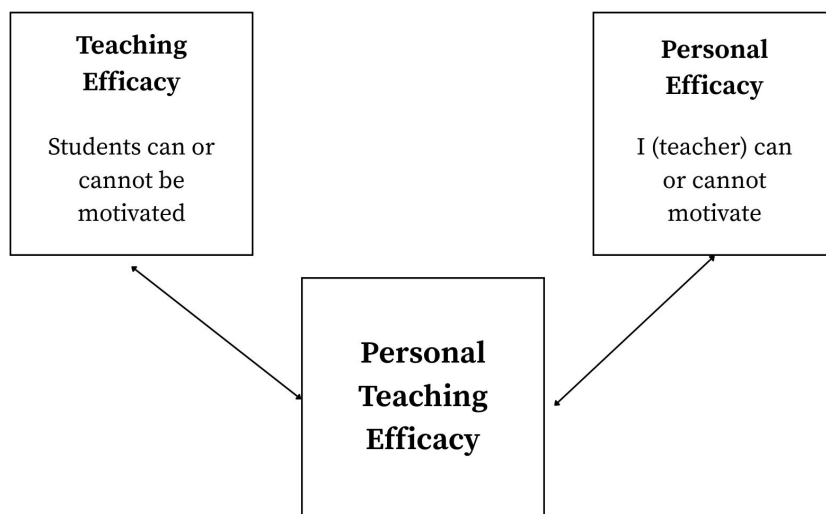
Self-efficacy theory (Bandura, 1977) has been widely applied to the study of teacher efficacy, with researchers consistently describing it as a multi-dimensional construct (Ashton et al., 1984; Bandura, 1993; Dembo & Gibson, 1984; Goddard et al., 2000). One proposed model

introduces the concept of personal teaching efficacy, defined as the intersection of two related beliefs: teacher efficacy and personal efficacy (Ashton et al., 1984). Teaching efficacy reflects a teacher's philosophy of teaching and learning, grounded in specific classroom contexts and student populations (Ashton et al., 1984). Personal efficacy, in contrast, pertains to a teacher's beliefs in their own instructional competence. As illustrated in Figure 2.3, the combination of these two components forms a more comprehensive understanding of teacher efficacy, reinforcing its multidimensional nature (Ashton et al., 1984).

Teacher efficacy is context dependent, shaped by both the specific instructional task and the educator's perceived ability to perform that task effectively (Ross et al., 1996; Tschannen-Moran et al., 1998). An educator may, for example, express strong efficacy beliefs in teaching early literacy skills such as letter recognition and phonemic awareness, while simultaneously expressing lower efficacy in teaching foundational mathematics to the same group of students. Similarly, a secondary mathematics teacher may report high efficacy in teaching Geometry but experience diminished confidence when considering instruction in lower-grade mathematics, even within their certified range of content expertise (Tschannen-Moran, et al., 1998).

Figure 2.3

Teachers' Sense of Efficacy Measurement Model (Ashton et al., 1983).



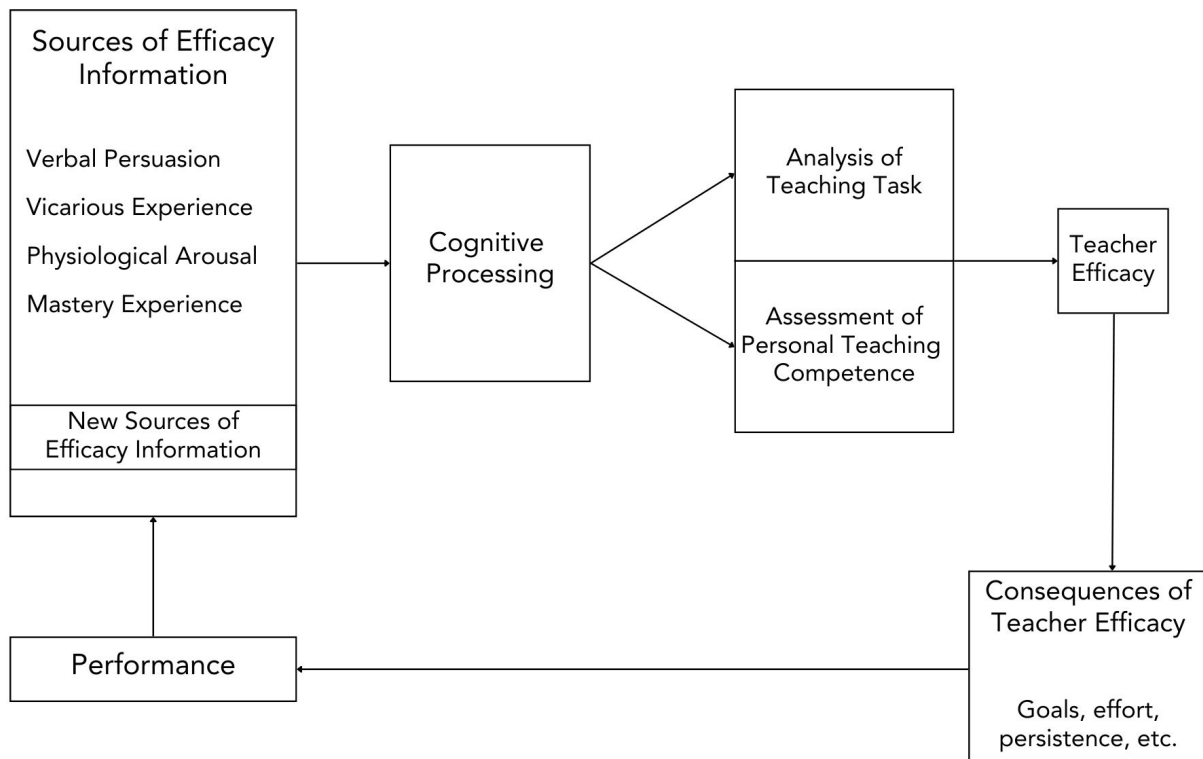
Note. This figure represents a multi-dimensional model of teacher efficacy. From Ashton, P. T., Webb, R. B., & Doda, N. (1983). Teachers' sense of efficacy: A self or norm-referenced construct? *Florida Journal of Educational Research*, 26(1), 29-41.

The cognitive process underlying teacher efficacy has been conceptualized as cyclical in nature, involving the simultaneous interaction of two components: analysis of the teaching task and assessment of personal competence (Tschannen-Moran et al., 1998). As illustrated in Figure 2.4, the analysis of the teaching task encompasses several factors, including preparation of instructional materials, availability of resources, and the specific content to be delivered, alongside an educator's judgment of personal capability to perform in that context (Goddard et al., 2000). This process also incorporates variables related to student background, academic ability, behavior, and motivation (Tschannen-Moran, et al., 1998). Notably, teacher efficacy is not static and may fluctuate throughout the school day, influenced by variations in subject-matter or the composition of students across classes (Goddard et al., 2000; Ross et al., 1996). As teachers encounter successful instructional experiences, new mastery experiences are formed,

which in turn reinforce their efficacy beliefs and lead to increased effort and persistence in future teaching tasks (Tschannen-Moran, 1998).

Figure 2.4

Cyclical Nature of Teacher Efficacy



Note. Image depicting the cyclical nature of teacher efficacy. From M. Tschannen-Moran, A. Woolfolk Hoy, & W. Hoy (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68(2), 202-248.

High-Efficacy vs. Low-Efficacy Teachers

Just as self-efficacy influences one's behavior, a teacher's perception of efficacy is a driver of actions related to teaching and learning, impacting the classroom environment and student learning (Bandura, 1993). Researchers have identified distinct differences in teacher behavior associated with high and low levels of perceived teacher efficacy (Allinder, 1994;

Ashton et al., 1983; Bandura, 1993; Dembo & Gibson, 1985; Goddard et al., 2000; Goddard et al., 2004; Guskey & Passaro, 1993; Podell & Soodak, 1993; Ross et al., 1996; Tschannen-Moran & Barr, 2004).

High Efficacy. Highly efficacious teachers are more organized, engage in thorough planning for instruction, and are more likely to try new strategies and ideas in the classroom (Allinder, 1994). These teachers employ mastery instructional strategies that positively impact students' cognitive processing, creating more mastery experiences for students (Bandura, 1993). In addition, teachers with high perceptions of efficacy prioritize and protect classroom time for academic learning, provide more support to struggling learners (Ashton et al., 1983; Tschannen-Moran & Barr, 2004), and offer appropriate praise to students for their accomplishments (Gibson and Dembo, 1984).

Additionally, higher levels of teacher efficacy produced classroom environments that were calm, orderly, and demonstrated a climate of concern for individual student needs (Ashton et al., 1983). Teachers with higher levels of efficacy gave more feedback to students and were more likely to persist with a student who was struggling to find an answer using prompts (Dembo & Gibson, 1985). Additionally, these classrooms had higher levels of on-task student behavior and demonstrated high academic standards for all students (Dembo & Gibson, 1985).

Research has examined the relationship between teacher efficacy and decision-making related to students experiencing academic or behavioral difficulties. For example, teachers with higher levels of personal efficacy were more likely to recommend continued placement in general education settings and assume responsibility for addressing student needs without referring them to special education services (Podell & Soodak, 1993; Soodak & Podell, 1994). In the context of inclusion, teachers with strong efficacy beliefs were more inclined to engage SWD

in classroom dialogue and to demonstrate persistence in providing appropriate learning opportunities (Brownell & Pajares, 1999; Nunn et al., 2009). Additionally, teacher efficacy and attitudes have been found to predict a teacher's willingness to implement inclusive practices (Avramidis et al., 2019).

A comprehensive review of four decades of research identified multiple associations between self-efficacy and positive outcomes for both educators and students (Zee & Koomen, 2016). Higher levels of teacher efficacy were linked to increased teacher well-being, stronger professional commitment, and greater job satisfaction. In classrooms led by teachers with strong efficacy beliefs, positive effects were observed in student achievement, student motivation, and overall classroom climate. These findings highlight the potential of teacher efficacy to positively influence both instructional practice and the broader classroom environment (Zee & Koomen, 2016).

Low Efficacy. Just as high levels of teacher efficacy impact educator behavior, the reverse is also true. Weak teacher efficacy resulted in classroom environments that negatively impacted student sense of efficacy (Bandura, 1993). Teachers with low efficacy were less likely to persist when students struggled to learn and answer questions, often giving the student the answer quickly or skipping to another student (Dembo & Gibson, 1985). In addition, less efficacious teachers seemed to favor and spend more time with students of high ability, arranging student seating arrangements through ability-grouping (Ashton et al., 1983). Further, teachers with low efficacy tended to blame students for their learning or behavior difficulties, associating the situation as a problem within the student rather than with the environment, and responded with criticism to students who answered questions incorrectly (Gibson & Dembo, 1984).

Lower levels of personal efficacy have been associated with increased teacher anxiety and a greater tendency to seek external solutions for students experiencing academic or behavioral difficulties, rather than implementing classroom-based intervention (Podell & Soodak, 1993). In scenario-based studies, teachers with weaker efficacy beliefs were more likely to recommend services such as counseling, remedial instruction, or evaluation for special education rather than addressing student needs within the general education setting (Soodak & Podell, 1994). Additional research found that teachers with low efficacy were more likely to experience anxiety and demonstrated resistance to including SWD in the classroom (Soodak et al., 1998). Low levels of teacher efficacy have also been correlated with increased risk of educator burnout (Zee and Koomen, 2016).

Teacher Efficacy Scales

Over time, as the model of teacher efficacy has evolved, researchers have proposed and implemented a variety of instruments and surveys to measure teacher efficacy in a way that is quantifiable. Some examples include the Teacher Efficacy Scale (Bandura, n.d.), Teacher Self-efficacy Scale, or TSES (Tschannen-Moran & Woolfolk Hoy, 2001), Teacher Efficacy for Inclusive Practices Scale, TEIP (Sharma et al., 2012), and more. As teacher efficacy is multidimensional (Ashton et al., 1984; Bandura, 1993; Dembo & Gibson, 1984; Goddard et al., 2000) and context specific (Ross et al., 1996; Tschannen-Moran et al., 1998), various efficacy scales incorporate an assortment of factors. For example, the TSES measures efficacy for three areas: instructional strategies, classroom management, and student engagement (Tschannen-Moran & Woolfolk Hoy, 2001). In contrast, the Norwegian Teacher Self-Efficacy Scale (NTSES) developed and tested by Skaalvik and Skaalvik (2007) add additional factors such as

teacher efficacy for adapting to individual student needs, coping with challenges, and cooperating with colleagues.

Adaptations have been made to teacher efficacy scales to specifically measure teacher self-efficacy for inclusive practices (Sahli-Lozano et al., 2023). The most prevalent is the Teacher Efficacy for Inclusive Practices (TEIP) scale (Sharma et al., 2012), with three specific factors: efficacy for using inclusive instruction, collaboration, and dealing with disruptive behavior.

Teacher Efficacy and Inclusive Practices

Research demonstrates that perception of teacher efficacy is related to teacher performance in inclusive classrooms, as it shapes the classroom environment the teacher creates as well as how the teacher perceives the students will receive instruction (Bandura, 1993; Gibson & Dembo, 1984; Sharma et al., 2012; Tschannen-Moran et al., 1998). Studies have identified that teacher efficacy perceptions predict educator attitudes related to inclusion (Soodak et al., 1998). Through the lens of teacher efficacy, one can assert that a teacher who is highly efficacious would be more likely to believe that students with individualized education plans would be able to learn effectively in an inclusive, general education setting (Sharma et al., 2012). Alternatively, teachers with low efficacy may be more likely to focus on challenges and perceive more limitations on both the student's ability to be educated effectively in an inclusive environment, as well as the teacher's skill set for helping all learners achieve (Sharma et al., 2012, p. 12). Hence, Sharma et al. (2012) conclude that "high teacher efficacy can be viewed as a key ingredient to create successful inclusive classroom environments" (p. 13).

A synthesis of ten years of international research on teacher efficacy and inclusive practices identifies five factors that influence teacher self-efficacy for inclusive education (Wray

et al., 2022). These five factors and sub-factors are reproduced in Table 2.3 (Wray, Sharma, & Subban, 2022, p. 6). Several of the sub-factors presented relate to co-teaching research. As reviewed earlier, common elements that support and enhance co-teaching include professional learning/development (Mastropieri et al., 2005; Pancsofar & Petroff, 2013; Pratt, 2014; Scruggs et al., 2007; Strogilos et al. 2023; Walsh, 2012; Walther-Thomas et al., 1996), administrative/leadership support (Mastropieri et al., 2005; Moin et al., 2009; Murawski & Swanson, 2001; Pratt, 2014; Scruggs et al., 2007; Strogilos et al., 2023; Walsh, 2012), and collaboration (Bouck, 2007; Friend, 2010; Kohler-Evans, 2006; Mastropieri et al., 2005; Moin et al., 2009; Murray, 2004; Pratt, 2014; Scruggs & Mastropieri, 1996; Scruggs et al., 2007; Stefanidis et al., 2019; Strogilos et al., 2023; Walsh, 2012; Villa et al., 2013). Teacher education and professional learning is identified as a main factor, and both leadership support and collaboration are indicated as sub-factors of school climate (Wray et al., 2022).

Positive and statistically significant associations have been identified between teacher collaboration and the implementation of differentiated instruction, as well as between differentiated instruction and teacher efficacy (Goddard & Kim, 2018). These findings suggest that individual teacher efficacy in addressing the needs of diverse learners can be strengthened through collaborative practices, particularly when collaboration focuses on curriculum design, instructional planning, and professional development. Conducted in a Midwest state with high levels of poverty, the study emphasizes the importance of dedicated time and structured opportunities for collaboration and key considerations for school and district leaders aiming to improve outcomes for learners with diverse needs (Goddard & Kim, 2018).

While individual teacher efficacy influences instructional decisions and student learning within a single classroom, the concept of collective teacher efficacy extends this influence to the

school-wide level. Defined as the shared belief among educators in their collective ability to positively affect student outcomes, collective teacher efficacy has emerged as a critical factor in promoting systemic improvement across school contexts (Donohoo & Forbes, 2025).

Table 2.3

Factors Influencing Teacher Self-Efficacy to Teach in Inclusive Classrooms

Factor	Corresponding sub-factors
Demographics	Understanding of legislation/policy Country and context Primary/secondary school Teacher experience, age, and gender
Teacher Education and Professional Learning	Pre-service education Practicum experience Professional learning/development
School Climate	Leadership support Collaboration Schoolwide processes and shared practices
Experience interacting with people with disabilities	Experiences and interactions in community and/or personal life Experience teaching SWD
Teacher internal attributes	Attitudes/beliefs Confidence Personality

Note: Factors and sub-factors that influence individual teacher self-efficacy for teaching in inclusive classrooms. From E. Wray, U. Sharma, & P. Subban (2022). Factors influencing teacher self-efficacy for inclusive education: A systematic literature review. *Teaching and Teacher Education*, 117.

Collective Efficacy

In 1977, Stanford University professor Albert Bandura identified a compelling phenomenon more influential than self-efficacy: individuals within a group or organization who shared confidence in their collective abilities were more likely to succeed and achieve positive

outcomes. This concept of the power of a group's shared belief has been applied by researchers across a variety of disciplines. For instance, community violence reduced significantly in communities that believed they could work together to combat crime (Sampson et al., 1997). Similarly, company employees that worked together in a team with shared positive beliefs about their teamwork were more creative and productive (Kim & Shin, 2015). Moreover, in schools where teachers believe in their joint capability to positively influence learning, higher levels of student achievement are realized (Bandura, 1993). Simply put, "When a team of individuals share the belief that through their unified efforts they can overcome challenges and produce intended results, groups *are* more effective" (Donohoo et al., 2018, p. 41).

When educators possess a shared belief in their unified ability to overcome challenges and positively impact student learning, they share collective teacher efficacy (CTE), a concept closely related to the theory of teacher efficacy (Protheroe, 2008). Collective teacher efficacy is defined as the "collective self-perception that teachers in a given school make an educational difference to their students over and above the educational impact of their homes and communities" (Tschannen-Moran & Barr, 2004, p. 190). CTE gained the attention of educational researchers after the groundbreaking discovery of a link between CTE and the student academic achievement (Bandura, 1993).

The influence of CTE extends beyond the average of the teacher efficacy perceptions of all the adults in a school or team. As indicated in the previous section, a teacher's self-efficacy significantly impacts classroom environment and interactions (Allinder, 1994; Ashton et al., 1983; Bandura, 1993; Dembo & Gibson, 1985; Goddard et al., 2000; Goddard et al., 2004; Guskey & Passaro, 1993; Ross et al., 1996; Tschannen-Moran & Barr, 2004). While the achievement of students in a classroom is largely attributed to the actions of the classroom

teacher and the quality of instruction, schools are complex social environments composed of diverse groups of individuals who work together interdependently; educators do not operate in silos (Bandura, 1993). Identifying schools as having an “intermediate level of interdependence” (Bandura, 1993, p. 141), the interactions and beliefs of the staff both in and out of the classroom impacts the success of the school as a whole. Indeed, in schools where educators collaborate around student learning and related challenges, students reap the benefits (Hattie & Zierer, 2025).

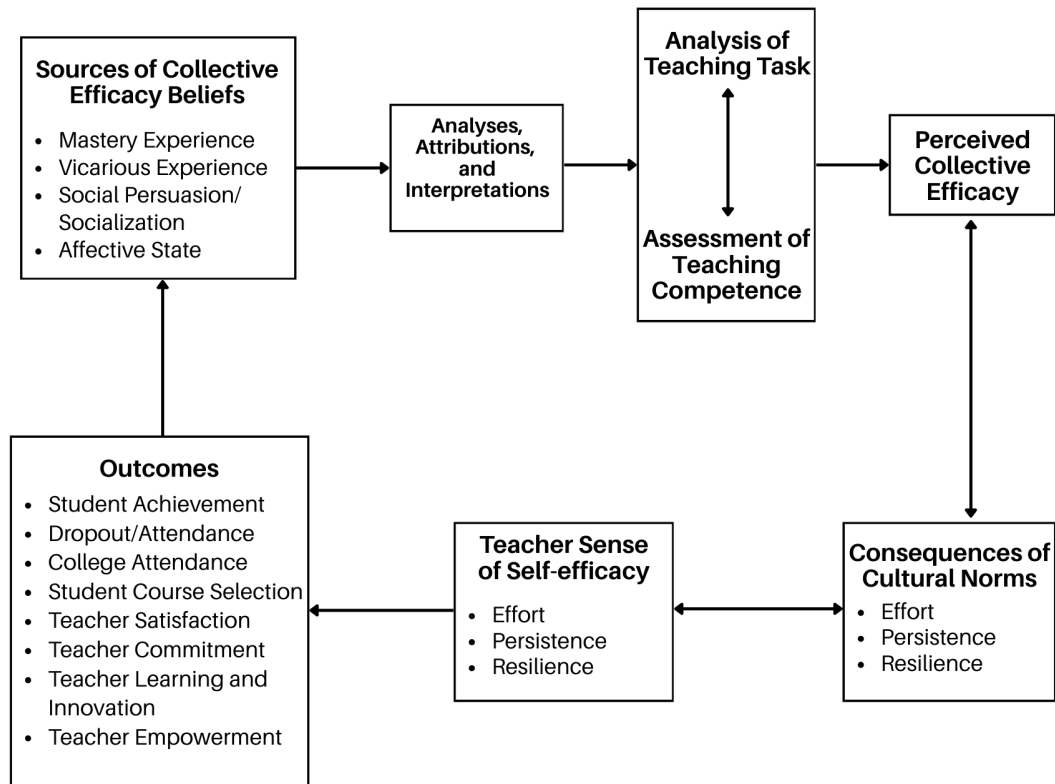
The collective efficacy of staff in a school building can be viewed as an attribute that characterizes the organization. CTE has been described as the “product of the interactive dynamics of the group members” (Goddard et al., 2000, p. 482). Just as teacher efficacy is formed in accordance with perceived abilities related to specific tasks and challenges, collective efficacy is associated with the held perceptions of the organization’s strengths, stressors, and efforts (Goddard et al., 2000). The relationship between individual and collective efficacy is presumed to be reciprocal; as one grows stronger, so does the other (Hoy et al., 2002).

While the classroom is impacted by teacher efficacy, the school environment is shaped by the shared efficacy beliefs of the adults in the school (Goddard et al., 2000). In fact, the impact of perceived collective teacher efficacy positively impacted student achievement with even more of an influence than the socioeconomic status of the students in the school (Bandura, 1993). Multiple researchers have found similar results (Adams & Forsyth, 2006; Eels, 2011; Goddard et al., 2000; Hoy et al., 2002; Moolenaar, et al., 2012; Ramos et al., 2014). The first meta-analysis related to CTE and student achievement identified that CTE “was strongly and positively associated with student achievement across subject areas, when using varied instruments, and in multiple locations (Eels, 2011, p. 110).

An expanded conceptual model of Collective Teacher Efficacy (CTE) and the ways in which teacher efficacy and school culture impact the process is presented in Figure 2.5 (Goddard et al., 2004). The definition of outcomes is extended beyond student achievement, with specific ways to measure learner success. School culture, teacher empowerment, and the ways in which educators learn together and apply that learning are included as developments (Goddard et al., 2004). The cyclical nature of the diagram demonstrates how individual teacher efficacy, cultural norms, and sources of efficacy beliefs come together to impact student outcomes, including graduation rates, teacher retention factors, and overall experiences of teachers and students in schools (Goddard et al., 2004).

Figure 2.5

Model of the Formation, Influence, and Change of CTE in Schools



Note. Depiction of the formation, influence, and outcomes of CTE in schools. From R. D. Goddard, W. K. Hoy, & A. Woolfolk Hoy. (2004). Collective efficacy beliefs: Theoretical developments, empirical evidence, and future directions. *Educational Researcher*, 33(3), 3 – 13.

Impact of CTE

Collective teacher efficacy impacts student outcomes both directly and indirectly (Donohoo et al., 2018). School leaders and educators in schools with high levels of CTE create strong cultures where student learning outcomes are viewed as attributable to the direct actions of school staff. They believe that all students can achieve, and that through collaboration, educators and leaders can create positive outcomes for students (Hattie & Zierer, 2025). New

teachers in these schools are less likely to leave the profession, teacher satisfaction is increased, and stress management is improved (Donohoo, 2018).

Collective teacher efficacy positively predicts the goal-directed actions of teaching staff (Donohoo, 2018). For instance, deeper levels of school improvement initiatives have been positively correlated with CTE (Donohoo, 2018). Educators at a junior high school with higher levels of CTE were more receptive to professional development and persistent in implementation of literacy strategies in content area classrooms (Cantrell & Callaway, 2008). In addition, they took more initiative in seeking out resources and trying out strategies to meet student needs. Notably, a key theme in the successful implementation of inclusion for SWD was confidence in CTE and collective capability to be problem solvers to promote successful inclusion (Lyons et al., 2016).

A growing body of research supports the connection between teacher leadership and CTE, highlighting the influential role that informal teacher leaders play in shaping school culture and improving outcomes (Derrington & Angelle, 2013). When informal teacher leaders are actively engaged in school operations and provide support to their colleagues, perceptions of CTE are higher (Derrington & Angelle, 2013; Donohoo, 2017). This strong relationship between teacher leadership and CTE has been shown to expand opportunities for both students and staff, thereby promoting greater access and equity within schools (Derrington & Angelle, 2013). The range of positive student outcomes includes improved behavioral outcomes for students with learning disabilities in inclusive classrooms when teachers worked collaboratively (Lyons et al., 2016). Similarly, schools with high levels of CTE demonstrated increased student emotional engagement and reduced exclusionary discipline practices, as teachers maintained a shared belief

in their collective ability to address challenges and support all learners effectively (Donohoo, 2018).

Collective teacher efficacy is particularly important in the consideration of learners receiving special education services, because educators in schools with high levels of collective efficacy hold high expectations for all students and demonstrate shared responsibility for academic outcomes (Tschannen-Moran & Barr, 2004). They also hold more positive attitudes for SWD (Donohoo, 2018). In these schools, teachers believe that all students can achieve at high levels and provide high quality instruction (Bandura, 1997). Further, teachers in high collective efficacy schools make no excuses for poor student performance (Tschannen-Moran & Barr, 2004). Rather than viewing family backgrounds, community poverty levels, or intellectual ability as a reason why students cannot achieve, “They roll up their sleeves and get the job done” (p. Tschannen-Moran & Barr, 2004, p. 192).

Conversely, schools characterized by low levels of CTE face significant challenges in fostering meaningful change. Although school leaders can influence the development of CTE, transforming a culture with entrenched low efficacy demands sustained, strategic effort (Tschannen-Moran & Barr, 2004). As DeWitt (2019) emphasizes, building CTE “requires a great deal of trust, which must be built over time, and an intentional effort by educators to buck the status quo” (p. 32). In such contexts, improvement is not simply a matter of adopting new practices, but rather necessitates a deliberate and collaborative redefinition of school norms, relationships, and beliefs about what is possible for students.

The development of CTE is closely tied to the same foundational sources that shape individual teacher efficacy. The mechanisms that influence self-efficacy, such as mastery experiences, vicarious experiences, social persuasion and affective states, also serve as critical

enabling conditions for the formation and reinforcement of collective beliefs within a school community (Goddard et al., 2000).

Enabling Conditions for Collective Teacher Efficacy

Knowing the power of CTE, how can school leaders create the conditions for it to flourish? Research identifies specific school attributes that give insight into the environments where collective efficacy is likely to grow (Donohoo, 2017). Given the demonstrated impact of collective teacher efficacy on teacher learning, it is prudent for district and school leaders to understand how to influence the CTE of a school staff (Donohoo, 2017). Bandura's (1977, 1993) four sources of self-efficacy as described earlier apply to the development of both individual and collective perceptions of efficacy (Adams & Forsyth, 2006; Donohoo, 2017; Faddis et al., 2023; Goddard et al., 2004; Hoy, et al. 2002).

Mastery Experiences. As stated previously, mastery experiences are the most powerful and influential source of collective teacher efficacy (Bandura, 1977; Faddis et al., 2023; Goddard et al., 2004; & Hattie et al., 2024). The perception that an individual or group completed something successfully influences the mindset that the individual or group will be successful in the future (Donohoo, 2017; Goddard et al., 2004). Prior student achievement is viewed as a mastery experience, strongly influencing CTE (Ross et al., 2004). Additionally, as teacher teams collaborate toward a common goal and experience success that they attribute to the explicit actions of the team, perceptions of CTE are strengthened (Faddis et al., 2023, p. 23). Mastery experiences may begin to pave the way for future success, as the more mastery experiences accrue, the more a team begins to actively look for and recognize success (Hattie et al., 2024). However, if success is attributed to a factor outside of the control of the group, or to mere luck, efficacy may not be strengthened as much (Goddard et al., 2004). As mastery experiences

accumulate and CTE is strengthened, teams are more able to overcome setbacks, remaining steadfast in their commitment to impacting student achievement (Bandura, 1977; Donohoo, 2017; Hattie et al., 2024).

Negative perceptions held by educators about students, families, or colleagues can undermine the development of CTE, particularly when such views are shared within collaborative teams (Faddis et al., 2023). When teachers enter a new school year already influenced by deficit-based narratives from prior grade-level teachers about students' poor behavior or academic struggles, these beliefs can hinder the formation of mastery experiences and lower collective expectations (Faddis et al., 2023; Tschannen-Moran & Barr, 2004). Over time, this mindset can contribute to a cycle of lowered expectations and diminished student outcomes (Tschannen-Moran & Barr, 2004). Asset-oriented language and intentional efforts to challenge negative assumptions are essential for fostering a collaborative culture that supports strong CTE (Faddis et al., 2023).

Vicarious Experiences/Modeling. When individuals observe the success of others who share similar skills or face comparable challenges, their own sense of efficacy is strengthened through vicarious (Bandura, 1977). This is also referred to as 'modeling' (Donohoo, 2017; Faddis et al., 2023; Goddard et al., 2004; Hattie et al., 2024). Modeling occurs both informally and formally within and outside school organizations. For instance, educators may engage in peer observations as an element of professional learning (Adams & Forsyth, 2006). To influence perceptions of efficacy, the model must encounter similar (Donohoo, 2017) as the observer (Donohoo, 2017). Further, visiting other classrooms or schools, reading, watching video, and networking may all be a means of vicarious experience (Donohoo, 2017). In sum, "when

teachers see their colleagues face similar challenges, and fare successfully, there are expectations that they too can overcome obstacles or setbacks” (Faddis et al., 2023, p. 27).

Within school organizations, vicarious experiences can be fostered when educators interact with staff from other schools or districts that share similar contexts, offering opportunities to observe effective practices and build belief in collective capabilities (Goddard et al., 2000; Hite & Donohoo, 2021). While such cross-site interactions have the potential to enhance perceptions of CTE, they are not common in most school settings (Ross et al., 2004). More frequently, modeling and vicarious learning occur within individual buildings, where collaborative processes such as shared planning, peer observation and mutual support create the cohesion necessary to influence group efficacy beliefs (Ross et al., 2004).

Social Persuasion. Sources of social persuasion may include supervisor feedback, colleague encouragement, and remarks from community members related to educator influence on student outcomes (Goddard et al., 2004). However, when feedback from any source is perceived as disingenuous or from a person with whom the individual does not have a positive relationship, efficacy is not likely to be enhanced (Bandura, 1977). Professional development can also be a form of social persuasion (Donohoo, 2017; Goddard et al., 2004). A telling product of the school’s culture, the conversations that occur as educators interact interdependently act as positive or negative social persuasion and are imparted quickly on new staff members (Goddard et al., 2004). The extent to which social persuasion positively impacts collective teacher efficacy is dependent upon how well the organization has built and established a culture of open communication, interdependence, and professionalism (Adams & Forsyth, 2006). Social persuasion, when grounded in integrity and aligned with shared values, can serve as a

constructive mechanism for strengthening collective beliefs and promoting efficacy within collaborative teams (Faddis et al., 2023).

Affective Conditions/States. Although identified as the least researched and least influential source of efficacy, affective states refer to “feelings of excitement or anxiety associated with an individual’s perceptions of his or her capability or incompetence” (Donohoo, 2017, p. 8). This concept is also described as the overall emotional climate of the organization (Tschannen-Moran and Barr, 2004). Organizations characterized by high levels of CTE demonstrate emotional resilience, maintaining stability and focus even when faced with significant pressure or crisis (Goddard et al., 2004). These schools are equipped to regulate emotional responses, producing educators who are more likely to interpret challenges as manageable and sustain a belief to succeed despite adversity (Faddis et al., 2023).

As school teams take risks or implement new strategies to address challenges and experience success, their affective states are positively influenced (Hite & Donohoo, 2021). When teachers experience positive feelings related to the work involved in the school improvement process, collective efficacy is increased (Hite & Donohoo, 2021).

Evidence of Impact. In order to impact CTE, student learning successes (mastery experiences) must be made visible through collaborative conversations centered around evidence of student learning (Hattie, 2023). Further, “efficacy beliefs need to focus on what impact means and how to diagnose and evaluate the levels of impact, and the beliefs need to be fed with the evidence of impact” (Hattie, 2023, p. 228). As teams see a direct connection between intentional teacher actions and student achievement through evidence of impact, their collective teacher efficacy is strengthened (Donohoo & Katz, 2019; Hattie, 2023). Repeated success, referred to as ‘mastery moments’ (Donohoo & Katz, 2019), fuels efficacy in the most powerful way because it

is experienced firsthand (Bandura, 1977; Hattie, 2023). Teacher teams with increased CTE exhibit more confidence, are more motivated, and raise their collective expectations for future goals (Donohoo & Katz, 2019).

Evidence of impact serves as a critical component for strengthening perceptions of efficacy for all stakeholders - students, parents, teachers, and school leaders (Hattie, 2023). Extending beyond the concept of a growth mindset, the development of CTE is supported by a shared commitment to use evidence to inform instructional decisions and guide improvement efforts (Hattie & Zierer, 2025).

Cognitive Processing of Enabling Conditions. It is critical to distinguish that while enabling conditions enhance the odds that collective efficacy may develop, they do not establish a causal relationship (Donohoo, 2017; Goddard et al., 2004). Perception of efficacy is shaped by how individuals and organizations interpret and reflect upon their experiences (Bandura, 1993; Goddard et al., 2004). As such, both individual and collective efficacy are influenced by cognitive and metacognitive processes through which educators evaluate and make meaning of the information they encounter (Goddard et al., 2004).

Collective Efficacy Cycle

A process of building collective efficacy as a cycle of inquiry is presented in Figure 2.6 (DeWitt, 2019). Created in a way to simplify CTE, educator agency and voice are included as vital components of the inquiry cycle (Goddard et al., 2004). As such, when teams of teachers are given autonomy to select goals that are meaningful, the central factor is the team's ability to identify a problem of practice, implement a strategy, and see the results created through their interdependent efforts (DeWitt, 2019). While the cycle can be put into practice at a time of crisis

for a school building, it can be utilized to build CTE as educators working collaboratively to improve, refine, or evaluate any practice to improve student learning (DeWitt, 2019).

The influence of the school administrator is integral in creating the environment for educator teams to be successful (DeWitt, 2019). School leaders bear the responsibility for communicating a clear understanding of the purpose of the work, encouraging the voice of all team members, and empowering collaborative discourse throughout the process to ensure the team creates a meaningful goal that is owned by all (DeWitt, 2019). Moreover, ensuring every member knows their role and the reason they are included in the work increases shared ownership (DeWitt, 2019).

Figure 2.6

A Collective Efficacy Cycle



Note: A depiction of a cyclical process teacher teams can follow to increase their collective teacher efficacy. From P. DeWitt (2019). How collective teacher efficacy develops. *Educational Leadership*, 76(9), 31 – 35.

School Leader's Role in Collective Teacher Efficacy

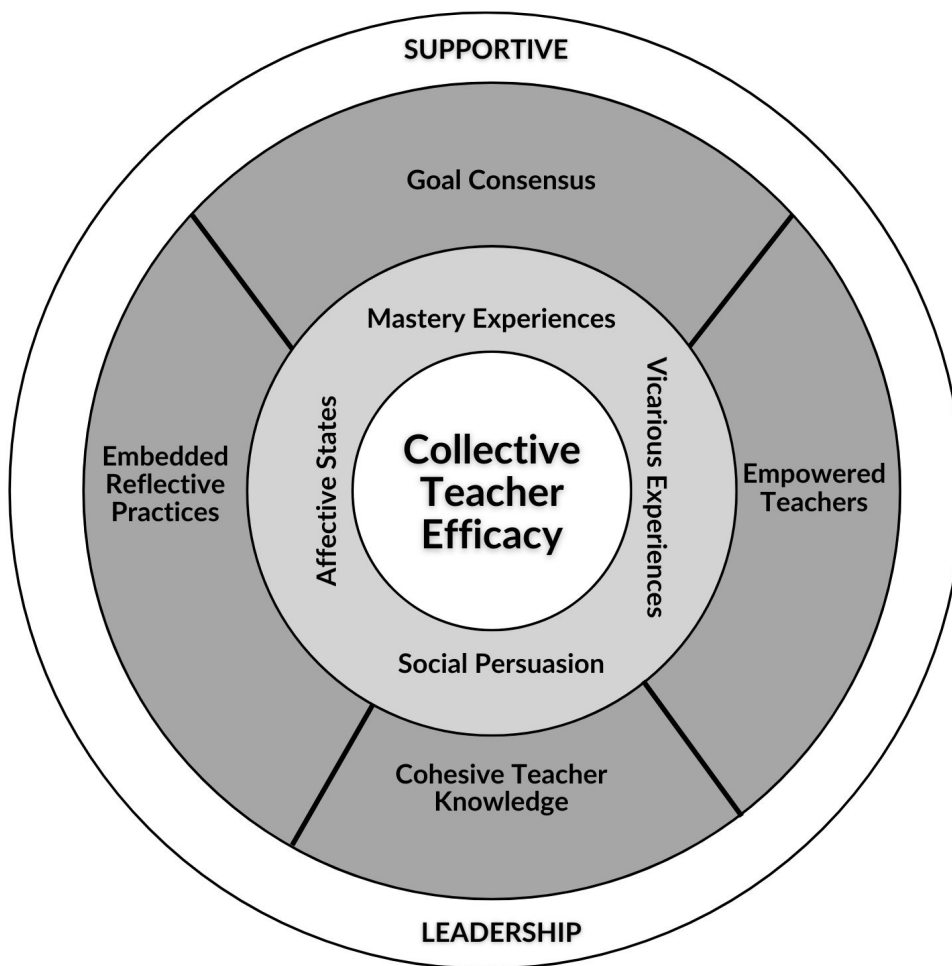
Research establishes the connection between school leadership and collective teacher efficacy (Urton et al., 2014; Donohoo et al., 2018). When school leaders establish a culture in which educators are empowered to collaborate, provided structured opportunities for shared inquiry, and led to focus on evidence of learning, the conditions necessary for CTE are more likely to emerge (Donohoo et al., 2018; Hattie & Zierer, 2025). Within these structures of collaboration, teachers are encouraged to recognize and celebrate student growth, reinforcing their collective belief in their instructional impact. Effective leaders play a pivotal role in defining what learning progress looks like, using concrete evidence such as assessments, student work portfolios, and learner feedback (Donohoo et al., 2018). Moreover, leaders cultivate school environments where educators feel psychologically safe to take risks and critically analyze student data to improve outcomes (Donohoo et al., 2018). Facilitating collaborative dialogue requires more than merely providing time for meetings; leaders must ensure that the interactions are structured, ongoing, and intentionally focused on the relationship between instructional practices and student learning outcomes (Hattie, 2023).

Authors have suggested actionable ways for school administrators to apply CTE research into practice (Donohoo, 2017a; Hite & Donohoo, 2021; Virga, 2024). For example, Hite and Donohoo (2021) present the “*Model for leading collective teacher efficacy*” as reproduced in Figure 2.7. The model is based on five enabling conditions for collective teacher efficacy (Donohoo et al., 2020). The outermost ring of this model identifies “supportive leadership” as the first key element impacting everything depicted in the model. Collective teacher efficacy is at the center of the model, with the four sources of efficacy in the next ring - mastery experiences, vicarious experiences, social persuasion, and affective states (Bandura, 1977). The next ring

identifies the other four enabling conditions that must be present within all collaborative teacher teams: goal consensus, empowered teachers, cohesive teacher knowledge, and embedded reflective practices (Hite & Donohoo, 2021). The model is intended to provide school administrators with a visual representation of how to leverage systems to positively impact CTE (Hite & Donohoo, 2021).

Figure 2.7

Model for Leading Collective Teacher Efficacy



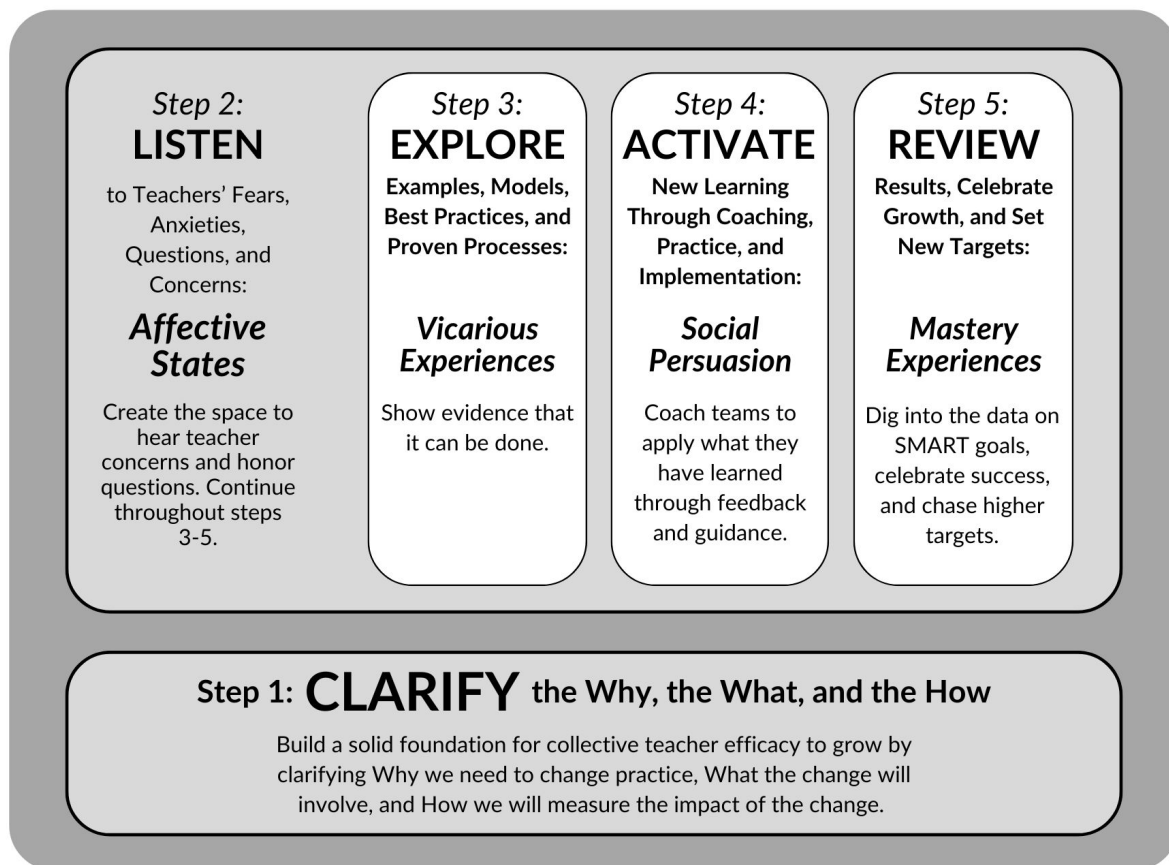
Note. The image above depicts a model of leading collective teacher efficacy. From S. A. Hite, & J. Donohoo (2021). *Leading collective efficacy: Powerful stories of achievement and equity*. Corwin Press.

How this model translates into practice is further elaborated and rooted CTE research. For instance, school leaders can influence the five enabling conditions described above (Hite & Donohoo, 2020). First school leaders begin by establishing a clear, shared understanding of school improvement goals and creating structured, collaborative processes (Donohoo, 2018; Goddard et al., 2015) where teachers come to consensus about goals. These collaborative processes should be led through promotion of teacher leaders (empowered teachers), employing distributed leadership where educators are given a voice rather than top-down initiatives (Goddard et al., 2004). Research demonstrates a correlation between collective teacher efficacy and the presence of teacher leadership, ownership in school processes, and influence on instructional decision-making (Adams & Forsyth, 2006; Derrington & Angelle, 2013; Goddard et al., 2004; Ross et al., 2004). Ongoing professional learning (cohesive teacher knowledge) and processes where teachers critically examine student work and data (embedded reflective practices) are also present in the model (Donohoo, 2017).

In contrast, some scholars have questioned the emphasis placed on enabling conditions for CTE, that it is the school processes that primary influence on student achievement (Hoogsteen, 2020). The CLEAR process as depicted in Figure 2.8 is a framework intended for school leaders, instructional coaches, teacher leaders, and others in both formal and informal leadership roles (Virga, 2024). This model emphasizes the importance of school processes in shaping the sources of efficacy: teachers' affective states are influenced when they feel heard; vicarious experiences are fostered through modeling and observations of peer success; social persuasion is activated through instructional coaching or collaborative dialogue; and mastery experiences are reinforced through data-informed celebrations of student achievement (Virga, 2024).

Figure 2.8

Virga (2024) CLEAR Process Graphic



Note. The CLEAR process graphic presents steps for leaders to positively influence collective teacher efficacy within teams. From J. Virga (2024). *Harnessing the power of collective teacher efficacy: A five-step process for developing strong teams in a PLC at work*. Solution Tree Press.

Despite differing perspectives on whether enabling conditions or school processes should be the main focus, both viewpoints highlight the critical role of teacher collaboration, goal setting, and use of data to evaluate instructional impact (Hite & Donohoo, 2021; Virga, 2024). Further, leadership that is clear, supportive, and committed to creating safe spaces for professional learning remains essential to leading and sustaining improvement initiatives (Hite & Donohoo, 2021; Virga, 2024). The four sources of efficacy are embedded across both models,

suggesting that while the emphasis may vary, the process to increase CTE shares common ground (Bandura, 1977; Hite & Donohoo, 2021; Hoogsteen, 2020; Virga, 2024).

Collective Teacher Efficacy for Inclusive Practices

Recent literature highlights a gap in understanding the role of CTE in inclusive education (Sharma et al., 2024). Building on existing measures of individual teacher efficacy for inclusive practices, the Teacher Efficacy for Inclusive Practice—Collective (TEIP-C Scale) was developed to assess educators' shared beliefs in their ability to implement inclusive practices (Sharma et al., 2024). The authors suggest that this tool offers school leadership teams a way to evaluate and strengthen staff-wide commitment and confidence in fostering inclusive learning environments (Sharma et al., 2024).

One study explored the connection of CTE and inclusive practices by examining co-teaching teams and their potential influence on CTE (Krammer et al., 2017). Using a survey-based methodology, the findings suggested that team level characteristics had a stronger impact on CTE than individual teacher attributes. However, the study's reliance on survey data without follow-up interviews or observational data presents limitations, indicating the need for further research to deepen understanding of how collaborative structures influence CTE in inclusive settings (Krammer, et al., 2017).

Another study (Pizana, 2022) investigated the self-efficacy and co-teaching efficacy of teachers engaged in co-teaching using an adaptation of the Teacher Self-Efficacy Scale, or TSES (Tschannen-Moran & Hoy, 2001). General and special educators completed two surveys; one based on their efficacy as an individual teacher in the classroom, and one as a co-teacher. The results identified that most co-teachers indicated higher efficacy perceptions as co-teachers than individually, with classroom management identified as the highest within co-teaching

partnerships (Pizana, 2022). Notably, teachers who indicated dislike for co-teaching had lower collective efficacy.

Summary

Two decades of research support the positive impact of collective teacher efficacy of a school staff on student achievement. Schools that have higher levels of CTE have cultures that are focused on student learning and filled with adults who collaborate and persist in the face of challenges. Leaders and teachers view student outcomes as malleable and operate with a ‘do whatever it takes’ mentality. Increased job satisfaction, less stress, and reduction in teacher burnout creates a healthier environment for students, staff, and families. A culture of high expectations, an increased focus on learning, and flexibility in strategies and approaches tailored to individual student needs create the conditions for positive learning outcomes for all.

School leaders can influence collective teacher efficacy by creating collaborative structures facilitated by teacher leaders and focused on evidence of impact, allowing for mastery experiences to fuel teacher efficacy. By creating a culture where teachers aren’t afraid to take risks, supporting their fears, and celebrating student success with evidence, classroom learning and achievement for the whole school can be realized. As educators grow in their individual perceptions of TE and CTE, greater effort, persistence, and resilience result. An influence on student achievement that is malleable, school leaders and staff can change the narrative of what is possible in their schools and communities by enhancing perceptions of CTE through intentional actions.

Student Achievement

This section begins with information about the achievement gap in test scores of SWD vs. SWOD in the United States and Kansas. Following, the concept of student achievement is explored and defined, including discussion of the ways achievement is measured in practice and research. Then, the research related to the impact of co-teaching on the academic achievement of SWD and SWOD is analyzed. Following, connections between student achievement and collective teacher efficacy are discussed and expanded from the previous section. Finally, the critical role school leaders play in ensuring positive achievement outcomes for all students is expanded.

Achievement Gap

In a 2025 Dear Colleague letter, the U.S. Department of Education (USDOE, 2025b) issued a policy guidance document reaffirming its expectation that state and local education agencies “uphold high expectations for the academic and functional success of all students through the use of inclusive practices” (p. 1). Beginning with a celebration of the progress made to educate and include all children, especially those with disabilities, the letter is also a call to action. The Department uses the 2022 National Assessment of Educational Progress (NAEP) as an example, highlighting achievement gaps between reading and math scores for nine-year-old SWD and SWOD. Specifically, the achievement gap for the 2022 NAEP assessment was a difference of 40% in reading and 32% in math. The discrepancy between high school graduates and drop-outs from the 2021-22 school year was also dismal; 87% of all students graduated with a regular high school diploma, while 74% of all SWD received the same. Likewise, the percentage of students who dropped out of high school was three times as high for SWD, at 5.3% of all students and 15% of SWD (USDOE, 2025).

The National Center for Education Statistics (NCES) achievement gap dashboard provides further insight. The 2024 NAEP data for the state of Kansas demonstrate a 31% gap between SWD and SWOD in 4th grade math; that gap is even more pronounced for 8th grade math at 46% (NCES, n.d.). Reading achievement is also significant; 44% difference in 4th grade and 42% in 8th grade (NCES, n.d.). While the NAEP is based on an assessment administered to a sample of students across the nation, overall, the achievement gap between SWD and SWOD is described by the USDOE as “significant, ongoing, and long standing” (USDOE, 2025a, p. 2). Likewise, Fuchs et al. (2018) referred to the achievement trends of SWD as “abysmal,” hypothesizing that a lack of intentional, evidenced-based academic and behavioral interventions is the root cause.

District and school leaders are held publicly accountable for the educational achievement of all learners as indicated in federal and state law, and the guidance document reinforced the key role of school leaders in fostering inclusive environments and promoting educational outcomes for all students (USDOE, 2025a). During the 2023-2024 school year, 7.9 million students in the United States received special education services, the majority of whom are assessed according to the same rigorous academic achievement standards (USDOE, 2025b). While a small percentage of students with the most significant cognitive disabilities may be assessed against alternate academic achievement standards, school leaders play an instrumental role in monitoring the academic progress made for every student (USDOE, 2025a).

Kansas Assessment Data Trends

Accountability measures require that all states make disaggregated student achievement data publicly available (USDOE, 2025b). Figures nine through twelve display five-year longitudinal student achievement data for Kansas SWD and SWOD in Math and

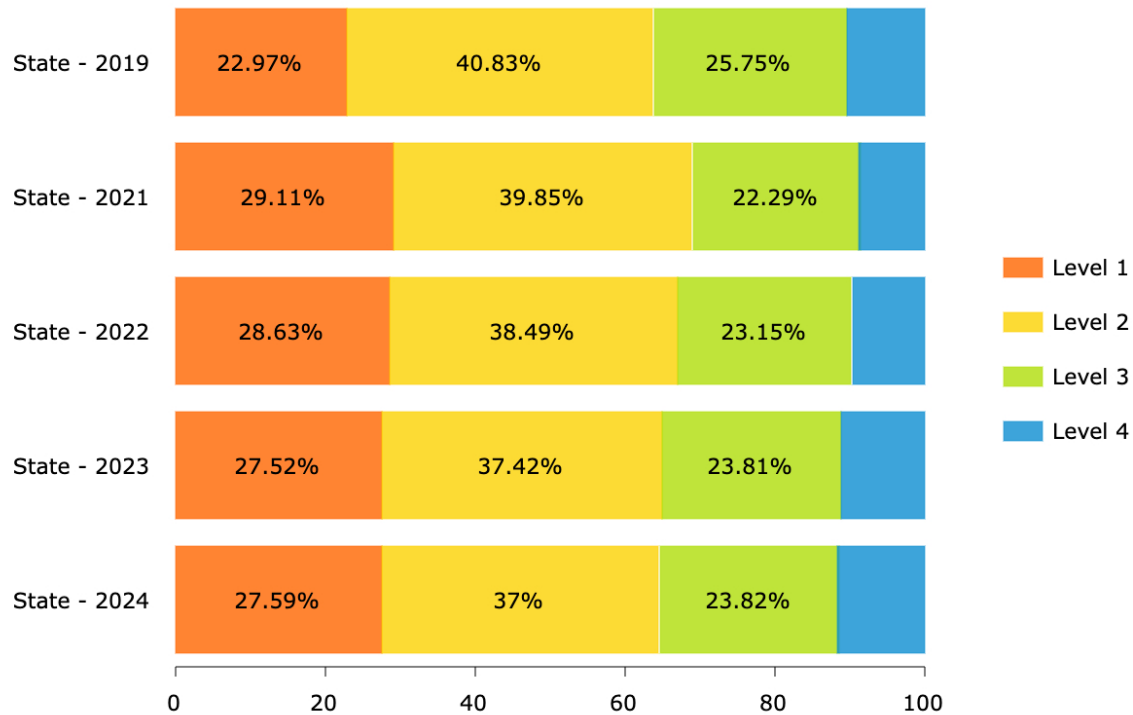
English/Language Arts (KSDE, n.d.-a). Reading and math are required to be assessed in grades 3rd through 8th and at least one year in high school (USDOE, 2025b); the data depicted are combined from all required grades. Kansas data is presented in terms of performance levels ranging from one to four, with levels three and four identified as effective (three) and excellent (four) in terms of knowledge needed for postsecondary success (KSDE, n.d.-a).

Student math assessment data differed from 20.8% to 25.4% between SWD and SWOD for performance levels three and four over the course of five years. Similarly, in English language arts, the difference in scores range between 23.52% and 26.65%. The amount of SWD scoring in level one in both reading and math is striking, as depicted in graphs two and four.

It is noteworthy to investigate the statewide longitudinal assessment outcomes for SWOD. For example, 31% to 36% of SWOD achieved Math state assessment scores in levels three and four. Similarly, 35% to 40% of SWOD achieved ELA scores in levels three and four. While a focus on creating a reduction in achievement gaps is important and necessary, assessment scores for SWOD may indicate a need for improvement in the high-quality instruction that is provided for all students (Friziellie et al., 2016). Friziellie et al. (2016) contend that an excessive number of students needing intervention indicates the need to examine tier one instruction, and that “systems collapse under the weight of the disproportionate number of students requiring more intensive interventions” (pp. 100-101). While this suggestion is indicated for achievement data specific to school districts, the percentage of SWOD across the state of Kansas scoring as basic (level one) and limited (level two) is worthy of exploration.

Figure 2.9

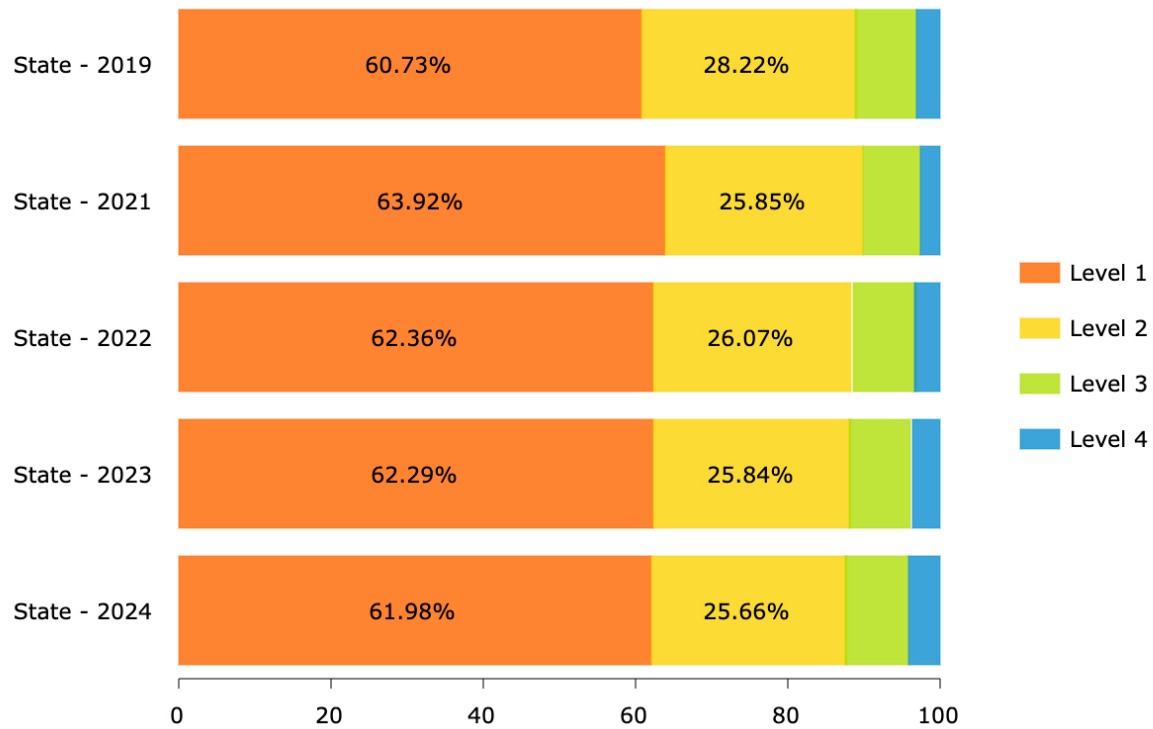
Kansas State Math Assessment Data for SWOD



Note: Graph depicts five years of student achievement on the Kansas state math assessment for students without disabilities. (KSDE, n.d.-a)

Figure 2.10

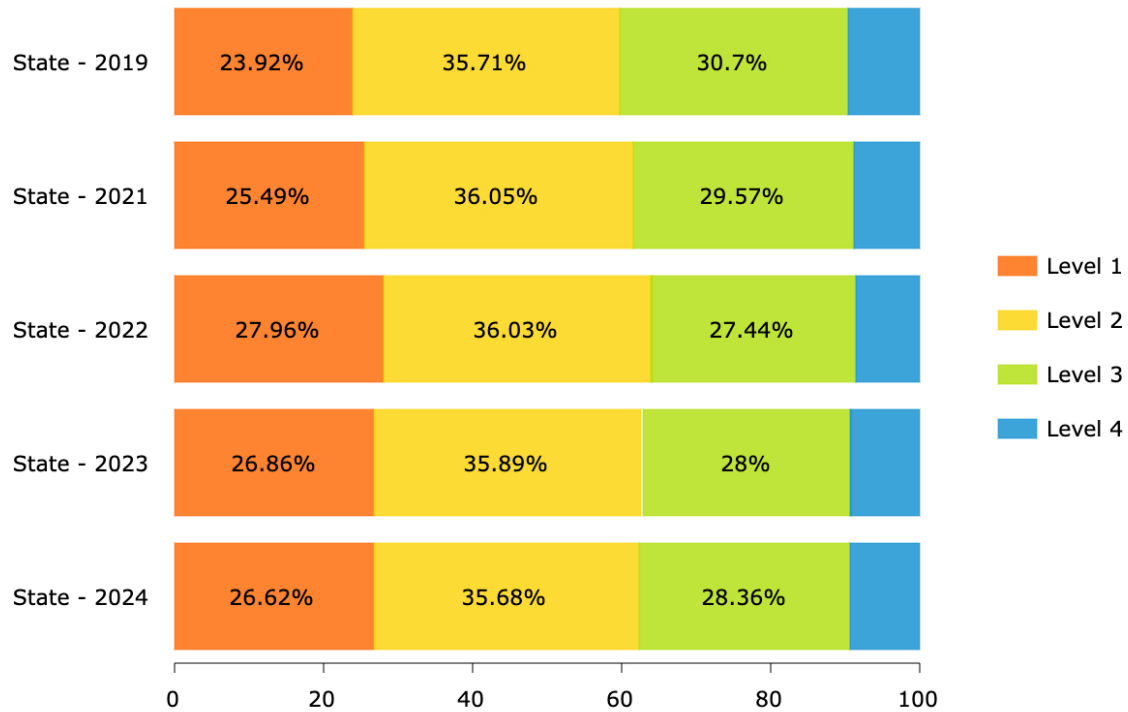
Statewide Math Assessment Data for SWD



Note: Graph depicts five years of student achievement on the Kansas state math assessment for students with disabilities. (KSDE, n.d.-a)

Figure 2.11

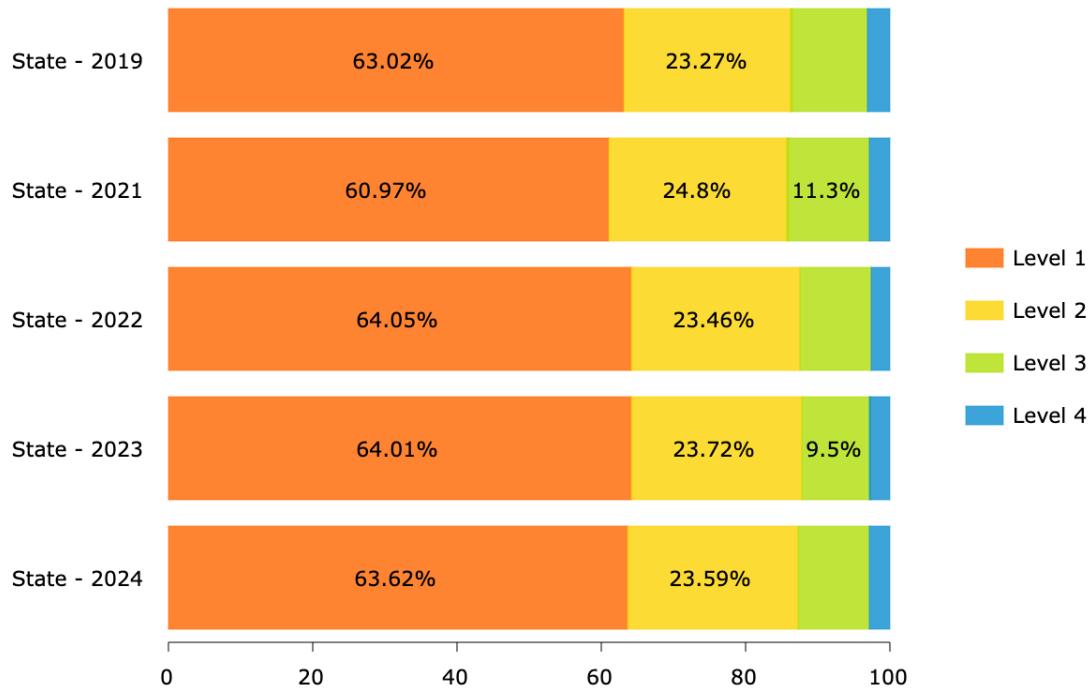
Statewide ELA Assessment Data for SWOD



Note: Graph depicts five years of student achievement on the Kansas state English language arts assessment for students without disabilities. (KSDE, n.d.-a)

Figure 2.12

Statewide ELA Assessment Data for SWD



Note: Graph depicts five years of student achievement on the Kansas state English language arts assessment for students with disabilities. (KSDE, n.d.-a)

Achievement Defined

The objective measurement of student success is a perpetual debate (Muhammad, 2015). Whether it be the use of high stakes standardized assessments to evaluate the effectiveness of teachers and schools, grading practices, or how to measure student learning behaviors, educators and researchers alike differ in recommendations. A tenet of public schools is to impact academic achievement, which remains a “universally valued educational outcome” (Hattie & Anderman, 2020, p. 1). However, the lack of a shared definition is problematic in that it creates inconsistencies not only between policy makers, educators, and families, but also within each of these groups (Guskey, 2013). The importance of measuring and representing student

achievement remains. As Erkens et al. (2017) state, “because the primary mission of schools is to create the optimum learning environment, the primary indicator of success will always be achievement” (p. 20).

In a simplified definition, Guskey described achievement as “the accomplishment of something” (2013, p. 3). He expanded on this concept in the context of student achievement, emphasizing that educator-identified learning goals must be the source, and discussion of achievement must clearly reference the intended learning goals for clarity (Guskey, 2013). Hattie and Anderman (2020) define achievement as “success within the school environment in the areas of academic functioning and behavioral functioning” (p. 20), with an included focus on social emotional learning and skills.

Attainment vs. Improvement

Student achievement is measured through attainment and improvement (Guskey, 2013). Attainment reflects a student’s mastery of content at a single point in time and can be assessed through norm or criterion-referenced measures. Norm-referenced achievement compares a student’s performance to that of a larger group, such as peers of the same age or grade level. For example, when educators state that a student is below, on, or above grade level, they are using norm-referenced data. Similarly, a student performing at the “75th percentile” has achieved at a level higher than 75% of the comparison group. Criterion-referenced achievement evaluates a student’s performance against a set standard rather than peer performance. Examples include assessment scores that meet grade-level expectations or reach a predetermined proficiency threshold, such as those used in state assessments (Guskey, 2013).

Improvement data, in contrast, requires at least two data points to measure learning over time. Achievement is measured by the change between the initial and final assessments, making

consistent measurement essential for validity (Guskey, 2013). For some students, the difference between attainment and improvement is minimal. However, SWD or those from less affluent backgrounds may make “significant learning progress and improve greatly on measures of their achievement during an academic term, but still not reach the predetermined level of proficiency expected for their grade level or course” (Guskey, 2013, p. 5). Similarly, high performing students may show little or no growth between assessments. These variations highlight the importance of contextual information when interpreting student achievement through either attainment or improvement (Guskey, 2013).

Testing vs. Assessment

Erkens et al. (2017) and Reeves (2019) highlight the importance of measuring achievement through assessment at the classroom level. Beginning by differentiating between “*testing* - the educational equivalent of the autopsy - and *assessment* - the educational equivalent of the physical examination” (Reeves, 2019, p. 71), these authors argue that assessment practices are impactful only when educators know what is being measured and how the data will be used to drive instruction (Erkens et al, 2017; Reeves, 2019). While an autopsy cannot improve health outcomes, physical examinations can present data to change behavior that results in better health (Reeves, 2019). Similarly, assessment data, when used to drive educator behavior and the provision of actionable feedback to learners, can improve student learning (Erkens et al., 2017).

Grades

Guskey (2020) provides a compelling metaphor of a medical doctor to illustrate flaws in the traditional method of reporting student learning through course grades. During a wellness exam, physicians utilize a variety of measures to assess a patient’s health, such as blood pressure, weight, and patient reports of diet and exercise. Asserting that inputting all this information into

a singular number would not be acceptable or valuable for the patient, Guskey (2020) draws attention to the common educator practice of combining multiple assignment scores from a vast array of learning goals into one arbitrary number.

The simple truth is that a single number describing a student's performance in school is just as ineffectual and difficult to interpret as a single number describing someone's physical health. That number or grade combines diverse data, gathered through different means and measuring a variety of different attributes. As such, it's not informative, meaningful, helpful, or equitable (Guskey, 2020, p. 41).

In contrast, Guskey (2020) suggests that educators create a dashboard of information to represent student learning from a variety of contexts, thereby creating an accurate picture - much like a physician would do with multiple measurements from a patient. Another common ineffective grading practice incorporates measures of compliance within grades, reinforcing a culture of punishment (Jung, 2024). Likewise, O'Connor et al. (2018) state, "grades do not typically represent student achievement but rather an amalgam of achievement, behavior, compliance, and test-taking skill" (p. 67). These grading practices impact the culture of learning, where student extrinsic motivation is reinforced through competition, and accumulation of points is valued rather than learning growth based on effective feedback (Jung, 2020; O'Connor et al., 2018; Reeves et al., 2017).

Erkens et al. (2017) reinforce the notion that grades will impact a learner, though it may not be in a productive manner. Unless the grade accurately portrays how well a student has learned, they are pointless, as the purpose of a grade is not to influence student learning, but to reflect student learning at a specific moment in time (Erkens et al., 2017).

Points. Feldman (2018) addresses the common practice of using points when determining student grades under the guise of objectivity. To illustrate this point, three sample students with the same end of course grade based upon points are presented. When each student's points earned on individual assignments and assessments are examined, it is made clear that the levels of learning and standards mastered vary greatly for each student. If grades are to reflect what a student has learned and is able to do, points may conceal important feedback from teachers and students (Feldman, 2018). Creating a grading scale like Figure 2.13 aligned to student level of content mastery creates more reflective discussions between students and teachers, particularly when paired with specific, actionable feedback (Feldman, 2018).

Figure 2.13

Grading Scale according to Mastery of Standards (Feldman, 2018)

Grade	Level of Mastery
A	Exceeded the standard
B	Met the standard
C	Student has key gaps in their understanding of the standard
D	Student is unable to demonstrate B or C levels without assistance
F	No evidence

Note. The above is a sample of a grading scale that can be used for more than one skill or content area as presented by Feldman (2018), p. 39.

Types of Learning. Guskey (2020) proclaims that equitable grading practices reflective of student learning must represent product, progress, and process criteria separately. Product and progress criteria are achievement or cognitive outcomes, whereas process criteria relate to non-cognitive behaviors or skills. Product criteria are likened to attainment in Guskey's earlier (2013) definition of achievement, or student performance on an assessment or project. Progress criteria, in contrast, indicate a student's growth made towards learning outcomes (Guskey, 2020). Finally,

process criteria refer to student learning behaviors or social emotional skills like “collaboration, goal setting, perseverance, habits of mind, or citizenship” (Guskey, 2020, p. 42). Educators who are inclined to grade students according to participation, compliance, or homework could also use the process criteria category. Meaningful feedback for students requires separation of these criteria, aligned to clearly defined rubrics (Guskey, 2020).

School leaders must ensure that student grades accurately represent student achievement - and are not diluted by measurements of behavior (O’Connor et al., 2018). To be sure, assessing student learning behaviors is appropriate and useful information for students and families - when it is represented as a stand-alone measure outside of academic standards (Guskey, 2020). These learning behaviors are referred to by a variety of names, such as soft skills, process grades, or 21st century skills (Jung, 2024). By isolating the learning behavior much like a specific academic standard and providing specific feedback, students are given information that they can act upon with the teacher’s support (Jung, 2024).

Standards-Based Grading. The standards-based grading (SBG) movement emerged as an alternative to traditional grading practices, first appearing in a publication in 1994 (Welsh, 2019). The purpose of SBG is to “accurately communicate what students have learned and are able to do, rather than simply tally the accumulation of points derived from different achievement indicators and noncognitive (behavioral) factors like work completion, attendance, and effort” (Link & Guskey, 2022, p. 407). Rather than representing student performance as a grade in a subject area or course, progress toward specific learning standards using a scale or continuum is reported (Link & Guskey, 2022). Effective SBG combines the recommendations of effective ways to measure academic achievement shared earlier:

- Instead of letter grades in specific content areas, students are measured on progress related to essential academic standards (Link & Guskey, 2022);
- Student progress towards an academic goal is presented on a short scale that is easily understood - e.g., 1 to 4, proficient or below (Welsh, 2019);
- Progress towards academic standards is reported separately from behavior factors like homework, effort, attendance (Link & Guskey, 2022; Welsh, 2019).

Welsh (2019) identifies the difference in the operational definition of SBG across schools and in the research as a barrier to its effective implementation. In addition, unclear policies, varying interpretations of what broad academic standards mean, and lack of implementation fidelity are identified as challenges (Welsh, 2019). However, communication of learner progress in a way that students, parents, and teachers can understand remains worthy of consideration and further exploration (Welsh, 2019).

Mastery Assessment

Jung (2024) challenges and suggests changes to SBG on the grounds that assessments and educator assessment practices are the root cause that must be addressed to create a system that is reflective of student learning. Mastery assessment furthers standards-based grading in three ways: “a focus on growth instead of a standard outcome, developing experts in learning instead of content experts, and grading as something to do as little as possible” (Jung, 2024, p. 16). Creating a culture of growth within schools where the objective is for every learner to grow as much as possible, engaging with learners in an ongoing cycle of feedback that enables them to eventually independently utilize metacognitive strategies, and reporting student learning focused on next steps furthers the equity of assessment practices (Jung, 2024).

Student Outcomes and Co-Teaching

Evidence indicates the positive impact of inclusive settings on students with and without disabilities (Blackorby et al., 2007; Causton-Theoharis et al., 2012; Cole et al., 2023; Cosier et al., 2013; Hehir et al., 2016; Kart & Kart, 2021; Kurth et al., 2024; National Council on Disability, 2018; Wang & Baker, 1985), but less research exists specific to the impact of co-teaching on the academic achievement of all students. Some researchers identify that co-teaching positively affects learning for all students (Bottge et al., 2015; King-Sears et al., 2021; Murawski & Swanson, 2001; Strogilos et al., 2023; Tremblay, 2013). Others assert that findings lack generalizability due to a lack of true experimental studies (Cook et al., 2017). Student achievement has been operationally defined in a variety of ways within the literature, and measures have included scores on state assessments, end of course tests, criterion-referenced tests (e.g., Measures of Academic Progress, AIMSweb), norm-referenced tests (e.g., Scholastic Reading Inventory), common district assessments, student grades, attendance, standardized measures of student behavior, and office discipline referral data.

Assessment in Co-Taught vs. Special Education Settings

A meta-analysis comparing achievement outcomes for students in co-taught versus separate special education classrooms identified an overall medium positive effect size of 0.47 for SWD in co-taught classes (King-Sears et al., 2021). Urging future researchers to include contextual evidence about classroom practices, the researchers state, “Absent clarity on and evidence about instruction being provided to SWD, we cannot claim that high-quality instruction was or was not occurring for SWD in either setting” (King-Sears et al., 2021, p. 15). In terms of achievement measures, SWD in co-taught classes demonstrated learning more positively on criterion-referenced tests in statistically significant ways as opposed to norm-referenced tests.

The researchers hypothesize that criterion-referenced assessments were more closely aligned to the grade level curriculum, which SWD were more exposed to in general education settings (King-Sears et al., 2021).

SWD and SWOD

A 2023 meta-analysis examining the academic achievement of SWD and SWOD educated in co-taught versus solo taught general education classes reviewed 28 studies representing 21,717 students (Stefanidis et al., 2023). Both SWD and SWOD fared similarly regardless of the number of teachers in the classroom. Cautiously refuting prior studies that suggest that co-teaching and the presence of SWD in the classroom might harm SWOD (Brusca-Vega et al., 2011; Fontana, 2005; Pancsofar & Petroff, 2016), the authors suggest that the results are not a sufficient reason to warrant abandonment of co-teaching as an instructional method. In contrast, they assert that additional research remains justified (Stefanidis et al., 2023). Further, the researchers note that many of the studies within the meta-analysis lacked appropriate disaggregation of information, including information related to teacher background (e.g., certification, experience co-teaching, professional development in co-teaching). Consistent with prior meta-analyses (Khoury, 2014; King-Sears et al., 2021; Losinski et al., 2019; Murawski & Swanson, 2001; Szumski et al., 2017), they recommend that future researchers “elicit and report explicitly” (Stefanidis et al., 2023, p. 15) background and demographic information related to co-teachers and students.

The finding that SWD and SWOD have similar academic achievement in co-taught settings aligns with findings from prior researchers (Bottge et al., 2018; Moin et al., 2009). Moreover, Stefanidis et al. (2023) identify that the types of assessments utilized in the studies range from criterion to norm-referenced, with no statistically significant difference between the

two. However, student performance on state assessments was significantly lower than non-state assessments, leading the authors to suggest that future studies avoid the use of state assessments. Further, the authors cite the limited description of co-teaching across studies as a barrier to drawing strong conclusions, as it is difficult to know if the intention of the collaborative instructional model matched the practice studied. Incorporating “rich descriptive information about what comprises effective co-teaching” (Stefanidis et al., 2023, p.15) and exploration of student social benefits in co-taught classrooms are also recommendations.

Co-Teacher Perceptions of Student Outcomes

Researchers have identified shared educator perceptions that SWD educated in co-taught settings achieve more positive academic outcomes than in segregated settings (Austin, 2001; Cook et al., 2017; Hang & Rabren, 2009; Rea et al., 2002; Scruggs et al., 2007; Strogilos & Stefanidis, 2015; & Strogilos et al., 2015) and tend to display more appropriate behaviors (Walther-Thomas, 1997; Hang & Rabren, 2009; Eaton, 2021), benefitting from peer models in the inclusive classroom environment (Scruggs et al., 2007).

Strogilos et al. (2023) synthesized qualitative co-teaching research from 47 qualifying articles incorporating both SWD and SWOD, updating the last meta-synthesis related to co-teaching since Scruggs et al. (2007). One of the leading research questions was to identify co-teachers’ perceptions of the impact of the practice on all students. Overall, co-teachers indicated that all students benefit from the instructional model, demonstrating improved academic and social skills. Citing the ability to provide immediate, targeted support, an increased ability to provide differentiated instruction, and effective usage of small group instruction, co-teachers overall indicated increased learning opportunities for all students (Strogilos et al., 2023).

Murawski and Lochner (2018) argue that the problem is not a lack of data; rather, “we do not have a consistent, systematic method for data collection on exactly what co-teachers are doing in schools” (p. 54). Declaring that achievement comparison across or within schools is akin to comparing apples to oranges, the authors cite that the multitude of contextual variables (e.g., classroom environment, learner variability, district policies) makes it difficult to isolate co-teaching as a reason for achievement (Murawski & Lochner, 2018). For instance, student success might be the result of co-teaching, but it also might be the use of evidence-based practices. Areas for data collection when determining program effectiveness of co-teaching include both student and teacher information and that areas of academic, behavioral, social, and programmatic (Murawski & Lochner, 2018). Some examples include:

- Academic:
 - Students: curriculum-based assessments, grades, pre-test/post-test
 - Teacher: creation of rigorous lessons, percentage of passing/failing students, lessons that provide differentiation
- Behavioral
 - Students: Attendance/tardies, suspensions, individual student behaviors
 - Teachers: use of co-teaching approaches, use of “we” language, time spent co-planning
- Social
 - Students: friendships, social skills, empathy/patience
 - Teachers: parity between teacher, use of heterogeneous groups, “our kids” vs. “your kids”
- Programmatic
 - Master scheduling, administrative support, culture change
(Murawski & Lochner, 2018, p. 55)

Through a customized combination of data, leaders can create a comprehensive way to assess the implementation and growth of co-teaching, including its impact on student achievement that includes and extends beyond academics (Murawski & Lochner, 2018).

Effect Size of Co-Teaching

The suggestion that co-teaching results in an effect size of 0.21 often draws scrutiny from educators and school leaders, especially given the “great concessions and immense costs” required for its implementation (Hattie and Zierer, 2025, p. 36). One rationale for this low effect size may be attributed to the complexity of implementing co-teaching with fidelity (Hattie and Zierer, 2025). High level co-teaching demands a high degree of educator competence and the adoption of specific professional mindframes, as illustrated in Figure 2.14. However, these competencies and mindframes are seldom emphasized in teacher preparation programs. As a result, co-teaching is frequently reduced to the mere sharing of space, rather than the intentional collaboration it is designed to be (Hattie & Zierer, 2025).

It is suggested that the way educators think about their practice, their students, and one another is what distinguishes classrooms in which students thrive (Hattie and Zierer, 2025). Among the ten mindframes identified for educator success is: “I collaborate with my peers and my students about my conceptions of progress and my impact” (Hattie & Zierer, 2025, p. 27). Co-teaching is situated within this mindframe, alongside the concept of collective teacher efficacy. The authors emphasize that when co-teaching is “truly cooperative and focused on jointly maximizing the collective impact, then it leads to a much higher impact on students” (p. 37).

Figure 2.14

Complex Competencies and Mindframes for Successful Co-Teaching

Competencies	Mindframes
Analyze learners' levels together	Make mistakes in front of co-teacher
Set and formulate instructional goals together	Make compromises
Design and differentiate tasks together	Hold back own ideas and preferences
Deliver the lesson together	Assume responsibility for new or uncomfortable tasks
Evaluate lesson impact together	Courage to try new things, rely on each other

Note. Successful co-teaching that results in high levels of student achievement requires the educators to have special mindframes and competencies (Hattie & Zierer, 2025).

Collective Teacher Efficacy and Student Achievement

Bandura (1993, 1997) brought attention to the concept of collective teacher efficacy, establishing that student achievement is strongly and systematically linked to the collective efficacy of the teachers in a school. Also identifying the great variance between schools regarding staff collective efficacy, Bandura created a compelling argument for further exploration into the construct. Considered a groundbreaking study in educational research, Bandura's (1993) identification of the link between collective teacher efficacy and student achievement also concluded that collective efficacy had a greater effect on the achievement of the students than the socioeconomic status of the student body. The exploration of multiple educational researchers expanded and supported Bandura's findings. For instance, Goddard et al. (2000) found that collective teacher efficacy was a stronger predictor of elementary student achievement in math and reading than socioeconomic status (SES). Hoy et al. (2002) demonstrated similar findings for high school student math achievement.

Out of hundreds of factors that influence student achievement, collective teacher efficacy has been identified as having the greatest impact (Hattie, 2016). With an effect size of 1.34

according to the latest research (Hattie & Zierer, 2025), collective teacher efficacy has the potential to impact student learning at a rate of three times higher than external school factors like parental involvement (Donohoo, 2017). The effect size of CTE is most impactful when considering the factors that are largely outside the control of educators or educational systems, such as parental involvement (Hattie, 2016).

Summary

It is imperative that school leaders are able to critically examine student data and identify areas of concern, including any existence of achievement gaps. Moreover, the ESEA and IDEA hold leaders accountable for ensuring the achievement of all students - including SWD. With 7.9 million students receiving special education in the United States during the 2023-2024 school year, and 66.7% of students with disabilities ages 5 (school age) through 21 spending 80% or more of their school day in an inclusive setting, leaders must be able to measure, evaluate, and justify educator practices that benefit the learning of all learners (USDOE, 2024). In determining staffing, professional learning, and leading collaborative teams in the use of data to make instructional decisions, school leaders set the tone for inclusive learning environments.

Measures of student achievement must include contextual information tied to the intended learning outcomes (Guskey, 2013), and behaviors should be measured separately from progress towards mastery of academic standards (Guskey, 2020; O'Connor et al., 2018). School leaders must understand the critical difference between student attainment and improvement data, and educator professional judgment is a key part of the assessment process (Guskey, 2013; Jung, 2024). Assessment is most powerful when it is used intentionally by educators to make decisions about instruction (Erkens et al, 2017; Reeves, 2019).

Chapter 2 Summary

Co-teaching is a collaborative partnership between special education and general education teachers, serving as a service delivery model for special education and a proposed instructional method to meet the needs of students with and without disabilities in inclusive, general education learning environments (Villa et al., 2013). While co-teaching can be traced back to the 1960s (Cook & Friend, 1995), empirical evidence of the impact on student achievement is lacking (Cook et al., 2017). Research suggests that co-teaching can positively impact student outcomes in various ways and does not have a negative impact on students without disabilities (Brusca-Vega, 2011; Walsh & Snyder, 1993; Hehir et al., 2016). Additionally, when certain elements are in place, teachers report positive experiences with co-teaching, identifying it as embedded professional development (Villa et al., 2013). Some scholars posit that co-teaching is an instructional model that should be incorporated into school reform efforts to benefit all students (Villa et al., 2013; Waldron & McLeskey, 2010; Walsh, 2012).

Collective teacher efficacy has been identified as a factor that has a tremendous impact on student achievement (Bandura, 1993; Goddard et al., 2000; Hattie, 2023; Tschannen-Moran & Barr, 2000), even superseding influences that educators cannot control, such as student socioeconomic status or parental involvement (Donohoo, 2017a). A factor that may be influenced by school leader's actions, CTE is indicated as worthy of inclusion within the strategic planning process for school districts (Donohoo, et al., 2018).

While researchers have examined the collective teacher efficacy of an entire teaching staff of a school, few have focused on pairs of educators who work collaboratively in pairs to deliver instruction to students (Krammer et al., 2018; Pizana, 2022; Rimpola, 2014; Shoulders & Krei, 2016). Further, researchers identify a need for further exploration of the self and collective

teacher efficacy perceptions of educators who participate in co-teaching (Hang & Rabren, 2009; Shoulder & Krei, 2016; Colson, et al., 2021).

The purpose of this basic qualitative study is to explore collective teacher efficacy perceptions of Kansas teachers actively engaged in co-teaching to meet the needs of students in inclusive classrooms, including perspectives of impact on student outcomes.

Chapter 3 - Methodology

The purpose of Chapter 3 is to provide a comprehensive overview of the basic qualitative research design employed in this study. This includes an explanation of the study's purpose and central research question with two sub-questions. The chapter elaborates on the research design and rationale introduced in Chapter 1. It also presents the researcher's positionality, participant selection criteria, and sampling strategy. Data collection methods and procedures are described in detail, followed by a discussion of the data analysis process. The chapter also addresses the study's limitations, delimitations, and ethical considerations. It concludes with summary of the overall research methodology and design procedures.

Purpose of Study and Research Questions

The purpose of this basic qualitative study was to explore the experiences of general education and special education teachers who co-teach in inclusive classrooms within public school districts in Kansas. Specifically, this study sought to investigate how co-teachers perceive and describe the development of collective teacher efficacy (CTE) and how they interpret the influence of this collaborative instructional model on student learning outcomes. This study is situated within the ongoing debate regarding the impact of co-teaching on the academic outcomes of students with and without disabilities (Cook et al., 2017; King-Sears et al., 2021; Stefanidis et al., 2023; Strogilos et al., 2023). Specifically, it aims to explore the underexplored area of CTE within co-teaching partnerships (Krammer et al., 2018; Pizana, 2022; Rimpola, 2014; Shoulders & Krei, 2016).

Empirical studies have consistently identified positive associations between teachers' collective efficacy beliefs and student achievement (Donohoo, 2018; Eels, 2011; Goddard et al., 2000; Goddard et al., 2017; Tschannen-Moran & Barr, 2004). Furthermore, structured teacher

collaboration has been shown to support the development of CTE (Donohoo et al., 2018; Goddard et al., 2017; Ross et al., 2004). Notably, CTE has been cited as the most influential school-based factor affecting student achievement, with an impact even greater than that of socioeconomic status and neighborhood context (Donohoo et al., 2018; Eels, 2011; Hattie, 2023). While existing research has examined CTE within broader school communities and teams of teachers, limited attention has been directed toward understanding how CTE may emerge within co-teaching relationships, in which educators share responsibilities for planning, instructing, and assessing in inclusive classroom settings (Krammer et al., 2018; Murawski & Lochner, 2017; Pizana, 2022; Rimpola, 2014; Shoulders & Krei, 2016). Therefore, this study aimed to contribute to the existing body of research on co-teaching, CTE, and student achievement, offering implications for school leaders in shaping policies, instructional practices, and collaborative structures that support improved student outcomes (Hite & Donohoo, 2021).

This basic qualitative study was designed around the following central research question:

What are the experiences of Kansas general and special education co-teachers who serve students in inclusive classroom environments?

The following sub-questions also guided the qualitative study:

1. How do co-teachers perceive and describe the presence or development of Collective Teacher Efficacy (CTE)?
2. How do co-teachers interpret the influence of their co-teaching practices on student learning and outcomes?

Research Design and Rationale

This study employed a basic qualitative research design, cited as one of the most frequently used approaches among educational practitioners (Merriam & Tisdell, 2015). This

design is particularly relevant for research aimed at understanding individuals' perceived experiences, including their interactions with others and contexts in which those interactions occur (Creswell & Poth, 2025; Tisdell et al., 2025). A basic qualitative approach was suitable for examining the collaborative nature of co-teaching, as it allowed for a detailed exploration of how general and special education teachers navigate shared responsibilities, while also centering and amplifying their voices (Creswell & Poth, 2025). Qualitative methodology has played a critical role in shaping special education policy and practice, particularly through research that illuminates the lived experiences of educators working with SWD (Brantlinger et al., 2005).

Qualitative research also centers on understanding how participants interpret and make meaning of their experiences (Merriam & Tisdell, 2015). While quantitative research is grounded in a positivist paradigm, assuming that reality is observable and measurable, basic qualitative research is underpinned by constructivism. This perspective holds that meaning is co-constructed by the researcher and participants through an iterative process involving prolonged engagement, flexible methodological decisions, and sensitivity to the specific context of the study (Tisdell et al., 2025).

Qualitative research methods are leveraged when the goal is to develop a complex and nuanced understanding of the issue under investigation (Creswell & Poth, 2025). While scholars have identified the need for qualitative exploration of CTE (Klassen et al., 2010; Krammer et al., 2018; Pizana, 2022; Sharma et al., 2024; Tschannen-Moran et al., 1998), most existing studies examining CTE and co-teaching practices have relied on large-scale surveys and quantitative methodologies (Krammer et al., 2018; Pizana, 2022; Sharma et al., 2024). Although researchers have developed and validated a range of survey instruments to measure CTE, "short-answer questionnaires with Likert scales that only gather surface information are inadequate to capture

the richness and fullness of an experience” (Polkinghorne, 2005, p. 138). In contrast, a qualitative approach allowed for a more thorough exploration of the relational dynamics within co-teaching pairs, including how educators perceive CTE (Creswell & Poth, 2025).

Illuminating the dynamics of co-teaching through rich, descriptive accounts from those directly engaged in the practice contributes meaningful insight to the field (Brantlinger et al., 2005; Stefanidis et al., 2023; Strogilos et al., 2023). As researchers continue to debate the impact of co-teaching on student learning, amplifying the voices of practitioners immersed in this collaborative instructional model provides insight into the conditions, strategies, and relational factors that shape its effectiveness in inclusive classrooms (Brantlinger et al., 2005; Cook et al., 2017; King-Sears et al., 2021; Stefanidis et al., 2023; Strogilos et al., 2023).

Other qualitative methodologies share the premise of basic qualitative research, but with additional dimensions (Merriam & Tisdell, 2015). For instance, phenomenological research seeks to glean insights into the meaning and essence of an experience (Creswell & Poth, 2025). This study’s purpose was to explore co-teacher perceptions, rather than understand an essence over time. As such, phenomenology was not the best fit. Grounded theory research methodology seeks to move beyond descriptive accounts to discover a theory, and ethnography is concerned with exploration of a specific cultural group (Creswell & Poth, 2025). Neither approach fit the intended purpose of this study, so it was determined that a basic qualitative approach was most appropriate (Tisdell et al., 2025).

Researcher Positionality

Rather than attempting to eliminate biases or subjectivities, qualitative researchers seek to acknowledge and monitor how their identities, beliefs, and experiences may shape the research process and findings (Brantlinger et al., 2005; Tisdell et al., 2025). As an educational leader, I

actively champion inclusive learning environments that foster a genuine sense of belonging for all students, particularly those with disabilities. This commitment is deeply rooted in both personal passion and professional advocacy and has been consistently enacted through my involvement with the practice of co-teaching throughout my career.

Personal and Professional Background in Co-Teaching

I began my educational career as a special education teacher, which included engagement in co-teaching with multiple educators throughout the course of a school day. At the time, our district did not offer formal professional development or structured guidance on implementing co-teaching. As a self-directed learner and reflective practitioner, I sought out relevant workshops, read widely, and collaborated with colleagues who were interested in maximizing the potential of co-teaching. While I initially lacked experience and formal training, I compensated with enthusiasm, curiosity, and a commitment to student learning.

My experiences as a co-teacher varied significantly. While none of the general education teachers I worked with openly resisted my presence, their willingness to engage in collaborative planning and instructional decision-making differed. At times, I felt underutilized, relegated to the role of a support aide rather than an instructional partner. In response, I focused my energy on building effective partnerships with those who welcomed collaboration and supported as many students as possible in classrooms where my co-teacher was less open.

This variability influenced my decision to transition into general education as a middle school math teacher. My move was not prompted by dissatisfaction, but rather a belief in my ability to deliver content in accessible and universally designed ways that benefitted all learners, with and without IEPs. I was also committed to fostering meaningful collaboration with special education co-teachers. However, in this role, I encountered new challenges, including a lack of

commitment from assigned co-teachers and inconsistent participation in planning time. I recognized that these practices did not align with the foundational principles of the co-teaching model. Furthermore, I understood that this misalignment likely resulted in students not receiving the special education services outlined in their IEPs.

Leadership and State-Level Influence

When I transitioned to an assistant elementary principal role, I saw an opportunity to support effective co-teaching implementation. Around this same time, our district invested in high-quality professional development from an internationally recognized expert in inclusive practices. Facilitating professional learning, coaching teachers, and witnessing the impact of evidence-based instructional strategies became a highlight of my leadership role. To build sustainability, our district trained teachers as coaches to observe and support co-teaching teams through cycles of feedback. At its peak, these efforts contributed to strong co-teaching partnerships, camaraderie among staff, and improved outcomes for students.

As an assistant superintendent, I also oversee special education programs and services. One of my responsibilities is oversight of districtwide implementation of co-teaching. To improve our internal processes, I became a certified state-wide trainer through KSDE's high-quality instruction within inclusive learning environments project. This involved a rigorous process of demonstrating knowledge and facilitation skills with veteran trainers. As trainers in the project, we aim to model effective co-teaching practices through co-presenting professional learning. These responsibilities have offered a broad view of how co-teaching varies across classrooms and schools, informing my recognition of both its potential and implementation challenges.

Reflexivity and Research Considerations

Given my extensive background and strong advocacy for inclusive education, I acknowledge the need to actively monitor my own perceptions as I conduct this research. As I conducted the literature review, I examined a wide range of perspectives, including studies that identified limitations, challenges, or conflicting findings related to co-teaching and CTE. Further, as a district leader, I regularly observe the spectrum of co-teaching practices and support administrators in fostering effective collaboration. These experiences contribute to my understanding of the critical role that teacher dispositions, planning, instruction, and assessment play in student success. I have experienced both the highs and lows of co-teaching firsthand, which fuels my curiosity about how educators perceive the connection between co-teaching and CTE.

While I have established relationships with educators in my district, I recognize the potential influence of power dynamics. Although building principals are directly responsible for teacher supervision and evaluation, my role as a district leader is supervisory at times. To reduce any unintended pressure, I will emphasize confidentiality, voluntary participation, and the separation of my researcher role from my administrative position during the study. This will be further addressed during the section explaining participant recruitment and consent.

My aspiration to serve as a superintendent further underscores the importance of developing a systems-level understanding of inclusive education. Listening to and learning from teachers' authentic experiences will not only enrich this research but also strengthen my leadership capacity. By engaging in ongoing reflexivity, I aim to maintain the integrity of the research process and ensure that the perspectives of co-teachers are represented authentically, rather than filtered exclusively through my own experiential lens.

Participant Recruitment and Sampling Strategy

Purposeful sampling was used to identify participants who could provide meaningful insight into the experiences of co-teaching within inclusive classroom environments (Creswell & Poth, 2025). Purposeful sampling is appropriate for qualitative research as it enables recruitment of individuals who have direct experience with the subject under investigation and can provide detailed descriptions relevant to the study's purpose and research questions (Merriam & Tisdell, 2015). The most basic form of sampling involves choosing participants who are geographically or professionally close to the researcher (Tisdell et al., 2025). Due to any potential power dynamics related to my administrative role (Braun & Clarke, 2013; Merriam & Tisdell, 2015), I intentionally extended the sample beyond the school district where I am employed.

Participants in this study included general and special education co-teachers from Kansas public school districts. All participants taught in districts engaged in the Kansas Co-teaching Project. As established in the literature review, participation in professional development specific to the co-teaching model is a critical factor in effective implementation (Beninghof, 2020; Chatzigeorgiadou & Barouta, 2022; Pancsofar & Petroff, 2013; Scruggs et al., 2007; Strogilos et al., 2023). Engagement in the Kansas Co-Teaching Project increased the likelihood that educators had engaged in professional learning, thereby supporting the integrity and relevance of the participant pool.

As a school district leader professionally connected with leadership of the statewide co-teaching project, access was obtained to an email list of co-teaching coaches working in public schools across the state. After Institutional Review Board (IRB) approval was obtained on December 5, 2025 (Appendix H), an invitation to participate in the study (Appendix A) was emailed to 66 potential participants on January 6, 2026. Over a two-week period, 15 responses

were received. Participants indicated their interest either by completing an interest survey (Appendix A) or by responding directly to the recruitment email; three responded through the interest survey and 12 responded via email.

All individuals who expressed interest met the study's inclusion criteria: (a) a minimum of one year of co-teaching experience and (b) current employment as a general education or special education teacher in a school participating in the Kansas Co-Teaching Project. Of the 15 individuals who expressed initial interest, 14 ultimately completed participation in the study. Participants who expressed interest received a confirmation email (Appendix B) that included the informed consent form (Appendix G) and options for scheduling virtual interviews. Once signed consent forms were received and interview times were confirmed, participants were sent an email containing (a) the scheduled interview date, time, and Zoom link; (b) a link to the pre-interview questionnaire (Appendix C); and (c) a copy of the interview questions for reference. The interview questions were provided in advance to allow participants time to reflect on their experiences prior to the interview if desired. The pre-interview questionnaire collected demographic information and details about participants' co-teaching experiences and provided an opportunity for participants to disclose any reservations related to the study.

Participants selected their preferred semi-structured interview format: (a) participation in both an individual interview and a paired interview with their co-teaching partner or (b) participation in an individual interview only. Participants received a \$25 Amazon gift card as a token of appreciation for each completed interview, for a maximum of \$50 if both interviews were completed.

Participant Demographics

Participant demographic information is displayed in Table 3.1 and was collected through a pre-interview questionnaire to provide contextual detail and support thick description of participants and co-teaching pairs (Creswell & Poth, 2025; Tisdell et al., 2025). Gender-neutral pseudonyms were used to protect participant identity and anonymity. Participants represented mid to large size school districts with teaching assignments spanning Kindergarten through Grade 12, and they varied in their years of teaching and co-teaching experience, as well as levels of educational attainment. Seven participants taught at the elementary level, two at the middle school level, and five at the high school level. Of the 14 participants, eight were special education teachers and six were general education teachers. All co-teaching pairs consisted of one special education teacher and one general education core content or grade-level teacher.

Participants' total years of teaching experience ranged from 2 years to 25-29 years, while reported co-teaching experience ranged from 1 year to 15-19 years. Ten participants held graduate degrees, one held a bachelor's degree, two held a bachelor's degree with additional graduate coursework, and one held an associate's degree while completing a bachelor's degree through a transition-to-teach program. Overall, diversity across participants was reflected in their level of position, size of school, and years of experience.

Table 3.1*Co-Teacher Demographic Summary Data*

Dyad	Participant (Pseudonym)	Teaching Role	Grade Band	Highest Degree	Years Teaching	Years Co-Teaching	Years with Partner	Interview Format
A	P1 (Riley)	SET	High	Graduate	5-9	0-4	2	I, P
A	P2 (Jordan)	GET	High	Graduate	10-14	0-4	2	I, P
B	P3 (Taylor)	GET	Elementary	Bachelor+	5-9	0-4	1	I, P
B	P4 (Casey)	SET	Elementary	Associate+	0-4	0-4	1	I, P
C	P5 (Avery)	SET	Elementary	Graduate	10-14	5-9	2	I, P
C	P6 (Quinn)	GET	Elementary	Bachelor	0-4	0-4	2	I, P
D	P7 (Alex)	GET	Elementary	Graduate	25-29	5-9	5-9	I, P
D	P8 (Peyton)	SET	Elementary	Graduate	15-19	15-19	5-9	I, P
E	P9 (Rowan)	SET	Middle	Graduate	15-19	15-19	5-9	I, P
E	P10 (Cameron)	GET	Middle	Graduate	20-24	5-9	5-9	I, P
N/A	P11 (Skyler)	SET	High	Graduate	0-4	0-4	0	I
N/A	P12 (Dakota)	SET	Elementary	Graduate	15-19	0-4	1	I
N/A	P13 (Elliot)	GET	High	Graduate	5-9	0-4	0	I
N/A	P14 (Parker)	SET	High	Graduate	10-14	5-9	4	I

Note. Dyad letters represent co-teaching pairs. N/A indicates participants interviewed individually. GET = general education teacher;

SET = special education teacher; I = individual interview; P = paired interview.

Sample Size

Qualitative research is conducted to illuminate understanding rather than generalize findings, prioritizing in-depth engagement with a smaller number of purposefully selected participants to generate deep understanding (Creswell & Poth, 2025). Qualitative inquiry calls for “intense, full, and saturated descriptions of the experience under investigation” (Polkinghorne, 2005, p. 139). As such, sample size in qualitative research is informed by the study’s purpose and the point at which data saturation is achieved, when no new themes or insights emerge, and patterns begin to repeat (Creswell & Poth, 2025; Tisdell et al., 2025).

Co-teaching, as defined in this study, involves pairs of educators working collaboratively to plan, instruct, and assess students within a shared classroom environment (Villa et al., 2013). This study employed responses to a pre-interview questionnaire and individual and paired semi-structured interviews. Given the depth and volume of data generated, a small sample size was necessary to ensure manageable data analysis and timely completion of the study (Saldaña, 2025; Tisdell et al., 2025). To identify a reasonable and justifiable sample size, similar qualitative studies were reviewed.

Several qualitative studies examining co-teachers’ experiences and perceptions included between six and 16 participants, which were sufficient to generate rich data and support meaningful, rigorous analysis (Banks, 2018; Davenport, 2020; Garofalo, 2019; Gosselin, 2021; Mullaney, 2021). One study employed semi-structured interviews with eight individual co-teachers to examine perceptions of professional development (Davenport, 2020). Other studies included 12 high school teachers (Garofalo, 2019) and 11 elementary participants (Mullaney, 2021). Another study incorporated interviews with 16 co-teachers across grade levels (Banks, 2018), while a different study conducted a smaller investigation with six highly effective co-

teachers and used multiple data sources (Gosselin, 2021). Notably, each of these studies focused on individual co-teacher perspectives within a single district or building rather than interviewing co-teaching dyads together. Moreover, participants were not necessarily members of identified co-teaching pairs; instead, they were individual educators with prior co-teaching experience whose partners did not necessarily serve as study participants.

Established recommendations for qualitative research identify 15 to 30 interviews as both appropriate and common (Braun & Clarke, 2013). The selected sample size supported saturation while allowing for rich, nuanced data collection (Creswell & Poth, 2025; Polkinghorne, 2005). The original goal was to recruit a sample of four to six co-teaching dyads (8 to 12 participants), intentionally selected to align with prior qualitative research on co-teaching and to ensure sufficient depth for rigorous analysis. Including both individual and dyadic interviews allowed for the examination of personal perspectives as well as the joint experiences of co-teaching pairs, an element seldom captured in prior studies (Marzullo-Matchniff, 2024; Ruvalcaba, 2015; Theofield, 2023). Five co-teaching dyads (n=10) and four individual participants (n=4) participated in the study resulting in a total of 14 participants, 14 pre-interview questionnaires, and 19 semi-structured individual and paired interviews.

Pilot Study

A pilot study was conducted in September of 2025 at the recommendation of the dissertation committee. Conducting pilot interviews supports the clarification and refinement of interview questions to ensure they elicit meaningful responses and to identify opportunities for additional relevant questions (Tisdell et al., 2025). Additionally, pilot interviews provide an opportunity for the researcher to practice and refine interviewing techniques (Braun & Clarke, 2013). Specifically, the pilot study was conducted to determine whether the selected sample size and

interview format were appropriate for achieving the desired outcomes. Participants selected for the pilot study had several years of experience co-teaching together. One participant also served as a co-teaching coach and had engaged in extended professional development.

Responses to the interview questions yielded sufficient information aligned with the study's purpose and research question. When asked to provide feedback on the interview protocol and study design, participants offered the following observations:

- The pre-interview questionnaire was straightforward and could be completed efficiently.
- Participants appreciated receiving the interview questions in advance with the pre-interview questionnaire.
- Conducting both an individual and dyadic interviews could be time-consuming for some teachers.
- Participants suggested that co-teachers who prefer not to participate in a joint interview should still have the option to complete the individual interview component.
- Participants recommended focusing on co-teaching partnerships perceived as strong, noting that collective teacher efficacy may be more observable within well-established collaborative relationships.

The pilot study also revealed that In Vivo and pattern coding techniques were well-suited for analyzing the interview data. Based on insights gained from the pilot study, participant choice was incorporated into the final interview structure. Participants were given the option to participate in an individual interview only or to participate in both an individual interview and a dyadic interview with their co-teacher. The proposed data analysis process was therefore deemed appropriate.

Data Collection Procedures

Qualitative data collection relies on reflexive and adaptive processes that respond to participants' perspectives and emergent findings (Creswell & Poth, 2025; Tisdell et al., 2025). Accordingly, the methods of data collection in this study were designed to balance structure with flexibility while maintaining strong alignment with the research questions and conceptual framework. This design facilitated the development of rich, detailed insights grounded in participants' lived experiences.

Sources of Data

The following data sources were used to elicit co-teachers' perspectives:

1. Individual participant responses to a pre-interview questionnaire
2. Semi-structured interviews based on participant-selected option:
 - Individual interview only
 - Both individual interview and dyadic interview with co-teaching partner

These sources incorporated a mixture of structured and open-ended items (Braun & Clarke, 2013; Tisdell et al., 2025). While both interview protocols were prepared in advance, the direction of each conversation remained fluid and participant-led (Braun & Clarke, 2013; Creswell & Poth, 2025; Tisdell et al., 2025). The questions in each interview protocol were intentionally constructed to explore participants' experiences and perceptions in alignment with the study's research questions and key themes from the literature (Braun & Clarke, 2013; Creswell & Poth, 2025). All question sets and protocols were reviewed and approved by the dissertation chair prior to use in the pilot study, and IRB approved prior to data collection. Figures 3.1, 3.2, and 3.3 present the alignment between the study's central and sub-research questions and their corresponding data sources, organized by survey and interview items. Each

research question is presented in a separate figure. Within each figure, the rationale for the selected data sources is provided and grounded in relevant scholarly literature to address identified gaps. This information is also located in Appendix F.

Pre-Interview Questionnaire

The electronic pre-interview questionnaire (Appendix C) collected basic demographic information about each co-teacher, including years of certification, overall teaching experience, and the length of time spent co-teaching with their current partner. This provided contextual details that contributed to the development of a robust and multifaceted account, enriching the description of participants' experiences (Braun & Clarke, 2013; Creswell & Poth, 2025; Tisdell et al., 2025). Additionally, prior studies have cited the absence of co-teacher demographic context as a methodological limitation, recommending its inclusion to deepen insight into co-teachers' experiences (King-Sears et al., 2021; Losinski et al., 2019; Murawski & Swanson, 2001; Stefanidis et al., 2023; Szumski et al., 2017).

The questionnaire also offered participants an opportunity to review the planned interview questions in advance, thereby activating prior knowledge and maximizing the use of time during the interview (Tisdell et al., 2025). Although not required, the structure provided included a space for pre-interview thoughts/ideas (Holmes, 2012, pp. 312-313). This design also included an open response question, which created an opportunity for participants to express any reservations or anxieties about participating in an interview with their co-teacher (Szulc & King, 2025). In more than one case, this allowed participants a space to share candid feedback that was not addressed elsewhere.

Semi-Structured Interviews

Semi-structured interviews were used to glean the individual and collective experiences of co-teachers. Key themes in the literature review related to co-teaching, collective teacher efficacy, and student achievement guided the development of both sets of semi-structured interview questions, as reflected in Figures 3.1, 3.2, and 3.3. Employing both individual and dyadic interviews provided data to illuminate how co-teachers perceive the role or development of collective teacher efficacy within the collaborative co-teaching experience (Donohoo, 2018; Szulc & King, 2025; Villa et al., 2013). Interview protocols were used for the individual (Appendix D) and dyadic (Appendix E) interviews. Open-ended questions in each protocol were designed to encourage the co-teachers to share in-depth information and perspectives (Tisdell et al., 2025).

Individual Interviews. Following participant completion of the pre-interview questionnaire, individual interviews were conducted. In-depth, individual interviews enable rich, descriptive data to emerge by capturing the fullness of the participants' experiences (Merriam & Tisdell, 2015). The decision to interview each co-teacher individually first was purposeful, intended to establish trust and rapport with participants and to capture a more accurate and authentic account of each teacher's perceptions of co-teaching (Braun & Clarke, 2013; Creswell & Poth, 2025; Tisdell et al., 2025). Conducting interviews individually also created a safe environment in which participants could share tensions, frustrations or uncertainties that they might be reluctant to disclose in the presence of their co-teacher (Szulc & King, 2025; Wilson et al., 2016). Additionally, this approach allowed for anticipation of potential areas of conflict that could surface during the subsequent dyadic interviews.

Dyadic Interviews. The term ‘dyadic interview’ is defined as “an interview conducted by a researcher with two participants at the same time, in which interaction between the participants is actively encouraged” (Szulc & King, 2025, p. 3). A dyadic interview has also been referred to as a paired depth interview, paired interview, or joint interview (Wilson et al., 2016). On the spectrum of interview formats, this method falls between an individual interview and a focus group (Szulc & King, 2025; Wilson et al., 2016). The focus is largely on the interactions and conversations that flow between the paired participants, including non-verbal communication (Wilson et al., 2016). In comparison to a focus group with multiple participants, the dyadic format enables the researcher to more closely observe these interactions (Wilson et al., 2016). Although the literature on this specific interview technique is limited, some scholars content that it has the potential to move beyond the data typically gathered in individual interviews and to yield additional insights when carefully aligned with the research purpose and questions (Szulc & King, 2025; Wilson et al., 2016).

In this study, dyadic interviews were used to supplement individual interviews to gain a deeper understanding of the interactions between co-teachers. Because co-teaching is inherently collaborative, this format provided an opportunity to examine how teachers jointly construct their understanding of shared practices, decision-making, and problem-solving. These elements align with the framework of collective teacher efficacy (Donohoo, 2018). Dyadic interviews also enhance recall, as participants recount shared experiences, supplement each other’s perspectives, and co-construct narratives (Szulc & King, 2025). During these exchanges, participants may agree, elaborate, or respectfully disagree, thereby illuminating both the strengths and challenges of their partnership. Such relational dynamics are often less visible during individual interviews

and provide unique insights into the lived realities of co-teaching (Cook et al., 2010; Szulc & King, 2025).

As co-teaching is a multi-faceted process requiring diverse competencies on the part of the educators (Hattie & Zierer, 2025), dyadic interviews offered a valuable means of capturing dimensions of the partnership that might not otherwise emerge (Szulc & King, 2025). Few prior qualitative studies on co-teachers have employed both individual and dyadic interviews to explore teachers' experiences, beliefs about educating SWD, and the evolution of their collaborative relationships (Marzullo-Matchniff, 2024; Ruvalcaba, 2015; and Theofield, 2023). Insights into the development and presence of CTE may be more fully understood through the joint conversations and interactions of co-teachers in a dyadic interview setting (Szulc & King, 2025).

Although participants selected their preferred interview format, I was sensitive to the dynamics within the dyadic interviews. Ground rules, as indicated in the dyadic interview protocol (Appendix E), helped set the stage for respectful interactions (Braun & Clarke, 2013). Attending to participants' well-being reflects an ethical commitment to the integrity of the research process. While no participants exhibited signs of discomfort, I was prepared to check-in if needed and offer a short break (Braun & Clarke, 2013). Preexisting relationships between participants in dyads often enables healthy conflict to take place (Braun & Clarke, 2013; Wilson et al., 2016).

Figure 3.1*Central Research Question: Data Source Alignment*

Central Research Question: <i>What are the experiences of Kansas general and special education co-teachers who serve students in inclusive classroom environments?</i>		
Data Source	Interview Question	Research Rationale/Objective
(1) Pre-Interview Questionnaire: Individual Response	Collection of demographic information includes details related to co-teaching professional development, existence of common planning time, and time spent shared planning. These responses provide demographic background and contextual information about each teacher prior to the interview, helping to data for a descriptive account (Braun & Clarke, 2013).	
(2) Semi-Structured Interview: Individual Teachers	(1) Tell me a little about your journey as a co-teacher. How did you first become involved in co-teaching?	Understand how the individual teacher was introduced to co-teaching, begin to develop a sense of attitudes and perceptions.
	(2) Describe your professional learning or training in co-teaching.	Professional learning has been identified as an essential element of effective co-teaching (Beninghof, 2020; Chatzigeorgiadou & Barouta, 2022; Pancsofar & Petroff, 2013; Scruggs et al., 2007; Strogilos et al., 2023).
	(3) How would you describe your working relationship with your co-teacher, and how has it evolved over time?	Identify how the teacher perceives the relationship and anticipate any challenges in the interviews with co-teaching partners. Co-teaching is impacted by relational dynamics (Hattie & Zierer, 2025; Villa et al., 2013).
	(5) What challenges have you experienced as a co-teacher? How have you worked through those challenges?	Explore teacher identified challenges, including any that align with research indicated barriers (Conderman, 2018; Cook et al., 2017; Harbort et al., 2007; Scruggs et al., 2007; Strogilos et al., 2023).
	(10) In what ways, if any, has your experience with co-teaching influenced your professional growth, both inside and outside of the co-taught classroom?	Prior research indicates that co-teachers describe the practice as embedded professional development and cite the benefits of learning from each other (Strogilos et al., 2023; van Hover et al., 2012; Villa et al., 2013).

(3) Semi-Structured Interview: Co-Teacher Pairs	(1) Tell me a little about your experience as co-teaching partners (e.g., how you were paired up, etc.)	Gain a sense of the co-teaching relationship, and any differences between what was shared during the individual interviews. Ease into the interview and make participants feel comfortable (Braun & Clarke, 2013; Tisdell et al., 2025).
	(7) Tell me about the workload involved with co-teaching.	Determine co-teachers' perception of workload (Muraski & Swanson, 2001; Strogilos et al., 2023).
	(10) If you could make one recommendation to school leaders about supporting co-teaching, what would it be?	Captures the essence of the co-teachers' perceptions of what is needed to support effective practices.

Figure 3.2

Sub-Question 1: Data Source Alignment

Sub-Question 1: How do co-teachers perceive and describe the presence or development of Collective Teacher Efficacy (CTE)?		
Data Source	Interview Question	Research Rationale/Objective
(1) Pre-Interview Questionnaire: Individual Response	Although the questions in the pre-interview questionnaire do not explicitly target CTE, the demographic data collected provide context for understanding participants' perspectives. An open-response space allows participants to share further comments, which may yield insights not captured elsewhere.	
(2) Semi-Structured Interview: Individual Teachers	(2) Describe your professional learning or training in co-teaching.	Effective professional development is often associated with the development of CTE (Cantrell & Callaway, 2008; Donohoo, 2017; Donohoo & Katz, 2019).
	(3) How would you describe your working relationship with your co-teacher, and how has it evolved over time?	Identified sources of CTE include affective states (Bandura 1977, 1993; Goddard et al., 2004), shared responsibility, and positive interdependence (Donohoo & Katz, 2020).
	(6) Share a specific example of a time when your co-teaching had a positive impact on student learning.	Mastery experiences are the largest and most influential source of CTE (Bandura, 1977; Donohoo et al., 2020; Goddard et al., 2004).
	(7) In your experience, how does a lesson with a co-teacher differ from a lesson delivered by one instructor?	Gain insight into co-teachers' perceptions of their ability to meet student needs together (Donohoo, 2017; Murawski, 2009), and if co-teaching is operating as intended (Hattie & Zierer, 2025).
	(8) Can you describe how you and your co-teacher approach meeting the needs of all students in your classroom?	Teachers with high levels of CTE believe they can influence all students' learning (Donohoo, 2017; Sharma et al., 2024; Tschannen-Moran & Barr, 2004).
	(9) What role do school or district leaders play in supporting or hindering your co-teaching efforts? What kind of leadership support would make the most difference for your students?	Administrators can set the tone for CTE to flourish through structured collaboration and teacher leadership (Donohoo, 2017; Donohoo & Katz, 2020).

(3) Semi-Structured Interview: Co-Teacher Pairs	(2) Describe a typical lesson or unit planning process.	Shared planning can create interdependence, which contributes to the development of CTE (Bandura, 2000; Donohoo, 2017; Tschannen-Moran & Barr, 2004).
	(4) What data do you use to evaluate the effectiveness of your co-teaching class?	CTE is fed by evidence of impact (Goddard & Kim, 2018; Hattie, 2023).
	(5) How would you describe the students in your co-taught classroom? What are some of the learning needs, strengths, and challenges of students in your co-taught class?	Understand how teachers describe their students. Teachers with high perceptions of CTE view their students as capable (Hattie, 2023; Tschannen-Moran & Barr, 2004).
	(6) How do you manage behavior in your co-taught classroom?	Gain a sense of how co-teachers manage their classrooms. Educators with higher levels of CTE are less likely to exclude children from the classroom based on problem behavior (Goddard et al., 2007).
	(8) What do you need from school or district leaders to make co-teaching successful?	Leaders influence CTE through supportive leadership and structures for collaboration (Donohoo et al., 2020).
	(9) To what extent do you and your co-teacher believe your work makes a difference for all students?	Teachers with high perceptions of CTE believe they are the common denominator in their students' success (Donohoo, 2017; Hattie, 2023).

Figure 3.3

Sub-Question 2: Data Source Alignment

Sub-Question 2: How do co-teachers interpret the influence of their co-teaching practices on student learning and outcomes?		
Data Source	Interview Question	Research Rationale/Objective
(1) Pre-Interview Questionnaire: Individual Response	The demographic information collected provides important context for interpreting participants' experiences. This includes details like access to planning time, which has been identified as essential for effective co-teaching (Strogilos et al., 2023). Additional demographic details, including teaching role, years of experience, and certifications, may offer a lens through which co-teachers' interpret their practice and impact on student learning.	
(2) Semi-Structured Interview: Individual Teachers	(4) Describe what effective co-teaching looks like.	Gain an understanding of teachers' perceptions of authentic co-teaching (Friend et al., 2010; Hattie, 2023; Villa et al., 2013).
	(6) Share a specific example of a time when your co-teaching had a positive impact on student learning.	Understand teachers' perceptions of their impact on student outcomes while co-teaching through a specific example (Donohoo et al., 2020).
	(7) In your experience, how does a lesson with a co-teacher differ from a lesson delivered by one instructor?	Effective co-teaching is expected to create a classroom environment that is vastly different from solo teaching (Hattie & Zierer, 2025; Murawski & Lochner, 2018).
	(8) Can you describe how you and your co-teacher approach meeting the needs of all students in your classroom?	Explore co-teacher approaches to meeting student needs (Strogilos et al., 2023; Villa et al., 2013).
(3) Semi-Structured Interview: Co-Teacher Pairs	(2) Describe a typical lesson or unit planning process.	Effective co-teaching requires effective planning and differentiated instruction (Villa et al., 2013).
	(3) Which co-teaching approaches do you use most frequently, and why? (Supportive, complementary, parallel, team)	The supportive approach is often the most utilized model (Scruggs et al., 2007), yet research has found it to be the least effective (Villa et al., 2013).

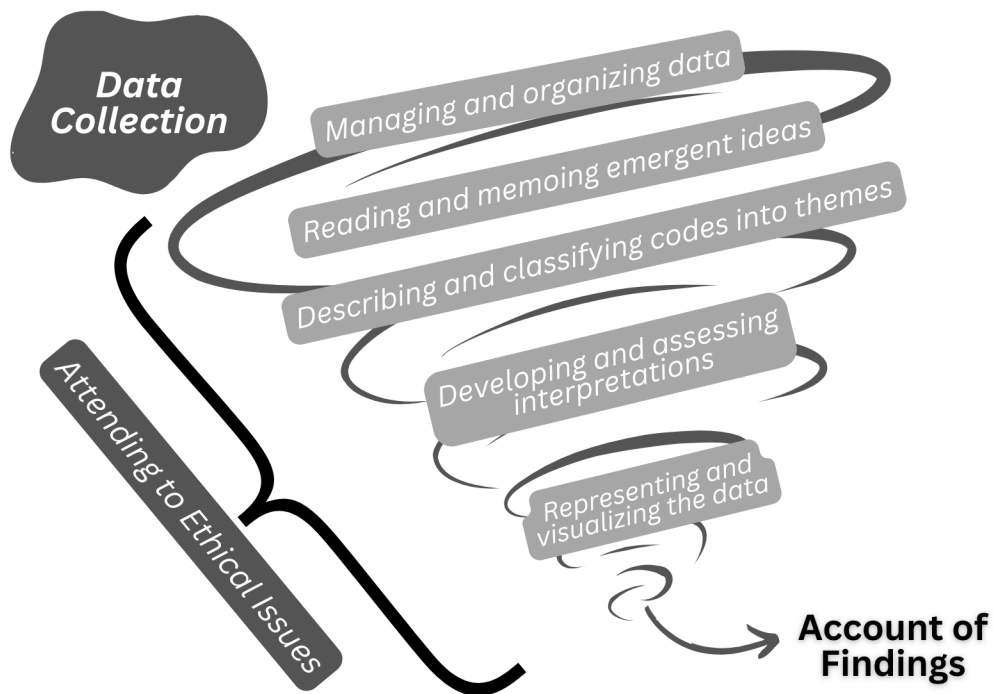
	(4) What data do you use to evaluate the effectiveness of your co-teaching class?	Use of data to drive instruction is a key component of instructionally responsive co-teaching (Hattie & Zierer, 2025; Murawski & Lochner, 2017).
	(6) How do you manage behavior in your co-taught classroom?	Some co-teachers report improved student behavior (Scruggs et al., 2007; Strogilos & Stefanidis, 2015).
	(7) Tell me about the workload involved with co-teaching.	Perspectives vary on the impact of co-teaching on teacher workload (Murawski & Swanson, 2001; Villa et al., 2013).
	(9) To what extent do you and your co-teacher believe your work makes a difference for all students?	Some co-teachers highlight the power of their combined efforts in achieving positive results (Scruggs et al., 2007). Moreover, shared beliefs in their collective ability to make a difference have been shown to contribute to improved student outcomes (Strogilos & Stefanidis, 2015).

Data Analysis Procedures

Data analysis followed an iterative and emergent approach consistent with qualitative research practices. This approach is illustrated through the data analysis spiral reproduced in Figure 3.4 (Creswell & Poth, 2025), which demonstrates that data collection and analysis are not distinct or linear stages but occur simultaneously during and between participant interactions (Tisdell et al., 2025). The spiral highlights the cyclical nature of qualitative analysis, as data are continually organized, coded, and categorized, with patterns progressively developing into themes aligned with the research questions and conceptual framework (Creswell & Poth, 2025; Tisdell et al., 2025). The first step was managing and organizing the data.

Figure 3.4

Data Analysis Spiral



Note. Data Analysis Spiral adapted from Creswell & Poth, 2025, p. 219.

Managing and Organizing the Data

Organizing data systematically was a critical step to ensure accuracy, preserve participant confidentiality and anonymity, and establish a foundation for rigorous analysis (Creswell & Poth, 2025; Saldaña, 2025; Tisdell et al., 2025). All interviews were conducted via Zoom, which enabled both audio recording and transcription. Digital files were stored securely on a private, password-protected laptop, while printed hard copies of each transcript were created as a backup (Merriam & Tisdell, 2015). These hard copies were placed in a file folder and secured in a locked file cabinet in my home.

Upon completion of each interview, participants were assigned a gender-neutral pseudonym to protect confidentiality and anonymity. The pseudonym, along with the interview

date, was entered at the top of each transcript to protect participant identity. Electronic files were labeled using a consistent format that allowed for clear identification of transcripts while maintaining participant anonymity (Creswell & Poth, 2025). A key linking participant names to their assigned pseudonyms was maintained in a spreadsheet stored on the password-protected laptop. These procedures ensured confidentiality, safeguarded participant information, and supported a systematic approach to high-quality data management and analysis (Creswell & Poth, 2025; Saldaña, 2025; Tisdell et al., 2025).

Following each interview, transcripts were downloaded and saved as Microsoft Word documents. The transcripts were then reviewed and cleaned to prepare the data for analysis. This process involved removing excessive filler words (e.g., “um”, “uh”) that did not alter the meaning of participant responses, correcting transcription errors, and eliminating irrelevant content such as informal greetings or off-topic dialogue). The data collection and analysis timeline are presented in Table 3.2 and began with managing and organizing the data. The transcripts were subsequently uploaded into Delve, a password-protected, web-based qualitative data analysis (QDA) tool designed to support qualitative researchers. The platform facilitated the organization of transcripts and the maintenance of an audit trail of codes and analytic memos.

Key considerations in the selection of QDA software include researcher time, budget, technological expertise, and the analytic needs of the study (Creswell & Poth, 2025; Tisdell et al., 2025). Delve was selected because it was cost-effective, easy to learn, and aligned with the study’s timeline, making it a practical tool for managing and analyzing the data. Although the software enhanced the efficiency and organization of the analytic process, the identification and interpretation of codes and categories remained the responsibility of the researcher (Creswell & Poth, 2025; Saldaña, 2025; Tisdell et al., 2025).

Table 3.2*Data Collection and Analysis Timeline*

Week	Participants	Semi-Structured Interviews	Data Collection and Analysis	Analytic Memos and Reflexive Writing
Week 1:	Recruitment		Invitation to participate email sent; responses received	
Week 2:	Riley (P1)	Pre-interview questionnaire completed prior to interview	Transcription; upload to Delve; first-cycle In Vivo coding	Analytic memo following interview
Week 3:	Skyler (P11), Dakota (P12)	Pre-interview questionnaire completed prior to interview	Transcription; upload to Delve; first-cycle In Vivo coding	Analytic memo following interviews
Week 4:	Jordan (P2), Taylor (P3)	Pre-interview questionnaire completed prior to interview	Transcription; upload to Delve; first-cycle In Vivo coding	Analytic memo following interviews
Week 5:	Elliot (P13) Dyad A (Riley and Jordan)	Pre-interview questionnaire completed prior to interview	Transcription; upload to Delve; first-cycle In Vivo coding	Analytic memo following interviews
Week 6:	Casey (P4), Rowan (P9), Dyad C (Avery & Quinn)	Pre-interview questionnaire completed prior to interview	Transcription; upload to Delve; second-cycle pattern coding	Analytic memo following interviews
Week 7:	Alex (P7), Peyton (P8), Dyad B (Casey & Taylor)	Pre-interview questionnaire completed prior to interview	Transcription; upload to Delve; second-cycle pattern coding	Analytic memo following interviews
Week 8:	Dyad D (Alex & Peyton), Dyad E (Rowan & Cameron), Avery (P5), Quinn (P6), Parker (P14)	Follow-up clarification emails sent and responses received	Cross-dyad and individual participant comparison; final theme development	Analytic memo following interviews

Note. Data collection timeline and activities. Participant numbers and gender-neutral pseudonyms were assigned to ensure confidentiality and protect participant privacy. Data collection occurred over an eight-week period (January-February 2026) and included 14 pre-interview questionnaires, 19 semi-structured interviews, and follow-up email responses.

Reading and memoing emergent ideas

Next, using the table feature in Microsoft Word, I created a two-column layout in each transcript. The first column contained the interview text, while the second column was reserved for coding and analytic notes. Each transcript was then segmented into rows by speaker, creating manageable “chunks” of text for coding and analysis (Creswell & Poth, 2025)

Analytic Memos

During each interview, I recorded brief notes to capture key topics, phrases, and statements aligned with the central and sub-research questions, as well as emerging patterns. Immediately following each interview, I wrote analytic memos to document observations, contextual details, and initial reflections about participant responses and the interview interaction (Tisdell et al., 2025). These memos also included reflexive notes related to my professional experiences and potential connections to the research questions. Maintaining analytic memos supported the data analysis process by informing coding decisions, documenting interpretations, and strengthening the study’s audit trail (Creswell & Poth, 2025; Merriam & Tisdell, 2015; Saldaña, 2025).

Once transcripts were prepared, each was reviewed at least twice to develop a comprehensive understanding of the discussion and ensure that no significant details were overlooked (Braun & Clarke, 2022; Creswell & Poth, 2025; Merriam & Tisdell, 2015). Conducting this review soon after each interview helped preserve contextual details that might otherwise have faded as additional interviews were conducted (Braun & Clarke, 2022; Tisdell et al., 2025). Memo writing, defined as “short phrases, ideas, or key concepts that occur to the reader as they examine various data files” (Creswell & Poth, 2025, p. 221), is a critical strategy in qualitative research. It enables researchers to document ongoing reflections and track the

development of analytic ideas throughout the research process (Merriam & Tisdell, 2015; Saldaña, 2025). A sample of analytic memos was included in the audit trail (Appendix I) to enhance trustworthiness by providing evidence of analytic decision-making and reflective practice (Merriam & Tisdell, 2015; Creswell & Poth, 2025).

During the initial stages of analysis, hard copies of each transcript were printed to facilitate deeper engagement with the data (Saldaña, 2025). A graphic organizer listing the three research questions was maintained in both electronic and printed formats, as shown in Figure 3.5. This organizer was reviewed before and throughout transcript analysis to maintain analytic focus and ensure alignment with the study’s guiding questions (Creswell & Poth, 2025; Merriam & Tisdell, 2015).

Figure 3.5

Research Questions Reference

<i>What are the experiences of Kansas general and special education teachers who co-teach in inclusive learning environments?</i>	
<i>How do co-teachers perceive and describe the presence or development of collective teacher efficacy?</i>	<i>How do co-teachers interpret the influence of their co-teaching practices on student learning and outcomes?</i>

Describing and Classifying Codes into Themes

Once I became familiar with the data, the next step in the analysis involved generating an initial set of codes that captured key insights and perspectives reflected in the interview transcripts (Braun & Clarke, 2022). Open coding, or coding without a predetermined list, was employed to identify recurring concepts and patterns across the data set (Saldaña, 2025; Tisdell et al., 2025). At this stage, segments of data relevant to the research questions were noted as potential codes (Braun & Clarke, 2022; Merriam & Tisdell, 2015). This preliminary coding process provided an initial understanding of participants' experiences and perspectives and served as the foundation for deeper analysis and the subsequent development of categories and themes (Saldaña, 2025).

First Cycle Coding (In Vivo)

In Vivo coding was selected as the first-cycle coding method to preserve participants' authentic voices through their exact words (Saldaña, 2025). This approach aligned closely with the study's central research question, which explored participants' perceptions and meanings related to their co-teaching experiences (Saldaña, 2025). Key words and phrases directly connected to the research question and sub-questions were highlighted in the printed transcripts. These phrases were then entered in capital letters and enclosed in quotation marks in the second column of the electronic transcript table to clearly distinguish participants' language from the researcher's interpretation. Notes and highlights from the initial review of the printed transcripts were consulted during this process, followed by review of the transcripts uploaded into Delve (Saldaña, 2025). Within Delve, these quotations were digitally highlighted and assigned as codes using the platform's coding features. Participant words used as codes were recorded in all capital letters to maintain consistency and clarity.

Following initial coding, the list of In Vivo codes was first organized chronologically and reviewed to identify notable patterns or ideas, with analytic memos used to capture initial insights (Saldaña, 2025). The codes were then reorganized alphabetically to provide an additional lens for identifying patterns and potential relationships among them (Saldaña, 2025). Emerging categories, consisting of clusters of related codes, were documented in dated analytic memos, contributing to the study's audit trail and supporting transparency in analytic decision-making (Saldaña, 2025; Tisdell et al., 2025). Together, the preliminary codes, notes, and analytic memos supported ongoing reflection and established a foundation for subsequent coding cycles and theme development (Braun & Clarke, 2022; Saldaña, 2025; Tisdell et al., 2025).

This process was repeated for each subsequent transcript, reflecting the iterative and cyclical nature of qualitative analysis (Merriam & Tisdell, 2015). While continuing to apply open coding through the In Vivo method, previously identified codes were reviewed and refined, and additional codes were generated as new insights emerged during transcript analysis (Braun & Clarke, 2022; Saldaña, 2025; Tisdell et al., 2025). Codes from each transcript were systematically incorporated into an evolving master code list within Delve, allowing patterns and relationships to be compared across participants and interviews (Merriam & Tisdell, 2015).

Second Cycle Coding (Pattern Coding)

Second cycle coding represents a shift from analysis to synthesis (Saldaña, 2025; Tisdell et al., 2025). Whereas first-cycle coding summarizes segments of data, second-cycle coding organizes those segments into “more meaningful and parsimonious units of analysis (Saldaña, 2025, p. 365). To facilitate the transition from codes to broader analytic categories, pattern coding was employed (Saldaña, 2025). The master list of first-cycle codes was reviewed for similarities and recurring concepts and then clustered into overarching categories, each

represented by a pattern code (Saldaña, 2025). Throughout this process, I ensured that emerging categories remained closely aligned with the research questions and the study's conceptual framework (Merriam & Tisdell, 2015). Pattern codes were entered digitally into Delve, where related first-cycle codes were organized beneath them using the platform's drag-and-drop feature.

Initial coding generated 109 codes. Through iterative analysis and pattern coding, these codes were consolidated into analytic categories and ultimately synthesized into seven themes. The complete codebook is included in Appendix J. The progression from codes to categories and themes is presented narratively in Chapter 4 and illustrated with tables as part of the audit trail.

Theme Development

While maintaining the ongoing list of analytic categories, theme development occurred through sustained engagement with the data and continuous analytic reflection. After all interviews were completed, transcripts were reviewed, and initial codes and categories were generated, the following process was used to develop themes.

1. Beginning with Dyad A, I compiled the individual and paired interview transcripts along with the corresponding analytic notes and memos.
2. Using these materials, I drafted preliminary narrative responses to the central research question and the two sub-research questions for each participant pair. These responses were grounded in participants' individual experiences and incorporated direct participant quotations alongside the categories identified during transcript analysis.
3. For each participant pair or individual participant, emergent themes were organized into a table aligned with the corresponding research or sub-research question (See Table 3.3 for an example).

4. After completing this process for Dyad A, I repeated steps one through three for Dyad B. This procedure was replicated across all dyads and the four individual participants.
5. Next, all emergent categories from both individual participants and participant pairs were compiled into a master table organized by research question component. These tables are included in Appendix I and serve as part of the study's audit trail.
6. Once compiled, categories were sorted alphabetically and consolidated based on conceptual similarities.
7. Through this process of comparison and consolidation, broader themes were identified.

Throughout the analytic process, constant comparison was used to examine similarities and differences across transcripts, codes, and categories, allowing patterns to emerge across participants and dyads. Emergent themes were subsequently reviewed across transcripts, analytic memos, and category tables to ensure alignment with participants' experiences and the study's research questions. This iterative process supported analytic rigor and contributed to the transparency and trustworthiness of the study's audit trail (Bloomberg, 2023).

Developing and Assessing Interpretations

Following the identification of themes, the next phase of analysis involved deepening understanding and interpretation of the data. This stage involved careful consideration in determining how the emergent themes represented participants' experiences and how the themes worked together to address the research questions and align with the conceptual framework (Creswell & Poth, 2025). Ongoing engagement and reflection included continued immersion into the transcripts, reading analytic memos, and creating and processing through category tables with the ultimate goal of determining patterns and relationships among themes.

Table 3.3*Emergent Themes: Riley & Jordan*

Research Question	Within-Dyad Themes
Central Research Question: What are the experiences of Kansas general and special education co-teachers who serve students in inclusive classroom environments?	administrative structure and support relational trust shared planning time uneven instructional leadership workload tension
Sub-Research Question 1: How do co-teachers perceive and describe the presence or development of Collective Teacher Efficacy (CTE)?	trust and professional affirmation shared moral purpose toward students student growth reinforcing collective teacher efficacy role dynamics within the partnership
Sub-Research Question 2: How do co-teachers interpret the influence of their co-teaching practices on student learning and outcomes?	learner autonomy and engagement academic growth as evidence of impact experiential and life-connected learning increasing engagement and retention

Note. Table presents emergent themes aligned to the three research questions resulting from Dyad A's individual and paired interviews. Table is provided as an example of the process used to identify themes.

Throughout this process, themes were compared across dyads and individual participants to consider the dataset as a whole. Through constant comparison, findings were developed that remained rooted in the lived experiences of the co-teachers and grounded in the data (Merriam & Tisdell, 2015; Saldaña, 2025). To strengthen credibility of interpretation, themes were reviewed against interview transcripts, category tables, and analytic memos, ensuring alignment with participant data, conceptual framework, and the study's central research question and sub-questions (Bloomberg, 2023).

This analytic process included multiple drafts of theme descriptions supported by participant quotes. In addition, re-imagining the original conceptual framework through mind

mapping and sketching aided in exploration of relationships among themes and refinement of interpretation. While the literature review informed the entire analytic process, the interpretation of themes into findings also included the development of tables linking thematic with participant quotations and relevant literature. These tables, presented in Chapter 5, serve as an additional tool for visualizing relationships between data and prior research alongside the ongoing drafting of interpretive insights.

Representing and Visualizing the Data

The final stage of analysis involved determining how the findings would be represented and communicated. Clear presentation of findings in relation to participant experiences, the conceptual framework, and guiding research questions aimed to make the analytic process as clear and visual as possible (Bloomberg, 2023; Creswell & Poth, 2025). Tables and diagrams were used during analysis and were included as part of the study's audit trail, providing additional visual representations and enhancing trustworthiness. Conceptual diagrams and tables were created to document demonstrate informed the development of the revised conceptual model presented in Chapter 5. Narrative descriptions, participant quotations, and visual representations were intended to provide an all-inclusive illustration of the study's findings with ties to the data.

Delimitations

Delimitations refer to the intentional boundaries established by the researcher in designing the study (Bloomberg, 2026). Several delimitations guided the design and implementation of this research. First, the study was purposefully bounded to general and special education teachers engaged in co-teaching partnerships within Kansas. This geographic focus allowed for a more contextualized understanding of co-teaching practices within a consistent

state-level policy environment related to inclusive education. While variation exists across districts and schools, this delimitation ensured that participants operated within a shared policy context.

Next, this study intentionally focused on the perspectives of teachers directly involved in co-teaching partnerships. Perspectives of school leaders, students, and paraeducators were not included. Although these perspectives may provide additional insight, the purpose of this study was to examine the shared experiences of educators engaged in co-teaching. This focus allowed for a deeper exploration of teachers' perceptions of collective teacher efficacy and their interpretations of student outcomes.

Third, a qualitative research design was intentionally selected to capture rich, detailed descriptions of participants' experiences. As such, the study did not include quantitative measures of student achievement or utilize validated survey instruments to formally measure collective teacher efficacy. Instead, data were collected through semi-structured interviews to examine how participants described and interpreted their experiences within co-teaching partnerships. Finally, this study was limited to co-teaching within inclusive classroom environments in which general and special education teachers shared responsibility for students with and without disabilities. Other collaborative instructional models were not included within the scope of the study.

Limitations

Limitations exist in all studies and should be considered when interpreting the findings (Bloomberg, 2026). Limitations refer to the constraints that affect how the findings can be interpreted, including factors beyond the control of the researcher as well as the implications of

design choices, such as limited transferability and reliance on self-reported data. Limitations addressed include participant representation considerations and interpretation.

First, one co-teaching pair was unable to complete all phases of the study due to a family emergency. As a result, the perspective of the participating co-teacher was included as an individual account rather than a member of a dyad. While this ensured representation of the partnership, the absence of a joint interview may have limited the ability to capture co-constructed experiences and relational dynamics typically revealed through co-teacher interaction. However, inclusion of this perspective was determined to maintain the integrity of the dataset, as individual co-teacher perspectives were also represented across the study.

Second, it is acknowledged that the participants who elected to participate may have represented co-teaching partnerships that were more effective or positively oriented toward the collaborative process. Although this was not an intentional outcome of recruitment, and participation was open to all interested co-teachers, it is possible that educators who experienced success or satisfaction with coteaching were more likely to volunteer. To mitigate this potential bias, participation was not restricted, incentives were provided to encourage broader participation, and participants were explicitly encouraged to share both positive and challenging experiences.

Finally, the qualitative design emphasized participants' interpretations of their experiences rather than objective measures of effectiveness. Although participants described improvements in student outcomes and classroom culture, these findings were not verified through quantitative analysis. As such, results should be interpreted as reflective of participants' lived experiences rather than empirical measures of performance. This limitation also affects

transferability, as findings are context-specific and may not be directly applicable to all co-teaching settings.

Trustworthiness

Trustworthiness in qualitative research reflects the rigor and integrity applied throughout all phases of a study, from research design through data analysis and interpretation (Tisdell et al., 2025). Although qualitative researchers employ a variety of frameworks and strategies, there is no singular, universally accepted method for establishing trustworthiness (Tisdell et al., 2025). Instead, researchers draw upon established criteria to demonstrate the credibility and rigor of their work. In this study, trustworthiness is addressed through the four widely recognized criteria: credibility, dependability, confirmability, and transferability (Bailey, 2018; Creswell & Poth, 2025; Tisdell et al., 2025). Together, these criteria provide a comprehensive framework for evaluating the quality and integrity of qualitative research.

Credibility

Credibility refers to the extent to which the findings are believable and accurately represent participants' authentic experiences (Bailey, 2018; Tisdell et al., 2025). In this study, credibility was supported through multiple strategies. First, detailed and transparent descriptions of the research design, data collection procedures, and analytic processes were provided to adequately explain how findings were derived (Bailey, 2018). This level of methodological transparency strengthens confidence in the alignment between the data and the resulting interpretations.

Credibility was further enhanced by analytic memos, which captured the formation and refinement of ideas throughout the data analysis process (Creswell & Poth, 2025). These memos served as a reflective tool, capturing emerging patterns, analytic decisions, and evolving

interpretations. A sample of these memos is included in the audit trail (Appendix I), providing evidence of ongoing engagement with the data and supporting transparency in the analytic process.

Member checking was also employed to enhance credibility by engaging participants in the review of preliminary themes and interpretations. Participants were invited to provide feedback, clarify their perspectives, or expand upon their responses (Creswell & Poth, 2025; Tisdell et al., 2025). Although participant responses to member checking were generally brief affirmations, the depth of the original interviews provided rich, detailed accounts of their experienced. Additionally, tables included in Appendix I document how individual participant data informed the analysis, further strengthening the credibility of the findings.

Dependability

Dependability refers to the stability and consistency of the research process and the extent to which the findings logically align with the data collected (Bailey, 2018; Creswell & Poth, 2025; Tisdell et al., 2025). In this study, dependability was supported through an extensive description of data collection procedures, coding processes, and analytic decisions. These descriptions provide a clear account of how the study was conducted and how conclusions were reached. A comprehensive audit trail, including reflective journals and analytic memos, was maintained to further illustrate the inductive nature of the process (Tisdell et al., 2025). The complete audit trail is provided in Appendix I, allowing readers to examine the consistency and transparency of the research process.

Confirmability

Confirmability refers to the extent to which the findings are grounded in the data rather than shaped by researcher bias or personal assumptions (Bailey, 2018). In this study,

confirmability was supported through multiple strategies designed to ensure that interpretations were closely aligned with participant data. Triangulation was employed through the use of multiple data sources, including pre-interview questionnaires, individual interviews, and dyadic interviews (Tisdell et al., 2025). These varied data sources allowed for comparison and corroboration of participant perspectives, strengthening the alignment between the data and the findings.

Additionally, confirmability was enhanced through attention to researcher positionality and reflexivity throughout the study (Brantlinger et al., 2005). Researcher subjectivity is acknowledged and accepted as part of the iterative process in basic qualitative research. Journaling and memoing provided a mechanism for examining assumptions and maintaining awareness of how interpretations were constructed (Bailey, 2018; Tisdell et al., 2025). Consideration of interpersonal dynamics during participant recruitment and data collection further supported reflexivity by acknowledging potential power dynamics and their influence on the research process (Tisdell et al., 2025).

Transferability

Last, transferability refers to the extent to which the findings may be applicable to other contexts, as determined by the reader (Tisdell et al., 2025). In qualitative research, transferability is supported not through generalization, but through the provision of rich, contextualized descriptions that allow readers to assess the relevance of findings to their own settings (Tisdell et al., 2025). In this study, transferability was supported through the inclusion of thick descriptions of participants, co-teaching contexts, and instructional practices. Detailed participant profiles presented in Chapter 4 provide contextual information about each individual co-teacher or co-

teaching partnership, enabling readers to better understand the settings in which the findings were generated.

Additionally, this study responds to critiques within the co-teaching literature that have identified a lack of contextual depth in prior research (Khoury, 2014; King-Sears et al., 2021; Losinski et al., 2019; Murawski & Swanson, 2001; Stefanidis et al., 2023; Szumski et al., 2017). By incorporating pre-interview questionnaires, multiple interview formats, and detailed narrative descriptions, this study provides a comprehensive account of participant experiences and the broader instructional context. These elements support readers in determining the potential applicability of the findings to other educational settings.

Ethical Considerations

Ethical considerations were addressed throughout all phases of this study to ensure the protection of participants and the integrity of the research process. As illustrated in Figure 3.4, attention to ethics was ongoing and embedded within the data collection and analysis process (Creswell & Poth, 2025). The data analysis spiral depicts the qualitative researcher's process of "moving in analytic circles rather than using a fixed linear approach" (Creswell & Poth, 2025, p. 218), highlighting that analysis was not a linear process. Throughout, being attuned to reflexivity, participant protection, and the use of analytic memos supported trustworthiness. Considerations of confidentiality, anonymity, and ethical responsibility were maintained consistently throughout the study.

Participant protection began immediately through adherence to the guidelines established by Kansas State University's Institutional Review Board (IRB). Approval for the study was obtained before any recruitment or data collection procedures were initiated (Appendix H). Informed consent procedures ensured that participants were fully aware of the study's purpose,

data collection procedures, and their rights as participations. Written consent was obtained from participants prior to their involvement in the study.

Participants were recruited through my professional network, which included educators engaged in co-teaching practices. While this access facilitated recruitment, careful attention was given to minimizing potential power dynamics associated with my role as a state co-teaching trainer. Recruitment emails (Appendix A) were distributed to 66 of co-teachers, and 15 agreed to participate in the study. Participants returned signed consent forms via email prior to engaging in the study.

Confidentiality and anonymity were protected through multiple strategies. Gender-neutral pseudonyms were assigned to all participants, and identifying information, including school and district names, was removed from all transcripts and reporting. As gesture of reciprocity for participants' time, a \$25 Amazon gift card was offered following completion of each interview, with participants given the option to decline (Creswell & Poth, 2025). Data collection was conducted through semi-structured interviews using the Zoom video conferencing platform. Participants were informed of audio recording and transcription procedures both in the consent form and at the beginning of each interview session. All interview recordings and transcripts were securely stored by the researcher in a locked and password-protected location and will be maintained in accordance with institutional guidelines.

Summary of Methodology

This chapter provided an overview and rationale for the selected basic qualitative research design. It included a detailed description of the methodological approach, including the study's rationale, participants, setting, and interview protocol. Additionally, the procedures for data collection and analysis were outlined. Chapter 4 presents the research findings and their

alignment with the study's conceptual framework. Finally, Chapter 5 discusses the implications of the findings and offers recommendations for future research.

Chapter 4 - Findings

This chapter presents the findings of this basic qualitative study, which explored the experiences of Kansas general and special education co-teachers working in inclusive classrooms. Additionally, the study examined how co-teachers perceived collective teacher efficacy within co-teaching experiences and how they interpreted the impact of collaborative instructional practices on student learning outcomes. Eight key themes emerged from the data, characterizing Kansas co-teachers' experiences, collective teacher efficacy perceptions, and student outcome interpretations.

One central research question and two sub-research questions guided this study:

Central Research Question: What are the experiences of Kansas general and special education co-teachers who serve students in inclusive classroom environments?

Sub-Question 1: How do co-teachers perceive and describe the presence or development of collective teacher efficacy (CTE)?

Sub-Question 2: How do co-teachers interpret the influence of their co-teaching practices on student learning and outcomes?

Chapter 4 presents the themes identified through interviews with Kansas general and special education teachers who participated in co-teaching partnerships within inclusive classroom settings. Data from individual and paired interviews were analyzed using qualitative coding that resulted in the development of categories, patterns, and themes as described in Chapter 3. Through iterative coding and comparison across participants, analysis of experiences resulted in eight themes that collectively describe teachers' experiences within co-teaching partnerships, how these experiences shaped their perceptions of collective teacher efficacy, and how co-teachers perceive their collaborative practices as impacting student outcomes. Themes

are as follows: (1) Relational Trust as the Foundation for Shared Instructional Ownership in Co-Teaching; (2) Co-Teaching as a Mechanism for Reciprocal Professional Learning; (3) Student Growth as a Reinforcement of Collective Teacher Efficacy; (4) Expanding Instructional Access and Responsiveness through Co-Teaching; (5) Fostering Student Engagement and Belonging within Co-Taught Classrooms; (6) Structural and Organizational Supports Enabling Co-Teaching and Collective Teacher Efficacy; (7) Structural and Organizational Constraints Limiting Co-Teaching and Collective Teacher Efficacy; (8) A Continuum of Leadership Engagement and Understanding Influencing Co-Teaching Implementation.

Before describing the themes in detail, participant profiles are provided to contextualize the educators whose experiences informed the themes. Gender-neutral pseudonyms and singular “they” pronouns are used to further protect participant confidentiality.

Participant Profiles

In Chapter 3, participant demographic information was presented. The following participant profiles provide additional context for understanding the experiences represented in the themes and contribute to the study’s trustworthiness. Each profile describes the professional background, instructional context, and co-teaching dynamics of the participating educators. These contextual descriptions offer insight into the instructional environments in which co-teaching occurred and help situate the themes that emerged through analysis and interpretation.

Dyad A: Riley and Jordan

Riley is a high school special education teacher with five to nine years of teaching experience, including two years of co-teaching experience. Jordan is a high school science teacher with 10 to 14 years of teaching experience, including four years in co-teaching roles. At the time of the study, Riley and Jordan were in their second year as an established co-teaching

partnership at a large Kansas high school. Both hold graduate degrees and have participated in formal professional learning focused on co-teaching practices.

They described co-teaching as a district expectation supported through structured professional learning processes, which included regular classroom observations, reflection protocols, and debriefing conversations facilitated by state-level project personnel and building administrators. Riley and Jordan also shared a scheduled planning period during the school day and reported spending approximately three hours per week planning instruction collaboratively. Their partnership operated within a direct service classroom utilizing a modified science curriculum designed for a small group of students receiving special education services. Across both individual and paired interviews, Riley and Jordan characterized their partnership as grounded in relational trust and supported by instructional coaching and feedback. Both teachers described the co-teaching experience as positively influencing student engagement, independence, and academic growth.

However, despite describing a positive professional relationship, Riley and Jordan expressed differing perspectives regarding personal satisfaction and the overall effectiveness of their co-teaching model. Riley emphasized the increased workload associated with co-teaching responsibilities, while Jordan highlighted the embedded professional learning opportunities within the co-teaching process as among the most impactful experiences of their career. Additionally, the participants described uneven instructional leadership within the classroom, despite the presence of strong relational trust between them. This coexistence of relational trust alongside differing perceptions of professional fulfillment and instructional leadership offers a nuanced contribution to the broader findings of the study.

Dyad B: Taylor and Casey

Taylor is an elementary general education teacher with five to nine years of teaching experience, including one year of co-teaching experience. Casey is an elementary special education teacher with two years of teaching experience, including one year of co-teaching experience. At the time of the study, they were in their first year as an established co-teaching partnership and taught reading at a mid-size elementary school. Taylor was nearing completion of graduate-level coursework, while Casey was completing their final year in a transition-to-teach program as they finished their bachelor's degree.

Neither teacher had participated in professional learning focused specifically on co-teaching practices. Instead, they described building their understanding of co-teaching through independently reading articles and participating in a limited number of meetings with building-level co-teaching coaches. Taylor and Casey described co-teaching within their school as a structure intended to support the inclusion of students with disabilities in general education classrooms. They shared a daily scheduled planning period and reported spending approximately five hours per week planning collaboratively.

Casey identified experience as a paraeducator in a co-taught classroom as foundational to their development as a teacher, emphasizing that encouragement from a supervisor and mentor influenced their decision to pursue teaching. Reflecting on this experience, they explained, "I think co-teaching, since I started...as a para, has made me the teacher that I am today." Across interviews, both Taylor and Casey characterized their partnership as grounded in relational trust, communication, and shared responsibility. They collaborated informally and frequently communicated outside of the school day. At the same time, they noted implementation

challenges associated with limited leadership engagement and structural constraints within the school setting.

Dyad C: Avery and Quinn

Avery is an elementary special education teacher with 10-14 years of teaching experience, including five to nine years of co-teaching experience. Quinn is in their second year as an elementary general education teacher, also including two years of co-teaching experience. At the time of the study, they were in their second year as an established co-teaching partnership and taught math and reading at a mid-size elementary school. Avery was pursuing a graduate degree, while Quinn had completed a bachelor's degree after student teaching the prior year. Both teachers reported participating in formal professional learning related to co-teaching.

Together, Avery and Quinn served students within a single grade level and collaborated with one another and their grade level team. They shared a daily scheduled planning period and reported spending approximately two hours per week planning collaboratively. In addition to classroom responsibilities, Avery served as the special education department leader and was a member of the building leadership team. Across individual and paired interviews, Avery and Quinn described co-teaching as embedded professional learning, informal mentoring, and an overall self-sustained co-teaching partnership characterized by relational trust and shared responsibility. Central to their partnership was a shared belief that all students can learn and achieve at high levels within inclusive settings.

Dyad D: Alex and Peyton

Alex is an elementary general education teacher with 25-29 years of teaching experience, including five to nine years of co-teaching experience. Peyton is an elementary special education teacher with 15-19 years of teaching experience, all of which have included co-teaching

responsibilities. At the time of the study, they were in their seventh year as an established co-teaching partnership at a mid-size elementary school. Both hold graduate degrees and have participated in professional learning focused on co-teaching practices, although Peyton reported receiving significantly more training due to serving as a co-teaching coach. Alex and Peyton shared a daily scheduled planning period and reported spending approximately one to three hours per week planning collaboratively. Their pre-interview questionnaire responses reflected strong perceptions of co-teaching outcomes, including shared instructional responsibility and improved student learning.

Across individual and paired interviews, Alex and Peyton described their partnership as long-standing and grounded in data-driven instructional practices, particularly the use of small group instruction. They emphasized a system of collaboration and planning that they had refined over multiple years teaching together. However, they also discussed limited school leadership engagement in supporting co-teaching, which they perceived as a barrier to successful schoolwide implementation of inclusive practices. While limited leadership understanding was not viewed as restricting the success of their co-teaching practices, both expressed fears that it impacted other partnerships and overall student impact.

Dyad E: Rowan and Cameron

Rowan is a middle school special education teacher with 15-19 years of experience, including 10-14 years of co-teaching experience. Cameron is a middle school English Language Arts teacher with 20-24 years of experience, including five to nine years of co-teaching experience. At the time of the study, they were in their sixth year as an established co-teaching partnership teaching English at a mid-size middle school. Both held graduate degrees and have participated in professional learning focused on co-teaching practices. In addition to co-teaching

together, both serve as co-teaching coaches in their building, supporting other co-teachers by conducting classroom observations and providing feedback.

During their interviews, Rowan and Cameron described a co-teaching partnership sustained across multiple years, grounded in shared expectations and clearly defined responsibilities. They noted that their differing areas of expertise supported ongoing professional growth and increased confidence. While both teachers reported that students perceived them as equal instructional partners, Rowan explained that this was not always the case in other co-teaching partnerships. The pair identified intentional daily actions to create a shared classroom environment. While their partnership was characterized as impactful for student and teacher growth, they described limited leadership visibility to support effective co-teaching practices, expressing their desire for feedback to continue to grow in their partnership.

In addition to the five co-teaching pairs who participated through individual and dyadic interviews, four individual co-teachers elected to participate through individual interviews. Their participant profiles are presented next.

Skyler

Skyler is a high school special education teacher with zero to four years of teaching experience, all of which have included co-teaching responsibilities. At the time of the study, Skyler was in their first year as part of established co-teaching partnerships with multiple general education teachers. Skyler described working with students across all grade levels (Grades 9-12) and co-teaching across four content areas: English, mathematics, science, and social studies. They held a graduate degree, had participated in professional learning focused on co-teaching practices, and attended workshops or conferences related to inclusive practices. While shared planning periods had been provided previously for co-teachers, they were not in place at the time

of the study. As a result, Skyler reported spending approximately one to three hours per week planning collaboratively with co-teaching partners outside of the school day.

Skyler's professional background included working as a paraeducator in a special education classroom, an experience identified as foundational to their development as a teacher. Reflecting on that experience, where Skyler co-taught with a special education teacher, they noted that it was where they "learned the special education ropes" and decided to pursue a degree in special education. While this experience did not occur in an inclusive general education classroom setting, it provided Skyler with confidence and skills that prepared them for a career as an educator. During the interview, Skyler emphasized the importance of common planning time, supportive leadership, and the challenges associated with planning for multiple content areas across several co-teaching partnerships. In addition, Skyler described filling a role on the building leadership team and responsibilities supporting co-teachers and paraeducators within the school.

Dakota

Dakota is an elementary special education teacher with more than 15 years of teaching experience, including six years in co-teaching roles, currently serving in a teaching assignment supporting students with a range of high-incidence disabilities across content areas within a single grade level. At the time of the study, Dakota co-taught both reading and mathematics with different co-teachers and was in the first and second years of those established co-teaching partnerships. They also described prior experience co-teaching across multiple special education assignments with several different co-teaching partners. Dakota holds a graduate degree and indicated participation in district-led professional learning focused on co-teaching practices.

Although many of Dakota's previous partnerships were viewed as positive for students, the single-grade-level assignment they currently assumed was perceived as the most effective. Reflecting on this structure, Dakota explained, "I really like being able to focus just on that one grade level and their curriculum and their standards." Dakota described current co-teaching partnerships as grounded in evolving trust and reciprocal professional learning, noting that these roles felt less isolating than previous teaching assignments. They shared a scheduled planning period with co-teaching partners and spent approximately three to five hours per week planning collaboratively, particularly in response to the implementation of a new curricular resource. Dakota also described challenges related to data-interpretation, specifically noting misalignment between assessments used to evaluate co-teaching outcomes and curriculum-based assessments used for instructional decision-making. Dakota's perspectives pr

Elliot

Elliot is a high school social studies teacher with five to nine years of teaching experience, including zero to four years of co-teaching experience. At the time of the study, they were in their first year of an established co-teaching partnership with a current co-teacher at a mid-size high school. They also described the recent assignment of an additional co-teacher at the start of the semester. Elliot holds a graduate degree and had participated in district-provided professional learning related to co-teaching. Prior support for co-teaching included structured observations and reflective feedback cycles facilitated by a district instructional coach but was not currently present as that position was vacant at the time of the study.

Elliot indicated they did not currently have a shared scheduled planning period with a co-teacher and reported spending no time per week planning collaboratively. Despite this limitation, they described their co-teaching partnerships as grounded in evolving relational trust and

complementary expertise, while also maintaining clearly delineated instructional roles. They emphasized a preference for role-specific expertise, positioning themselves as the primary content instructor while co-teachers supported through the provision of modifications and accommodations. Elliot characterized co-teaching as most effective when sustained over time, explaining that established partnerships reduced individual workload, increased student access to accommodations, and provided instructional support within clearly defined boundaries of authority and responsibility. Finally, Elliot described structural challenges affecting co-teaching implementation, including scheduling instability, staff shortages, and high concentrations of students with disabilities assigned to the same class period.

Parker

Parker is a high school special education teacher with 10-14 years of teaching experience, including five to nine years in co-teaching roles. At the time of the study, they were in their third year working as part of established co-teaching partnerships with multiple general education teachers. Parker described supporting students across all grade levels (Grades 9-12) and co-teaching across multiple content areas, including mathematics and English. Parker explained that their strongest content knowledge was in social studies, noting that they entered the teaching profession through a non-traditional pathway; first earning a bachelor's degree in economics before returning to school to pursue a graduate degree in special education.

Parker participated in district-provided professional learning related to co-teaching, and described prior support provided through structured observations and reflective feedback cycles with co-teaching partners facilitated by a district instructional coach, a position that was vacant at the time of the study. In addition to instructional responsibilities, they served as the special education department leader and was a member of the school's building leadership team. During

the interview, Parker described effective co-teaching partnerships as grounded in a shared mindset of inclusivity and mutual responsibility for all students. They emphasized that co-teaching contributed to professional growth and positively influenced overall quality of work life. Parker also highlighted the importance of both initial and ongoing professional learning, alignment in co-teacher dispositions and communication styles, and a shared belief that all students in the classroom belong to both teachers. At the same time, identified challenges associated with co-teaching implementation included staffing shortages and missed opportunities for feedback and instructional support from school leaders.

Presentation of Themes

The participant profiles presented above provide contextual information about the educators who participated in this study, including their professional backgrounds, teaching assignments, and experiences co-teaching in inclusive classrooms. Although participants represented a range of grade levels, content areas, and levels of experience with co-teaching, several consistent shared patterns emerged across interviews. Through an iterative process of data analysis, eight overarching themes were identified. These themes capture participants' experiences with co-teaching, their perceptions of collective teacher efficacy within co-teaching partnerships, and their interpretations of how co-teaching influences student learning outcomes in inclusive classrooms.

Table 4.1 presents the identified themes along with their corresponding sub-themes. This is followed by a detailed discussion of each theme, supported by participant quotations and illustrative examples drawn from the interview data to substantiate and enrich the analysis.

Table 4.1*Summary of Themes and Sub-Themes*

Themes	Sub-Themes
Theme 1: Relational Trust as the Foundation for Shared Instructional Ownership in Co-Teaching	– Relational Trust as the Foundation of Co-Teaching Partnerships – Enacting Shared Instructional Ownership through Joint Practice – Negotiating Instructional Roles and Parity within Co-Teaching Partnerships – Shared Commitment to Student Success as an Outcome of Collaborative Practice
Theme 2: Co-Teaching as a Mechanism for Reciprocal Professional Learning	– Complementary Expertise – Reciprocal Professional Growth – Embedded Mentoring – Embedded Professional Learning and Shared Instructional Leadership – Variability in Instructional Leadership within Co-Teaching Partnerships
Theme 3: Student Growth as a Reinforcement of Collective Teacher Efficacy	– Academic Growth – Multiple Measures of Student Growth – Non-Academic Growth – Interpreting Evidence of Student Growth
Theme 4: Expanding Instructional Access and Responsiveness through Co-Teaching	– Expanded Instructional Access – Differentiated Instruction and Flexible Grouping
Theme 5: Fostering Student Engagement and Belonging within Co-Taught Classrooms	– Classroom Culture and Belonging – Student Confidence and Participation
Theme 6: Structural and Organizational Supports Enabling Co-Teaching and Collective Teacher Efficacy	– Professional Learning – Shared Planning Time – Collaborative Planning Practice
Theme 7: Structural and Organizational Constraints Limiting Co-Teaching and Collective Teacher Efficacy	– Staffing Shortages – Classroom Complexity – High Concentration of Students with Disabilities – Teacher Workload – Scheduling Instability
Theme 8: A Continuum of Leadership Engagement and Understanding Influencing Co-Teaching Implementation	– Minimal or Indirect Leadership Engagement – Limited Leadership Understanding and Visibility – Leadership Engagement as a Factor Influencing Collective Teacher Efficacy

Note. Table presents the themes and sub-themes that emerged from analysis of participant interview data.

Theme 1: Relational Trust as the Foundation for Shared Instructional Ownership in Co-Teaching

Across participants, relational trust emerged as a foundational condition for effective co-teaching partnerships and the development of shared instructional ownership. Trust was consistently described as mutual confidence in a partner's professional competence, reliability, and instructional judgement, developed over time through sustained collaboration. This relational trust enabled co-teachers to engage in joint decision-making, adopt flexible instructional roles, and assume collective responsibility for all learners.

Participants emphasized that the quality of their professional relationships shaped both their capacity to collaborate and their confidence in what they could accomplish together for students. Shared instructional ownership was reflected in practices such as co-planning, co-delivery of instruction, and a collective responsibility for student learning. Through division of workload and assumption of a variety of duties involved in the instructional process, relationships and trust were strengthened. In many partnerships, high levels of relational trust supported cohesive instructional practices and reinforced co-teachers' shared belief in their ability to meet diverse student needs.

However, relational trust alone did not ensure the enactment of instructional parity. While trust was widely established across partnerships, the degree to which co-teachers enacted shared instructional ownership varied. Differences in instructional leadership, role expectations, and content expertise required ongoing negotiation within co-teaching partnerships. These variations suggest that relational trust functioned not as a guarantee of equitable instructional practice, but as a condition that enabled co-teachers to navigate roles, responsibilities, and authority within the classroom.

Relational Trust as the Foundation of Co-Teaching Partnerships

Across interviews, relational trust was established as a critical component of successful co-teaching partnerships. Trust developed within partnerships over time through sustained collaboration and confidence in one another's instructional expertise. Alex (Dyad D) emphasized that trust enabled effective collaboration, explaining that co-teachers could "work together to get anything done." Alex further described how relational trust supported open communication and problem solving while affirming their co-teacher's expertise. They noted that their partnership with Peyton increased access to resources and instructional strategies needed to support struggling learners, stating, "I do trust Peyton with anything...to help me get through it or get the right resources we need." Peyton similarly described having "100% trust" in Alex's instructional competence and preparation.

For many partnerships, time spent with consistent co-teachers across school years increased relationships and co-teacher capability. For instance, Quinn and Avery (Dyad C) described their partnership as evolving and becoming increasingly "cohesive" over time. Avery explained that shared trust allowed them to respond confidently to classroom situations, noting, "If anything happens in the classroom...we trust each other to handle it appropriately." Likewise, Jordan (Dyad A) affirmed Riley's special education expertise, explaining that "Riley's expertise...helps reduce barriers." In this way, time served as a mechanism for supporting trust.

Elliot also reflected on how relational trust shaped co-teaching experiences. They described a previous co-teacher as a close friend, explaining that the relationship developed through collaborative work: "I would say that co-teaching helped foster that...our friendship has just grown...and that really helps with the co-teaching aspect of things." In contrast, they depicted current co-teaching partnerships in which trust and relational familiarity were still

developing, noting, “This year, I’m co-teaching with (name), who’s brand new, has not taught before, and as far as I know, is still taking classes.” This contrast highlights the impact of relationship building over time to support effective co-teaching partnerships.

Taken together, these accounts suggest that relational trust was not immediate but developed through sustained collaboration, shared instructional responsibilities, and confidence in one another’s expertise. This indicates that relational trust functioned as a foundational condition for collaboration, enabling co-teachers to engage in shared practice while building the relational capacity necessary for effective partnership over time, including the development of shared instructional ownership. Where foundations of relational trust were present, expressed levels of collaboration were elevated.

Enacting Shared Instructional Ownership through Joint Practice

Across interviews, shared instructional ownership was a defining feature of effective co-teaching partnerships, enacted through joint practice in planning, instruction, and decision-making. This ownership was evident in how co-teachers co-led instruction, contributed to lesson delivery, and assumed responsibility for all learners within the classroom. As co-teachers more fully engaged in all facets of the learning process, ownership and responsibility became increasingly mutual and distributed across the partnership.

Participants’ language further reflected this shared orientation. For instance, Rowan and Cameron frequently referred to their learning environment as “our classroom,” emphasizing collective responsibility for both instruction and decision-making. Cameron described how instructional leadership evolved over time: “I would say when we first started it was probably mostly me teaching and Rowan as the supportive role...but just teaching with each other over numerous years, we feel comfortable interjecting and adding things in.” Similarly, Taylor (Dyad

B) emphasized visible shared leadership, explaining, “We are both the leader of the classroom, and the kids can both rely on us.” The use of collective language such as *our classroom*, *both the leader*, and *we* illustrate how co-teachers conceptualized instructional ownership as shared rather than individualized or role dependent.

Across interviews, mutual responsibility for all students was central to authentic co-teaching practices, contrasting with approaches that divide workload or learners based on role, specialization, or designation. Quinn (Dyad C) explained that co-teaching reduced reliance on a single teacher, noting that “it’s not just 17 kids relying on one person.” Rowan (Dyad E) echoed this perspective, explaining, “it’s our classroom, our students, and we’re working with them together.” In partnerships characterized by shared ownership, a willingness to work with any student or assume any instructional responsibility was expected.

This shared responsibility was enacted through daily instructional practices. Quinn described how co-teachers flexibly assumed roles during lessons, with one teacher re-teaching content while the other extended or enriched learning. Alex similarly described collaborative planning for targeted small group instruction: “we decide what days we’re taking which groups, and then what we’re gonna be doing with those groups.” These examples illustrate how shared instructional ownership was operationalized through coordinated and responsive decision-making, both in real time and during planning.

In contrast, some partnerships demonstrated partial or evolving enactments of shared instructional ownership. Although Elliot expressed trust in their co-teacher’s ability to modify assessments, they retained final authority over grading and instructional decisions. Reflecting on this dynamic, Elliot explained, “I told him I have complete trust in you to modify...but I want to see it.” Over time, this relationship shifted as the co-teacher developed a stronger understanding

of expectations, leading to increased confidence and reduced oversight. Elliot explained: “I’m more comfortable now...he understands exactly what I want, and he can translate that...into what is student-friendly for a student who struggles.”

This example suggests that shared instructional ownership was not uniformly enacted across partnerships. While some co-teachers demonstrated fully integrated and collaborative instructional practices, others enacted shared ownership more gradually as trust, experience and mutual understanding developed. Collectively, these patterns indicate that shared instructional ownership is actively constructed through joint practice and ongoing negotiation, even in the presence of established relational trust.

Negotiating Instructional Roles and Parity within Co-Teaching Partnerships

Although relational trust and shared responsibility were widely described across participants, several co-teachers also emphasized how instructional roles and parity were actively negotiated within their partnerships. These findings suggest that effective co-teaching is not characterized by automatic equality in instructional roles, but rather by the ongoing development and negotiation of instructional authority over time. Notably, these dynamics were most evident in secondary co-teaching contexts, where content specialization and disciplinary expertise appeared to shape the distribution of instructional roles.

Riley and Jordan (Dyad A) described a strong interpersonal relationship grounded in mutual respect; however, instructional leadership within their classroom was not consistently shared. Riley explained that Jordan frequently led whole group instruction while they provided access and support. They recalled a moment when Jordan was absent and students questioned their authority, stating, “Jordan was gone...I was teaching class...the kids were like, who are you

and why are you up here?” Despite a consistent instructional presence, Riley described being perceived by students as a substitute teacher.

Jordan acknowledged these dynamics and described efforts to strengthen shared leadership over time, explaining that they hoped to “move towards...things that Riley can take charge of.” In this secondary science classroom, instructional roles were shaped in part by disciplinary expertise, with Jordan leading content delivery and Riley focusing on access and individualized support for students with disabilities. This structural division of roles appeared to reinforce uneven instructional leadership, influencing how authority was perceived within the classroom. While both teachers attempted to signal shared authority verbally and visually, student perceptions suggest that enacted instructional practices communicated a more powerful message about instructional leadership than stated intentions.

Similarly, Rowan described prior co-teaching experiences in which they felt treated “like a para.” In contrast, Rowan’s current partnership with Cameron reflected more intentional efforts to establish and communicate instructional parity. They explained that shared authority was reinforced through visible indicators, including co-teacher names displayed on the classroom door and in the gradebook, as well as consistent messaging throughout the year. These intentional efforts to shape student perceptions contributed to increased teacher satisfaction and greater student recognition of both educators as instructional leaders.

Elliot further described how perceptions of content expertise influenced role dynamics. Within these partnerships, the special education teacher was primarily responsible for accommodations and modifications. Elliot noted, “He doesn’t have a background in social studies, whereas I do.” In this case, trust was present but classroom leadership remained largely

role-specific, with instructional authority distributed according to perceived expertise rather than shared equitably across the partnership.

Collectively, these examples suggest that instructional parity within co-teaching partnerships develops over time and is shaped by contextual factors such as experience, content knowledge, and established role expectations. Secondary settings, in particular, appeared to reinforce role differentiation based on disciplinary expertise. While relational trust supported collaboration, it did not inherently result in equitable instructional roles. Instead, parity was constructed through ongoing negotiation, shared experience, and intentional efforts to redistribute instructional authority within the partnership.

Shared Commitment to Student Success as an Outcome of Collaborative Practice

Participants identified shared commitment to student success as an important dimension of their collaborative relationships. Elliot described advocating for co-teaching support when discussing student placement with the special education team leader, explaining, “Put them all in there, and if you can, give me a co-teacher. And we’ll make it work.” He framed co-teaching as both instructional and emotional support, noting that having “another adult in the room” reduced the stress of meeting diverse student needs and created a “level of security” for him. Parker similarly described collective teacher efficacy as grounded in a shared mindset that both teachers held instructional responsibility. He emphasized that successful co-teaching depended on a shared, embraced belief that all students were “our students.” In partnerships where co-teachers viewed students receiving special education services as belonging to only one teacher, he explained, the collaborative model was weakened.

Avery expressed the shared belief within her co-teaching partnership that “all students have the ability to learn and grow,” and explained that it is the shared role of the co-teachers to

influence student learning. Similarly, Peyton and Alex described modeling collective commitment within their classroom to increase student confidence. Peyton explained, “I always say, if somebody’s struggling with something, it’s okay if you don’t know. It’s my job and Mrs. A’s to figure out a way to teach it to you.” Alex added that all students can be successful within their co-taught class—some students just need additional time to get there.

These descriptions illustrate that collective teacher efficacy within co-teaching partnerships was not only grounded in relational trust, but reinforced through shared commitment, instructional collaboration, and collective responsibility for student success. Participants expressed that where co-teachers have a shared mindset that all students can learn, collaboration increased. As a result, their instructional practices were more effective.

Theme 2: Co-Teaching as a Mechanism for Reciprocal Professional Learning

Across participants, collaborative practice within co-teaching partnerships functioned as a central mechanism through which professional learning developed. Sustained collaboration created ongoing opportunities for shared problem-solving, reflection, and mutual accountability, allowing teachers’ instructional knowledge and practices to evolve over time. Through co-planning, observing one another’s instruction, and reflecting on student learning, teachers described how their instructional knowledge and practices evolved over time. Co-teachers’ interactions reflected the integration of complementary expertise, including distinct instructional strategies, content knowledge, and professional perspectives that shaped shared instructional practice. As these contributions interacted, participants described reciprocal professional growth that strengthened both individual instructional practice and collective professional capacity to support student learning.

Complementary Expertise

Complementary expertise appeared in classroom practice through phrases such as “tag-team,” “piggyback,” “interject,” “bounce back and forth,” “communicate with a look,” and “thinking on our feet.” These descriptions illustrated how co-teachers fluidly shifted instructional leadership roles and built upon one another’s contributions during classroom interactions. This responsiveness enabled teachers to leverage one other’s strengths in real time while supporting students during instruction, resulting in perceived benefits for adults and learners.

Dyad E provided a clear example of complementary expertise and assurance of legal compliance within their co-teaching partnership. Cameron described how Rowan’s specialized knowledge in special education supported their instructional practice: “It’s nice to have...an expert in special education in the room, in case I forget...accommodations or just kids who need extra help...then she’s there to remind me of that. That helps...with my confidence in working with the kids.” Likewise, Rowan explained how Cameron’s content expertise strengthened her understanding of ELA standards, stating, “I’ve gotten more comfortable with the content...ELA...I’ve always liked it, but working with Cameron, I’ve started to understand more of the standards.” These explanations highlight how each member of the dyad perceived individual expertise as influential to both their professional learning and their collaborative practice.

Rowan also reflected on prior co-teaching partnerships that expanded her knowledge across content areas, noting, “That helped me become more confident, because math is not my strongest area. So, it’s nice to have someone I can go to and talk about...how do I need to teach this to help the kids?” Similarly, Dakota described co-teaching as an opportunity to “play to each other’s strengths,” emphasizing that diverse instructional perspectives allowed teachers to reach

a broader range of learners: “We look at things differently. And so do kids.” Casey echoed this idea, explaining that “kids are not cookie cutter by any means...so, it’s great to have those two pieces of the puzzle to fit together.” Overall, participant reflections suggest that complementary expertise enabled co-teachers to approach instruction from multiple perspectives, strengthening their collective capacity to support a wide range of learners.

Reciprocal Professional Growth

Across interviews, co-teaching partnerships were depicted as a mechanism for reciprocal professional growth. Working closely with a partner exposed teachers to new instructional strategies, increased their content knowledge, and strengthened their confidence in supporting students with diverse learning needs. Engaging in shared practice provided a variety of opportunities for during daily practice. In this way, co-teachers experienced professional learning both within and beyond the partnership as their practices expanded.

In Dyad D, Peyton explained how co-teaching alongside Alex helped develop their understanding of grade-level expectations and instructional goals: “It allows me to see where that standard should be leading, so I continue to have high expectations...we don’t have to settle for the bare minimum...we can keep reaching.” Alex similarly reflected on their own professional growth within the partnership, stating: “I feel like Peyton’s always kind of been the expert at this. So, I feel like I’ve gained tons of confidence, just working with them.” Alex attributed this growth in part to Peyton’s experience as a co-teaching coach, while Peyton emphasized that exposure to content expertise supported maintaining high expectations for all learners.

Embedded Mentoring. An additional dimension of reciprocal growth emerged through informal embedded mentoring. Avery, an experienced special education teacher and team leader, noted how co-teaching with Quinn, a first-year teacher, allowed the partnership to

simultaneously serve as a form of mentoring. Quinn explained how observing Avery's instructional approaches supported their professional development, noting that "being able to see or hear it a different way to help students" supported their growth as a teacher. The pair depicted a partnership that leveraged the supportive co-teaching approach early in the partnership, with Quinn noting that Avery "led me in the right direction." Quinn attributed significant professional growth and increased confidence to the experience, explaining that "coming and being a brand-new teacher...it's improved my confidence so much."

Over time, however, this partnership evolved into a cohesive and increasingly reciprocal collaboration. Quinn explained that their shared understanding allowed them to "work together without even having to really say what we are planning to do." Similarly, Casey (Dyad B) described how co-teaching experiences as both a paraeducator and a transition-to-teach candidate supported her development, noting, "I know I'm taking all the college class...but I feel I've learned more by doing. And I think that it prepared me for what I'm doing now and made me better at it." These descriptions illustrate how two novice educators experienced co-teaching as an opportunity for experiential learning and professional growth through close collaboration with more experienced colleagues. Informal and embedded mentorship reinforced confidence and provided daily exposure to instruction and management.

Embedded Professional Learning and Shared Instructional Leadership

Across participants, co-teaching shaped embedded professional learning opportunities. Working alongside another teacher provided opportunities to observe instructional strategies, refine explanations of content, and experiment with new teaching approaches during daily instruction. These ongoing interactions created consistent opportunities for job-embedded learning while planning and instructing within the classroom. For example, in Dyad D, Alex

explained, “I have learned so much just by watching them teach...they’ve just helped me be a better teacher.” Peyton similarly described how observing her co-teacher’s instruction enhanced her own practice:

We’re right across the room from each other, and we can be teaching the same skill...I might hear a trick or a vocabulary word that Alex uses, and I might say oh, that’s a good way to describe it or explain it, and I piggyback off of that, or I use it in my small group.

Both participants also described a sense of accountability that emerged through collaboration. Alex noted that teaching alongside another educator made them “really want to do the best job I can do,” while Peyton emphasized that the partnership encouraged the development of “new, fun, and exciting activities.” Shared spaces enabled for safer instructional risk-taking and division of duties.

Taylor (Dyad B) described a similar influence on professional growth, explaining that co-teaching “has definitely made me a better teacher and made me want to be a better teacher.” They also noted that collaboration sparked an interest in supporting other teachers, suggesting that co-teaching influenced both instructional practice and professional identity. Through embedded mentoring and opportunities to provide feedback, Taylor was able to practice instructional coaching skills and discovered a potential new passion.

Dakota described how co-teaching expanded their professional learning as a special education teacher, stating, “It has helped me grow, and I really like that. And it has helped me branch out. More than just being in my little special ed. box, I can really understand more of how regular ed. works.” They contrasted this with prior teaching assignments that were more self-contained, providing little connection to other teacher’s practices other than “just popping in and out, getting kids.” Co-teaching, in contrast, provided opportunities to work alongside colleagues

and engage directly with various instructional styles. Likewise, exposure to partners with different experiences and knowledge provided fresh perspectives and increased awareness of content area standards.

These examples suggest that co-teaching functioned as a daily and ongoing job-embedded form of professional learning. Through observation, shared instruction, and collaborative reflection, teachers were exposed to diverse instructional strategies and perspectives that extended beyond the co-taught classroom. Participants described applying this learning to their individual teaching contexts, indicating that co-teaching not only supported immediate instructional practice but also contributed to broader professional growth.

Variability in Instructional Leadership within Co-Teaching Partnerships

Participants emphasized that collaborative practice strengthened over time as co-teachers developed shared routines, communication patterns, and instructional strategies. Sustained partnerships enabled teachers to adapt instruction more fluidly and coordinate instructional roles more effectively. For example, Alex and Peyton described how their collaborative planning evolved into what Peyton referred to as a “shorthand system,” allowing them to operate efficiently without extensive planning meetings. Peyton explained, “We used to spend so much time and worry...but we have a kind of shorthand system in place that works for us.” Their planning process included both formal collaboration with the grade level team and informal daily reflection. Peyton described brief conversations “directly after math during recess” where they discussed student understanding and instructional adjustments.

Similarly, Rowan and Cameron described how their multi-year partnership resulted in nonverbal communication and seamless instructional coordination. Cameron explained that they often “don’t really have to even say much...just maybe make eye contact,” while Rowan

emphasized their ability to move fluidly between co-teaching approaches and adjust instruction based on student needs. These examples suggest that instructional leadership became more integrated and responsive over time as partnerships developed routines and practices aligned with their schedules and professional preferences.

In contrast, some participants described partnerships in which instructional roles remained more fixed, highlighting variability in how instructional leadership was enacted across co-teaching contexts. For example, Riley and Jordan (Dyad A) described a partnership in which instructional leadership was still evolving. Riley explained that their role often centered on supporting instruction rather than leading whole-group lessons, which at times led to frustration and a sense of being a “glorified para.” Jordan acknowledged that their collaborative practice was still developing and expressed a desire to expand Riley’s leadership role over time. Notably, their ability to communicate these perceptions reflects a level of relational trust and a shared commitment to improving their practice.

Elliot described a more structured division of labor within their co-teaching partnership, in which they retained responsibility for lesson planning and grading while special education co-teachers focused on modifying assignments and providing instructional access supports. Elliot described “training” co-teachers to implement modifications aligned with their instructional goals. These more differentiated role structures were primarily described in secondary settings, where content specialization appeared to shape instructional leadership. In addition, co-teachers without a provided common planning time tended to experience less shared ownership and role-specific instructional responsibility.

Overall, collaborative practice within co-teaching partnerships strengthened instructional capacity through peer observation, shared reflection, joint problem solving, and mutual

accountability. Across participants, co-teaching was shaped by complementary expertise that created reciprocal professional learning opportunities. These processes supported the development of interdependent working relationships that reinforced collective teacher efficacy. However, variations in the way instructional leadership was enacted across partnerships suggests that the development of collaborative practice is context-dependent, shaped by experiences, role expectations, and organizational structures.

Theme 3: Student Growth as a Reinforcement of Collective Teacher Efficacy

Co-teachers consistently described student growth as the most meaningful indicator of co-teaching effectiveness. Evidence of student progress reinforced their belief that collaborative instruction positively influenced learning outcomes and strengthened their collective teacher efficacy. Teachers drew on multiple indicators of growth, including standardized assessments, classroom-based assessments, teacher observations, and daily instructional interactions. Although some participants referenced mastery of grade-level standards, most emphasized student progress over time as the most significant measure of success. Observing student learning gains across both academic and non-academic domains strengthened co-teachers' shared belief in their collective instructional impact.

Academic Growth

Academic growth emerged as a primary form of evidence through which co-teachers interpreted the impact of their collaborative instruction. Several dyads described monitoring student achievement on standardized assessments such as the i-Ready diagnostic to evaluate co-teaching's influence on learning. Quinn and Avery explained that students in their co-taught mathematics and English language arts classes demonstrated greater growth than students in non-co-taught classes at the same grade level. Avery explained, "On our most recent i-Ready

diagnostic, the students showed the most growth in the classes that are co-taught. And that is across the board, not only students on IEPs.” This description illustrates how assessment data was used to evaluate growth across learners with varying support needs, while also comparing outcomes across classrooms.

Rowan and Cameron similarly described how student growth in their middle school English language arts classroom strengthened their confidence in their collaborative instruction. Rowan explained, “We look at our i-Ready diagnostic scores, and I feel like a lot of our kids that are in a co-taught classroom...are making growth. Our co-teaching definitely contributes to that.” Rowan’s statement reflects their belief that collaborative instruction contributed directly to student learning, with specific assessment data used as evidence.

Across participants, co-teaching was leveraged to support learners at all ability levels, with student growth evaluated through standardized and classroom-based assessment practices. Alex and Peyton (Dyad D) explained that pre-and post-assessment data informed both instructional planning and their evaluation of co-teaching effectiveness. Using pre-assessment, students demonstrating early mastery received acceleration while those requiring additional support accessed targeted instruction. Alex explained that data were used to continuously assess student learning and guide instructional adjustments, noting, “We always talk when we’re done with a lesson...some are not quite getting it, some are ready to move on...we can change those groups as we need to.” This description depicts how co-teachers used data not only to evaluate learning at the end of an instructional unit but also to inform ongoing instructional decisions based on student progress. Rather than reviewing student data in isolation, shared conversation created interdependent analysis of learning.

Peyton described how observing growth among students who initially demonstrated limited understanding influenced their perception of instructional effectiveness and collective teacher efficacy. They explained, “Kids who are already at... a 60% on the pre-test kind of know what’s happening. But when you get somebody with a 0%, 10%, 20%...and they’re scoring a 90%, 100% at the end. And that...is the best feeling.” Peyton further emphasized the impact of co-teaching on students who may not qualify for special education but benefit from additional instructional support, stating, “It’s those kids who make it really, really exciting, because you see the difference you make.” These descriptions illustrate how interpreted growth data served as evidence that collaborative instructional strategies were supporting student learning, which reinforced co-teacher perceptions of collective efficacy. Across participants, co-teaching impacted growth for students with and without disabilities.

Jordan and Riley similarly described how pre-and post-assessment data reinforced their understanding of student learning. Jordan explained that reviewing assessment results helped them recognize student growth even when instruction initially required repeated re-teaching:

We were convinced that we were not doing a good job...the kids just needed so much re-teaching over and over...but when we got to the post-assessment data and saw how much they had grown, it gave us that encouragement that yes, what we’re doing is working.

Jordan’s reflection demonstrates how evidence of student growth strengthened the co-teachers’ belief that their collaborative instructional efforts were effective, reinforcing their collective teacher efficacy.

Multiple Measures of Student Growth

Across interviews, co-teachers drew on multiple sources of evidence to evaluate student progress, reinforcing their confidence in the effectiveness of their collaborative practice. In

addition to standardized assessments, teachers referenced classroom-based assessments, progress monitoring data, and informal instructional observations as indicators of student learning. These multiple measures both informed instructional decisions and reinforced participants' belief that co-teaching directly contributed to student growth. For example, Taylor and Casey (Dyad B) described how student progress on IEP goals informed their evaluation of instructional effectiveness. Taylor explained that progress monitoring data helped them determine whether their instruction was effectively supporting student learning: "We've been talking a lot about Casey's progress monitoring...every kid...92%, 80%.....that shows us, they're getting 92% on their comprehension checks that go with their IEP goals. That means we're probably doing good things in tier 1." Their description reflects how progress monitoring data reinforced instructional impact for students with individualized learning goals.

Some participants also described comparing outcomes across classrooms within the same grade level as an additional source of evidence supporting their perceptions of instructional effectiveness. Peyton explained that examining grade-level mathematics results strengthened confidence in the effectiveness of their co-teaching partnership, stating, "I can see that even our students on IEPs are passing more standards than students in other classes who are not co-teaching...I think they're just getting more instruction." This highlights how Peyton attributed growth outcomes to the increased instructional support students received within co-taught environments. Their interpretation suggests that these comparisons across classrooms reinforced a belief that collaborative instructional practices were effective for diverse learners.

Non-Academic Growth

In addition to academic outcomes, co-teachers interpreted non-academic growth as meaningful evidence of the impact of their collaborative instruction. Co-teachers emphasized

observing increases in student confidence, communication, independence, peer relationships, and use of accommodations. While these outcomes are not always captured through standardized assessments, participants viewed them as meaningful indicators of progress. For Dyad B, a classroom moment served as meaningful validation of their co-teaching partnership and an example of non-academic success.

Taylor described an instance in which a student voluntarily supported a peer who had previously struggled academically and behaviorally. Reflecting on this moment, they stated, “This is why we do this. If we weren’t co-taught, that moment wouldn’t have happened.” Taylor attributed this interaction to the classroom environment intentionally established by their co-teaching partnership, explaining, “That’s the environment that Casey and I created ... rely on each other, support your friends.” This example suggests that teachers viewed improvements in classroom culture and peer support as positive outcomes of their collaborative environment. Further, it illustrates how co-teachers attributed belonging as a direct result of their partnership.

Riley and Jordan similarly emphasized student growth in areas such as confidence, communication, and independence. Jordan explained, “Some of our successes...a couple of kiddos that are very timid and kind of reserved...from last year to this year, we’ve seen these kids open up more...and their independence has just shot through the roof.” Riley agreed that these improvements represented meaningful student progress, emphasizing that these skills were essential for students’ long-term development beyond academic performance. For the student population served, Riley and Jordan viewed these skills as more impactful than more traditional academic priorities.

Elliot described co-teaching as influencing student growth by increasing students’ willingness to access accommodations and instructional supports. They described a student who

had previously resisted guided notes when they were presented in Elliot's independently taught classroom but accepted modified materials when a co-teacher was later added. Reflecting on this change, they noted that the student was "much more willing now to take the fill-in-the-blank notes or take a modified assignment." Elliot interpreted this increased acceptance of supports as contributing to improved academic performance. While leadership in this co-teaching partnership appeared to be role-specific, there were still perceived benefits for students evidenced by specific examples.

Interpreting Evidence of Student Growth

Co-teachers also engaged in ongoing interpretation of student growth data, navigating tensions between formal assessment measures and classroom-based evidence of learning. While formal measures of achievement did not always reflect the level of progress teachers observed during daily instruction, participants witnessed meaningful learning and growth within classroom interactions. Others noted that discrepancies between assessment results and classroom performance sometimes occurred when curriculum resources and assessment tools were not aligned. For instance, Taylor described observations of significant student growth within the co-taught classroom, particularly in relation to students' social development and progress toward IEP goals. Although daily instructional interactions indicated strong student progress, they noted that these gains were not always exhibited in standardized assessment results. For example, Taylor explained that improvements observed during instruction did not consistently translate to i-Ready diagnostic data, stating "We've seen beautiful, miraculous things in the classroom, but they don't translate to i-Ready. I know that's only one part of the picture, but it's a picture people care about." This reflection highlights how teachers sometimes experienced tension between classroom observations of learning and the external measures used to evaluate student

achievement. School leadership emphasis on standardized assessment measures seemed to further impact this tension.

Dakota similarly emphasized the importance of alignment between curriculum and assessment when interpreting student growth. They described how co-teaching appeared most effective when instruction and assessment were aligned within the same curriculum framework. Reflecting on experience using the Success for All (SFA) reading curriculum, they explained, “With co-teaching with SFA...when the kids are doing their Roots assessments, it is based on what they have learned in SFA.” In contrast, Dakota described a previous co-teaching assignment in which students were assessed using measures that were not aligned with the instructional materials being used. In that context, student progress appeared “dismal,” which they attributed to misalignment rather than ineffective instruction. Dakota’s reflection highlights how teachers interpreted student growth within the broader context of curriculum and assessment alignment.

Elliot described evaluating the effectiveness of co-teaching through systematic analysis of assessment data, particularly through reviewing patterns in unit test responses. They explained comparison of patterns across modified and non-modified assessments to identify instructional gaps. Describing this reflective process, Elliot stated:

For example, I noticed they were consistently missing this question, why is that? Okay, everybody else was also consistently missing this question, that must have been a me thing. Or, well, everybody else did really well on this, but all the identified kids are missing this question. Where’s the gap?

Elliot’s description illustrates how teachers used assessment data to both inform instructional reflection and adjust teaching strategies to better support diverse learners. While instructional

roles within the partnership were not always equal, intentional analysis of student learning and strategies functioned as a mechanism for refining instruction and addressing the gaps in access for diverse learners.

Across participants, student growth emerged as the most meaningful validation of collaborative instructional practices. When teachers observed evidence that students were learning, improving, and benefitting from the co-taught classroom environment, their belief in their collective ability to positively influence student learning was strengthened. Co-teachers evaluated growth through both formal and informal measures across academic and non-academic domains, emphasizing student progress over time rather than mastery alone. This suggests that student growth served not only as an outcome of co-teaching, but as a reinforcing mechanism through which teachers developed and sustained collective teacher efficacy.

Theme 4: Expanding Instructional Access and Responsiveness through Co-Teaching

Co-teaching functioned as a mechanism for expanding instructional access and responsiveness within inclusive classrooms. Co-teachers described instructional responsiveness as the ability to adjust instruction in real time through shared instructional roles, flexible grouping, and differentiated supports. The presence of two educators allowed teachers to increase access to content, respond immediately to student misconceptions, and adapt instruction using ongoing student data. These practices were perceived to enhance student engagement and support learning outcomes.

Expanded Instructional Access

Expanded instructional access emerged as a central way co-teachers interpreted the impact of their collaborative instruction. The presence of two educators enabled them to simultaneously support student learning, often through multiple explanations and visuals during

lessons. Avery (Dyad C) emphasized the impact of having “two highly qualified teachers in one classroom,” while Quinn explained that “kids definitely just grasp it better when there’s two of us.” When one teacher led instruction, Avery described how the other provided additional instructional supports using multiple modalities, including manipulatives, modeling on the board, or “whatever the students need.” These practices illustrate how Avery and Quinn strategically leveraged two instructors to present content in multiple ways during a single instructional period. Through both intentional planning and in the moment adjustments, co-teachers were responsive to the needs of the learners.

Quinn also described how co-teaching allowed one teacher to continue instruction while the other redirected individual students, preventing disruptions to the entire class. This structure allowed instruction to proceed uninterrupted while ensuring that students received individualized attention when needed. Avery further emphasized the importance of intentionally rotating instructional roles so that one teacher was not consistently leading while the other provided support. Their reflections suggest that co-teaching supported classroom management and instructional continuity by allowing teachers to respond immediately to learner needs and maintain shared instructional ownership through fluid role enactment.

Similarly, Casey explained that students benefited from hearing multiple instructional perspectives, stating, “They get to see a perspective from me and my co-teacher. And sometimes my perspective might work for one, whereas maybe their perspective works better for another.” Taylor likewise emphasized the importance of shared instructional engagement, explaining, “If both co-teachers are fully engaged, and have the tools they need and feel confident then you can meet the needs of more kids.” Their descriptions illustrate a shared belief that collaborative

instructional engagement increased opportunities for students to access content through multiple explanations and approaches.

Alex and Peyton described co-teaching as increasing instructional access through heightened student engagement. Alex characterized co-teaching as essential to their instructional effectiveness, stating, “I don’t think I could go back to teaching the regular way.” Both participants described how they intentionally modeled collaborative energy for students during instruction. Peyton described beginning lessons with team teaching, noting, “We utilize team teaching at the beginning of every lesson...the kids see us having fun together, and they love it.” They further explained that the benefits of co-teaching become visible when both teachers actively participate in instruction: “When both co-teachers are really teaching...you don’t have to believe anything, you just see it. It is just so obvious how helpful it is.” Their reflections illustrate how co-teaching increased learner’s instructional access by increasing teacher presence, engagement, and interaction during lessons.

Elliot described instructional responsiveness in terms of pacing adjustments. Contrasting the pacing of individually taught classes with that of co-taught classes, they explained how the presence of a co-teacher “slowed me down in a good way.” Elliot perceived that co-teaching increased the number of student questions and extended instructional dialogue, particularly when their co-teacher contributed additional content explanations during lessons. Elliot interpreted this slower pacing as beneficial for student learning, as it allowed additional opportunities for clarification and deeper understanding.

Parker described a “divide and conquer” approach to lesson preparation in which each co-teacher developed specific components of the lesson. Over time, this division of labor allowed both teachers to invest more time in resource development and instructional design.

They explained how collaborative preparation resulted in broader range of instructional materials, alternative explanations, and supplemental supports for students who struggled with initial instruction. In this way, co-teaching expanded the instructional resources available within a single class period.

Differentiated Instruction and Flexible Grouping

Differentiated instruction and flexible grouping functioned as key mechanisms through which co-teachers enacted instructional responsiveness. Several dyads and individuals emphasized the importance of small group instruction as a way to respond to students' specific learning needs within the inclusive classroom. Alex and Peyton described the use of flexible, data-informed grouping as central to student growth in their co-taught classroom. While they valued whole group instruction, Alex explained that small group instruction allowed them to "work with every student, every day." They noted that this structure enabled co-teachers to respond to specific skill deficits while ensuring that students who required targeted support received instruction from a certified teacher daily.

Peyton further explained that these structures allowed co-teachers to maintain a detailed understanding of students' academic progress. This ongoing awareness enabled the teachers to adjust instruction regularly and respond quickly to emerging needs. They also emphasized the motivational benefits of small-group instruction, stating, "When you can work in a small group of kids, you see the needle move every single day. Today, they can do this, when yesterday, they couldn't." These experiences allowed teachers to observe incremental student progress and adjust instruction accordingly.

Rowan and Cameron similarly emphasized flexible grouping and small-group instruction, particularly through the use of parallel co-teaching. The parallel approach allowed for targeted

re-teaching and immediate feedback. Rowan explained, “Parallel...we can address when kids aren’t understanding content, and we can go back and review it with them.” Their comments reflect an intentional use of co-teaching structures to respond to student learning needs in real time.

Skyler described the effectiveness of co-teaching as closely tied to opportunities for re-teaching in small groups. “I’ve had multiple examples of re-teaching concepts to kids,” they stated. “The teacher might explain it one way, but they come into my room, and I explain it in a different way or draw pictures.” Skyler described teaching students to balance chemical equations by drawing atoms rather than relying on specific formulas, noting, “Then they were able to pick out, oh, okay, this one needs another oxygen to match and balance this equation.” This example illustrates the use of visual supports and multiple modalities to help students understand complex concepts.

Skyler also explained that small group instruction frequently included both students with IEPs and general education students who required additional support. “It depends on the caseload in that class. In English...I have six or seven, so it’s a legit small group.” When fewer students with IEPs were present, they described including struggling general education students in the group to provide additional instructional support. Skyler noted that class size influenced whether small group instruction occurred within the classroom or in a separate setting, explaining that in larger classes, “especially in a class of 25 or 30...there’s a lot of distractions.” In those instances, small group instruction often worked best because students could receive targeted support in a quieter environment.

Dakota described the use of student data to inform small group instruction. “We’re constantly changing how we group the kids based on weekly assessments...so our groups are

really fluid,” they explained. They also noted that frequent regrouping contributed to an equitable learning environment, stating, “The kids don’t know that they’re being grouped, because the groups are always changing.” Parker likewise described using student data to guide instructional adjustments and group formation. Rather than grouping students based solely on special education status, he explained that groups were formed around shared learning needs. This approach allowed teachers to provide targeted feedback and re-teaching in response to emerging patterns in student performance. Collectively, this illustrates how the intentional use of targeted instruction for all students removed stigma associated with receiving help, normalizing small group instruction for all learners.

Across participants, co-teaching expanded the possibilities for responsive instruction by enabling shared instructional roles, differentiated strategies, flexible grouping, and ongoing use of student data. These practices allowed teachers to adjust instruction in real time and provide more targeted support than would typically be possible in single-teacher classrooms. As a result, co-teaching was perceived as enhancing both students’ access to content and the responsiveness of instruction to diverse learning needs. By embedding these practices into regular classroom routines, small group instruction became normalized, reducing stigma for students receiving additional support.

Theme 5: Fostering Student Engagement and Belonging within Co-Taught Classrooms

Co-teaching supported the development of classroom environments that fostered both academic engagement and a sense of belonging for all learners. Teachers described intentionally creating co-taught classrooms in which students learned to appreciate human diversity, felt safe attempting challenging tasks, and developed confidence in seeking help from peers and teachers.

Across interviews, participants connected these classroom dynamics to the collaborative structures of co-teaching, explaining that the presence of two teachers allowed them to model inclusive relationships, provide responsive support, and normalize the use of accommodations and learning supports. Within these contexts, students demonstrated increased independence, willingness to participate, and comfort asking for help. Overall, co-teachers interpreted these behaviors as indicators that co-teaching supported both academic engagement and social belonging.

Classroom Culture and Belonging

Classroom culture and belonging emerged as central ways co-teachers understood the impact of their collaborative practice on students' social and academic experiences. Taylor provided a vivid example of how the co-taught classroom culture supported peer collaboration and inclusion. They described a moment when a typically reserved, high-achieving student (Student A) voluntarily supported a peer receiving special education services (Student B) who had demonstrated behavioral challenges earlier in the year. As Taylor recounted:

...On his own, (*Student A*) gets up out of his seat...puts his arm around him (*Student B*) and says, 'If you want to read, I will help you, and we can do it together.'...That right there, this is why we're here, this is why we do this. If we weren't co-taught, that moment wouldn't have happened.

Taylor attributed this interaction directly to the inclusive and supportive classroom environment built with their co-teacher, Casey, emphasizing that these students would not typically "run in the same circle." Taylor explained, "We've both worked really hard to create an environment where that is okay...and Casey and I model that by working together." This example reflects a shared belief that their combined instructional and relational practices

produced meaningful social and academic outcomes. In this way, collective teacher efficacy was expressed not only through direct instruction, but through the classroom culture they believed they had jointly established and its impact on students.

Casey similarly described a moment of student success that occurred outside the context of standardized assessment data. They recounted an experience in which a student, previously described by parents as a non-reader, stood and read a paragraph aloud to the class. Casey stated:

He read the entire paragraph by himself to the entire class, and all the kids just stopped, and a slow clap started going through the classroom. It built so much confidence that we were able to get more kids after that to start reading.

Casey interpreted this moment as evidence that the collaborative environment fostered both academic risk-taking and peer encouragement. Likewise, Avery and Quinn explained that they intentionally cultivated a classroom environment in which students felt safe attempting challenging work and seeking help. Avery stated that students “feel safe...they know it’s okay if they don’t get it right the first time.” Quinn similarly highlighted students’ willingness to assist classmates who needed support as a strength of the classroom context. Their descriptions suggest that co-teaching influenced academic outcomes while also contributing to a classroom culture of belonging, mutual support, and normalized struggle in learning.

Alex and Peyton (Dyad D) connected co-teaching to increased student engagement and positive behavior. Team teaching routines, positive behavior incentives, an expectation of “doing your best,” and shared enthusiasm were described as strengthening classroom culture and maintaining student interest. Their reflections illustrate how co-teaching influenced not only academic outcomes but also classroom climate, student motivation, and willingness to participate

in learning. As co-teachers attributed these outcomes directly to their instructional practice, collective efficacy was positively impacted.

Rowan and Cameron interpreted co-teaching as increasing access and reducing stigma within inclusive settings. Cameron expressed that students likely would not be able to identify which classmates receive special education services because supports are normalized. Rowan described fostering an environment where all students belong. Together, these comments reflect their belief that co-teaching promotes inclusive participation and equitable access to instruction. Their emphasis on reducing stigma and normalizing support suggests that co-teaching moved from an instructional strategy to a social structure that reshaped peer dynamics and perceptions of ability within the classroom.

Student Confidence and Participation

Across participants, co-teaching was associated with classroom environments characterized by belonging, peer support, and increased student confidence. Teachers interpreted these outcomes as evidence that collaborative efforts were positively shaping both the academic and social experiences of students. This suggests that co-teaching not only supported student engagement, but also contributed to the development of inclusive classroom communities in which students felt valued, supported, and capable of participating in learning. Jordan explained, “Seeing the independence and those soft skills really grow over time...knowing that we’re teaching them skills...they’re gonna need once they leave high school.” Likewise, Riley emphasized the importance of student self-reliance, noting her observation of it developing within the co-taught classroom. They explained, “A lot of these kiddos are used to...being prompted...this is a class where they’re really also learning to figure out how to kind of think for

themselves.” Riley connected these outcomes to the life skills they prioritized as a special educator, identifying autonomy and communication as essential for students beyond high school.

Riley and Jordan further described how student attendance and engagement were important indicators of success. “They’re there every day...willing to participate in the activities...they don’t have any behaviors,” Riley said. Jordan added that the students are “really open to feedback.” These descriptions emphasize the pair’s perception of student growth in non-academic competencies within this small, co-taught setting. Taken together, this indicates that co-teaching may contribute to the cultivation of classroom conditions that support both behavioral engagement and social emotional growth.

Collectively, co-teaching was associated with classroom environments characterized by belonging, peer support, and increased student confidence. Teachers interpreted these outcomes as evidence that their collaborative efforts were positively shaping both the academic and social experiences of students. This suggests that co-teaching not only supported student engagement but also contributed to the development of inclusive classroom communities in which students felt valued, supported, and capable of participating in learning. Furthermore, as co-teachers connected these positive outcomes to their shared instructional practices, their sense of collective teacher efficacy was strengthened.

Theme 6: Structural and Organizational Supports Enabling Co-Teaching and Collective Teacher Efficacy

Across interviews, participants described structural and organizational conditions as shaping their experiences implementing co-teaching in inclusive settings. These conditions included building-level supports such as shared planning time, professional learning opportunities, staffing, scheduling, and classroom composition. Participants explained that these

structures influenced how co-teaching partnerships developed, how instruction was coordinated, and how teachers responded to the needs of diverse learners. Overall, these findings suggest that co-teaching practices were shaped not only by collaboration, but also by the broader organizational systems within which partnerships operated.

Structural Supports for Co-Teaching

Structural supports functioned as enabling conditions that facilitated the development and sustainability of co-teaching partnerships. These supports included professional learning, common planning time, and collaborative planning practices that influenced day-to-day implementation. Across participants, these supports were essential to effective practice.

Professional Learning. Participants described a range of professional learning experiences related to co-teaching, including initial training, coaching, classroom observations, and professional learning resources. Many emphasized the importance of attending initial training together as co-teaching partners, particularly when beginning a new partnership. Shared learning opportunities were viewed as important for developing a common understanding of collaborative instructional practices. Several participants noted that professional learning should extend beyond initial training. Casey explained that learning to co-teach “isn’t just a one-time learning thing or a one-time meeting thing,” emphasizing the importance of continued opportunities for practice and feedback as partnerships develop.

Co-teachers explained a variation in the level of ongoing professional support available within their schools. Rowan and Cameron, both trained co-teaching coaches, explained that although they regularly supported other teachers, they had limited opportunities to receive feedback on their own collaborative practices. Rowan explained, “Since both of us are co-teaching coaches...we don’t have...feedback on what we could improve.” Their experiences

suggest a willingness and desire to engage in activities that furthered their professional practice, even as a veteran co-teaching team.

Other participants described more limited professional learning structures. Elliot reported that his most recent co-teaching training occurred “about five years ago,” noting that a former instructional coach had previously observed lessons and provided feedback but that this support had not been replaced. In contrast, Skyler described more extensive professional learning opportunities, including participation in the statewide co-teaching project, conference attendance, and preparation to serve as a co-teaching coach. They explained that these opportunities were supported by school leadership, stating, “Our principal put us in the co-teaching project to find different strategies and to connect us to those mentors...to help us officially and efficiently co-teach.” This illustrates the variation in structural support provided across school contexts.

Participants also suggested that observing other teams could serve as a valuable form of professional learning. Peyton proposed structured observation opportunities in which co-teaching teams could visit other classrooms to observe specific instructional practices and apply those strategies within their own partnerships. This desire for feedback through modeling and exposure to other pairs was exhibited across levels, with elementary and secondary partnerships expressing interest in opportunities for classroom visits. While professional learning was embedded within partnerships, this illustrates the potential to expand professional learning through cross-partnership observation and shared instructional reflection.

Across interviews, participants consistently identified both initial co-teaching training and ongoing learning as critical structural supports for sustaining effective co-teaching partnerships. While nearly all had been exposed to training prior to or at the beginning of their co-teaching implementation, a shared desire for regular feedback and learning was consistently

expressed. This suggests that regular support was viewed as integral to partnership development and sustainability, presenting an opportunity for systems to institutionalize sustained professional learning structures that reinforce and deepen co-teaching practice over time.

Shared Planning Time. Participants consistently emphasized the importance of shared planning time during the school day as a vital structural support for effective co-teaching. At the time of this study, most participants reported having a common planning period built into their schedules, though the amount and consistency of that time varied across schools. For example, Riley and Jordan (Dyad A) described how their high school block schedule provided shared planning time every other day. Jordan noted that having common planning time significantly improved their collaborative work, stating that “having that common plan time...has been a much easier process.” They also explained that they were provided monetary compensation for engaging in planning during the summer. Jordan contrasted experiences with and without shared planning periods, tying successful practice to the provision of structured time within the contract day.

Elementary participants described similar structures, although their shared planning time was often embedded within grade level team planning periods. Taylor (Dyad B) explained that this time was not always reserved exclusively for co-teaching collaboration because other responsibilities frequently competed for it, noting, “Sometimes other meetings or building priorities get in the way.” While grade level planning was depicted as a starting place for co-planning, it did not consistently provide the depth of collaboration required to support effective co-teaching.

Participants at the middle school level also described adjustments to planning structures. Cameron explained that the team previously had two shared planning periods each day, but one

of those periods had recently been reassigned for student intervention services. In some cases, participants reported planning outside the school day when shared planning time was not available. For instance, Skyler estimated spending one to three hours each week preparing for co-taught classes outside the school day. Reflecting on a previous assignment in which she shared a planning period with the science team, they explained that the structured planning time allowed her to “differentiate more” for students. This suggests that the provision of planning time as a structural support was viewed as elevating and improving practice for diverse learners.

Overall, co-teachers emphasized shared planning time within the school day as a critical structural support for sustaining effective co-teaching partnerships. Rowan summarized this need succinctly as the need for a “designated, protected, shared planning time.” Although the amount and structure of planning time varied across school contexts, participants emphasized that protected time for collaboration enabled co-teachers to coordinate instruction and respond to student needs more effectively.

Collaborative Planning Practices. Participants described collaborative planning as both structured and flexible within their co-teaching partnerships. Elementary co-teachers (Dyads B, C, and D) explained that planning often began within grade-level teams to align instruction with standards and curricular pacing before extending into more focused planning conversations between co-teaching partners. Some participants described developing efficient planning routines over time. Quinn explained using approximately “20 minutes a day” of shared planning periods with their co-teacher to coordinate instruction and discuss student needs. Similarly, Alex and Peyton (Dyad D) described developing a “shorthand method of planning” as their partnership matured, relying on informal conversations and ongoing monitoring of student progress rather than lengthy planning meetings.

Others described maintaining frequent communication even when formal planning time was interrupted. Taylor regularly discussed student needs and instructional plans with their co-teacher throughout the day, noting, “Basically, we talk all the time...can you help me with this? What do you think about that? It’s very open-ended communication.” This illustrates that even when shared planning was limited, co-teachers enacted informal means of communication.

Across participants, collaborative planning practices were described as both structured and adaptive. While scheduled planning time provided opportunities for intentional coordination, many co-teachers also relied on ongoing informal communication and reflection to adjust instruction and respond to student needs. Overall, shared planning emerged as a central structural support for effective and sustainable co-teaching, illustrating how partnerships developed flexible routines that supported ongoing instructional responsiveness.

Structural and organizational supports more broadly shaped how co-teaching partnerships developed and operated within inclusive classrooms. Supports such as professional learning opportunities, dedicated planning time, and established collaborative structures enabled co-teachers to coordinate instruction and share responsibility for student learning. These conditions supported sustained collaboration and contributed to the development of collective teacher efficacy, allowing partnerships to function more cohesively and respond more effectively to diverse student needs.

Theme 7: Structural and Organizational Constraints Limiting Co-Teaching and Collective Teacher Efficacy

Across interviews, participants described structural and organizational constraints as shaping their experiences implementing co-teaching in inclusive settings. These constraints included staffing shortages, increasing classroom complexity, high concentrations of students

with disabilities, teacher workload, and scheduling instability. Participants explained that these conditions influenced how co-teaching partnerships functioned, how instructional responsibilities were distributed, and how effectively teachers were able to respond to diverse student needs.

Structural Constraints Affecting Co-Teaching

Structural and organizational constraints emerged as limiting conditions that shaped how co-teaching was enacted in practice and influenced perceptions of collective teacher efficacy. These barriers included staffing shortages, classroom composition challenges, and scheduling instability, directly influencing the day-to-day implementation of collaborative instruction. Across participants, such conditions disrupted opportunities for consistent collaboration and constrained the enactment of shared instructional practices, ultimately limiting teachers' perceptions of effectiveness and their collective capacity to support student learning.

Staffing Shortages. Participants described how staffing shortages, including vacant positions, staff absences, and teacher turnover, impacted their ability to sustain consistent co-teaching practices. These challenges influenced classroom coverage, partnership continuity, and the distribution of instructional responsibilities within inclusive classrooms. For instance, Peyton described how paraeducator absences occasionally disrupted co-teaching when she was required to leave the classroom to support students in other settings. They explained, "I have to either leave Alex's room for part of the time so I can work with students in other classes or bring them into the classroom and have more." Peyton also described instances when additional support was needed for students who required a break or a space to deescalate, which sometimes required their presence outside the co-taught classroom. This challenge, though occasional, impacted the co-teaching instructional plans and often required flexibility and adaptations in the moment.

Peyton expressed concern for less veteran co-teaching pairs who might be less equipped to respond, particularly when absences or changes occurred without much notice.

Teacher turnover and onboarding gaps were also described as barriers to sustained co-teaching partnerships. Jordan explained that frequent changes in co-teaching partners created challenges for instructional continuity. “I would say with turnover, it’s been really challenging, especially being a science teacher at the secondary level...and the content we’re teaching,” they explained. Jordan described working with a different co-teacher each year for three consecutive years, elevating turnover as the most significant challenge to effective collaboration. They reflected, “Thankfully this year I’ve had a co-teacher from last year continue over, and that’s made things so much smoother.” Jordan positioned consistent partnerships and shared planning as important structural supports for co-teaching and foundational for CTE.

Rowan similarly described how turnover influenced professional learning opportunities, noting that “lack of training sometimes just with teacher turnover right now” created challenges in maintaining consistent co-teaching practices. While their own partnership benefitted from stability, they observed that this continuity was not consistent across the building. Rowan also explained that shortages among special education staff increased their workload and affected how effectively co-teaching could be implemented. Skyler described similar challenges related to teacher turnover within their school, explaining, “We had a lot of turn-over in teachers this year...we have two new co-teachers this year and two new Sped teachers as well that are new in the whole co-teaching realm.” They noted that new partnerships required time to develop trust and routines. “This is the first year I’ve co-taught with this teacher, so we’re still in the relationship-building stage right now,” they explained. Over time, Skyler perceived that a current

co-teacher had become “more comfortable with me being in the classroom,” illustrating how collaborative relationships developed gradually.

Parker also described how staffing shortages influenced classroom composition and scheduling. As the special education department leader, they assisted with student schedules and support staff assignment. When paraprofessional positions were unfilled, they explained that co-taught classrooms sometimes contained higher numbers of students with IEPs because students could not be distributed as evenly across the schedule. Increased numbers of students with needs within one classroom environment created challenges in meeting student needs and strained perceptions of effectiveness of practice.

Classroom Complexity. Across interviews, participants described classroom complexity as influencing experiences within co-taught settings. Classroom complexity referred to factors such as class size, the number of students receiving special education services, and the range of academic and behavioral needs present within a classroom. Alex and Peyton described their classroom as academically and behaviorally diverse, with high-achieving students, students performing at grade level, students requiring targeted intervention, students receiving special education services, and students needing behavioral supports. Alex emphasized that co-teaching enabled greater responsiveness to this wide range, stating, “It’s just a huge variety of skills in here...but that’s the beauty of co-teaching, I mean, you can get them what they need.”

Elliot similarly described the complexity of balancing learner needs within inclusive classrooms. They explained the challenge of simultaneously providing enrichment for advanced learners while ensuring access for students with low incidence disabilities: “Trying to find the balance of making sure some students are getting enriched in what I’m teaching them, but also making sure that I don’t lose any of those low-incidence kids.” They noted that maintaining this

balance became more difficult when staffing limitations required a co-teacher to leave the classroom.

High Concentration of SWD. Some participants described how the presence of co-teaching supports resulted in higher concentrations of students with disabilities placed in co-taught classrooms. While this practice ensured that students had access to specialized supports, participants described how it increased instructional complexity and workload. Two elementary dyads described navigating classroom contexts with higher concentrations of students receiving special education services. Peyton (Dyad D) explained that co-teaching often resulted in a larger number of students with IEPs being assigned to Alex's homeroom classroom:

Because I do co-teach with Alex, I think that the number of students on IEPs in their homeroom can be more than other people, and so that can mean just more IEPs throughout the year. More meetings, more teacher reports, more everything.

Avery described similar patterns within Quinn's classroom, explaining that the larger number of students with IEPs created additional responsibilities related to meetings, documentation, and progress monitoring. Dyad B described similar experiences, as Taylor explained that students with IEPs from other classrooms were sometimes scheduled into the co-taught reading class to access specialized supports. "I think the biggest issue is the extra kids that come in, and it just makes for a lot of kids," they explained.

Taylor and Casey also described the complexity of serving academically diverse learners. Taylor explained, "There are days where we have 31 kids by the time the extra students come in, and trying to differentiate all that instruction is pretty difficult." Casey further described managing a "huge caseload" of 21 students receiving special education services within the grade level, which increased instructional demands within the co-taught classroom. These descriptions

illustrate how classroom composition decisions influenced instructional demands within inclusive co-teaching settings. As the number of students with needs increased, participants noted less opportunities for collaborative learning amongst students due to the limited presence of typically developing peers.

Teacher Workload. Participants described how structural conditions influenced workload demands for general and special education teachers. Avery acknowledged that co-teaching eased some instructional responsibilities through shared teaching, but also recognized that Quinn’s classroom contained a higher concentration of students with IEPs. This resulted in additional responsibilities such as IEP meetings and documentation. Quinn expressed a strong preference for continuing to co-teach, explaining, “Even if it gives me some harder kiddos, even if it gives me a bigger class size, I would take co-teaching every day...a thousand times, yes.” Quinn’s description suggests that the perceived benefits of collaborative practice were worth additional workload.

Riley and Jordan described differing perspectives regarding workload within co-teaching. Riley emphasized additional time demands within a role already characterized by frequent changes in priorities. They explained, “The time commitment to co-teaching from a special education viewpoint is very stressful because my job changes every day all day; it’s one more thing I have to manage.” In contrast, Jordan acknowledged the demands of co-teaching but framed the workload as important due to perceived instructional impact on students. They stated, “The workload can be heavy at times, but it’s very meaningful.”

Skyler described structural changes that required special education teachers to co-teach across four content areas. While this structure was intended to increase familiarity with curricular content and better support students during study skills periods, it also increased preparation

demands. “If I’m not doing something for chemistry, I’m doing something for government, and so on,” they explained. In contrast to prior years where special educators supported singular content areas and shared planning time, Skyler perceived this structure as less effective. This suggests that structural constraints related to the number of co-teachers and subject areas was a limiting factor to the enactment of effective practice.

Dakota similarly described structural barriers related to preparation time, particularly when implementing new curricular resources. They explained that prepping materials often required work outside of the contract day. “Especially with a new math program, there’s lots of time spent outside of the school day getting the materials ready that are needed for the lesson,” they explained. This example highlights how various constraining factors may emerge that impact practice, including curricular change.

Scheduling Instability. Finally, participants described scheduling instability as another structural barrier to effective co-teaching. Elliot explained that frequent schedule changes, delayed placement of support staff, and ongoing student movement during the first weeks of the semester disrupted instructional continuity. They explained, “Building-wise, the thing that hinders the co-teaching the most is just the craziness of our schedules...we’re moving kids in and out of classes the entire first week of the semester.” Although they acknowledged the complexity of coordinating schedules across departments, Elliot expressed concern that these disruptions affected students’ ability to establish routines and remain engaged in instruction.

Across participants, structural and organizational constraints shaped how co-teaching was enacted in practice. Factors such as staffing shortages, classroom composition, and scheduling instability complicated implementation and increased instructional demands. Despite these challenges, participants described adapting their planning, communication, and instructional

approaches to sustain collaboration. However, these findings suggest that while co-teachers often relied on the strength of their partnerships to navigate constraints, broader organizational systems ultimately influenced the extent to which co-teaching could be implemented effectively and collective teacher efficacy could be fully realized.

Theme 8: A Continuum of Leadership Engagement and Understanding Influencing Co-Teaching Implementation

Across interviews, participants described leadership engagement and understanding as key factors shaping the implementation and sustainability of co-teaching in inclusive settings. Leadership engagement was reflected in administrator presence, actions, and prioritization of co-teaching, which either facilitated or hindered collaborative practice. Participants described varying levels of leadership involvement across contexts, influencing both their experiences and their perceptions of what was necessary for effective co-teaching. While some co-teachers viewed minimal administrative involvement as sufficient, others identified active leadership engagement as a critical support for sustaining high-quality collaborative instruction. Taken together, these findings suggest that leadership played a significant role in shaping not only the structural conditions of co-teaching, but also teachers' perceptions of collective efficacy and support within their school contexts.

Minimal or Indirect Leadership Engagement

Some participants described relatively neutral perceptions of leadership involvement. For Dyad C, co-teaching partners described limited leadership engagement but did not perceive it as problematic. Quinn explained:

There's not really a lot of things that happen within the school or within the district for co-teaching. It's not like they hinder it in any way, but it's also not like there's a lot of

support there either. But I don't know what would need to happen to be supported.

There's nothing that I feel like is lacking there.

Avery similarly stated that "school and district leaders have always been supportive of co-teaching," identifying that shared planning was provided, but unable to identify the need for specific leadership actions that directly supported the practice. Overall, Quinn and Avery described their partnership as largely self-sustaining through collaborative practice. The dyad identified limited leadership engagement but explained that they "just kind of do our thing." Their descriptions indicate that collective teacher efficacy was primarily shaped through their partnership and interactions within the inclusive classroom environment rather than through direct leadership involvement.

Dakota similarly acknowledged limited awareness of administrators' involvement in co-teaching, stating, "I don't really know if the administration has any 'seen' part of co-teaching. There's probably a lot behind the scenes that I'm not aware of." These descriptions suggest that in some contexts co-teaching partnerships functioned independently of active leadership engagement, with collective teacher efficacy developing primarily through collaborative relationships within the classroom. While administrator engagement was limited, co-teachers had neutral perceptions of leadership support and did not identify it as a significant factor influencing their day-to-day collaborative practice.

Limited Leadership Understanding and Visibility

Other participants described limited leadership visibility or understanding of co-teaching practices but stressed the importance of administrator engagement in sustaining inclusive instructional models. Alex and Peyton (Dyad D) expressed concern regarding limited leadership engagement with co-teaching practices. While survey responses indicated perceptions that

leaders promote a vision of inclusive education, the pair reported that co-teaching's impact was not actively monitored and that challenges were not consistently recognized. Peyton stated, "I'm not sure our school leaders understand what true co-teaching looks like. That makes it difficult for them to fully appreciate the benefits." Alex similarly shared, "I haven't felt supported in the co-teaching role for many years. There are no conversations happening with our school principals at all. I don't think they have any idea what has to happen for co-teaching to work."

Both participants emphasized that leadership's commitment to understanding and communicating a vision for co-teaching was essential to sustaining high-quality implementation. Peyton noted:

I think it has to be a district-level priority. It has to be a building-level priority. Co-teaching cannot be done well if it's not supported at the school level. But when it is, it can just be the most special thing.

Alex also explained that other staff in the building who were not involved in co-teaching sometimes held misconceptions about the practice, stating, "When we get comments like...get rid of co-teaching and use people in other ways, that shows that they don't understand. If leadership was supportive and could explain the purpose to everyone, those comments wouldn't be happening." Peyton suggested that turnover in administrators may have been a contributing factor to inconsistent levels of support and understanding.

Participants from Dyad E described a similar pattern, noting more frequent engagement from district-level leaders than from building administrators. Rowan stated, "I feel like our district leaders right now...come in and check in with us, and they talk to us about the good things they're seeing...so that's always nice to hear." However, Cameron noted fewer visits from building administrators, explaining, "I don't feel like they really ever come in anymore." Both

participants identified structured planning time and professional development as important leadership supports for sustaining effective co-teaching practices. While these were in place, lack of regular engagement and visibility from school leaders remained a concern.

Taylor and Casey (Dyad B) also described a desire for greater administrative presence within co-taught classrooms. Taylor suggested that classroom visits and informal “check-ins” could provide encouragement and feedback for co-teachers. They explained:

Talk to them, see what they need, check on them before you see something you don’t like. Because if you come in and see, you might see something you do like, and you should tell them. Because then they will feel good about themselves.

These reflections highlight how teachers perceived leadership visibility and understanding as important factors influencing the sustainability of co-teaching practices and broader staff perceptions of inclusive instruction. Moreover, these reflections emphasize the role of leadership affirmation in fostering a supportive professional culture that reinforces and sustains co-teaching practices.

Leadership Engagement as a Factor Influencing Collective Teacher Efficacy

In several cases, participants described leadership actions as directly shaping their perceptions of collective teacher efficacy and professional agency. Dyad A presented contrasting perspectives regarding leadership engagement. Jordan described strong administrative advocacy for co-teaching, noting the provision of professional development, classroom observations, and feedback. They explained that principals partnered with the statewide co-teaching project to provide training and feedback for co-teaching teams. When co-teachers were unable to have a shared planning period one year, administrators responded by adjusting the schedule the following year to accommodate that need. Jordan stated, “structurally, we’ve got all the support

we need, and professionally, I would say it's been a dream, working with the co-teachers and administrators I have right now." They further described the value of administrative feedback following classroom observations:

Our administration has been wonderful in supporting this. For professional development and they provide us great feedback when they come and observe us, and we do a debrief afterwards. Definitely some...great kernels of observations that have helped evolve our co-teaching and planning.

In contrast, Riley described co-teaching as an administrative mandate that increased workload for teachers. They stated, "I think they think it looks better on paper than they do about the extra work it puts on us as teachers." These contrasting perspectives within the same dyad illustrate how individual teachers may interpret leadership actions and expectations differently.

Taylor also reflected on interactions with administrators that felt evaluative rather than supportive. During a meeting in which i-Ready diagnostic assessment data were reviewed, she remarked, "I feel like, a little bit in trouble. But we haven't necessarily been given any help." Although Taylor acknowledged the value of data, they expressed concern that assessment discussions were sometimes framed in ways that felt corrective rather than collaborative. Taylor characterized this pattern as a "morale killer," explaining that it influenced how supported they felt within their co-teaching role. Her description suggests that when teachers do not perceive school contexts as psychologically safe for problem solving, the development and maintenance of collective teacher efficacy may be constrained.

Parker described a potential missed leadership opportunity to reinforce shared accountability in co-taught classrooms. They explained that classroom walkthrough tools used by administrators were designed for traditional single-teacher classrooms rather than collaborative

instructional environments. As a result, feedback was not consistently directed toward co-teaching or distributed equally following observations. Parker explained, “A lot of times we’ll get a walkthrough...and only one person will get the feedback from that. The tool is meant for one teacher, one classroom.” In these situations, mutual accountability and joint responsibility were not reinforced through existing structures. This highlights an opportunity for school leaders to more intentionally align observation and feedback systems with inclusive, co-teaching practices.

Skyler described administrative support through distributed leadership responsibilities. They explained that they served on the building leadership team and that administrators had delegated some responsibilities related to co-teaching coordination. In this role, Skyler assisted with scheduling and problem-solving related to staffing and support personnel, which allowed opportunities to help sustain the structure of co-teaching within the building. This provides an example of how some school leaders leveraged distributed leadership as a means of helping sustain inclusive practices.

Across participants, leadership engagement emerged as an important contextual factor influencing the implementation and sustainability of co-teaching. While many teachers described strong collective teacher efficacy within their partnerships, leadership visibility, understanding of co-teaching practices, and prioritization of time and resources shaped the broader climate supporting collaborative instruction. When leadership support was described as proactive and visible, participants expressed greater confidence in the sustainability of co-teaching practices. In contrast, when leadership involvement was limited, teachers described co-teaching success as relying primarily on the strength of individual partnerships. These reflections suggest that while collective teacher efficacy often developed through shared instructional practice within co-

teaching dyads, leadership engagement played a critical role in shaping organizational and cultural conditions necessary to sustain collaborative work.

Findings

Across participants, co-teaching emerged as a complex and relational instructional practice shaped by interactions among teachers, students, and organizational systems. Collectively, the findings illustrate that effective co-teaching was not defined by a single factor, but rather by the dynamic interplay of relational trust, collaborative practice, instructional structures, and contextual supports. First, relational trust served as a foundational condition within co-teaching partnerships, enabling teachers to engage in shared instructional ownership and navigate evolving roles and responsibilities. Within this relational context, collaborative practice functioned as a mechanism for reciprocal professional learning allowing co-teachers to expand their instructional knowledge, refine their practices, and develop interdependent working relationships over time.

Participants further described how co-teaching created opportunities for responsive and adaptive instruction, expanding students' access to content through shared instructional roles, flexible grouping, and differentiated supports. These instructional practices contributed not only to academic growth but also to classroom environments characterized by engagement, belonging, and increased student confidence. Across participants, evidence of student growth reinforced teachers' shared belief in their collective ability to positively influence student learning.

At the same time, these findings highlight the importance of structural and organizational conditions in shaping how co-teaching was implemented and sustained. Supports such as shared planning time, professional learning, and staffing stability facilitated collaboration while constraints including scheduling challenges, classroom composition, and workload demands

complicated the enactment of co-teaching practices. Leadership engagement further influenced these conditions with varying levels of understanding, visibility, and prioritization, shaping both the implementation of co-teaching and teachers' perceptions of support.

Taken together, these findings suggest that co-teaching operates as a multifaceted practice in which relational, instructional, and organizational factors intersect to influence both teacher and student outcomes. While co-teachers frequently relied on the strength of their partnerships to navigate challenges, the broader systems in which they worked played a critical role in supporting or constraining their ability to sustain collaborative, responsive, and inclusive instructional practices. Figure 4.1 presents this interconnected and multifaceted process developed in response to the central research question, sub-research questions, and eight themes that emerged from participants' descriptions.

Chapter Summary

This chapter presented the themes identified from the analysis of interview data exploring the experiences of Kansas co-teachers in inclusive classrooms, their perceptions of collective teacher efficacy within co-teaching partnerships, and their interpretations of how co-teaching practices influence student learning outcomes. Eight themes were identified that illustrate recurring aspects of participants' experiences and perceptions. These themes present an interconnected response to the combined central research question and sub-research questions that guided this study. Chapter 5 examines and interprets the findings in relation to the existing literature and the conceptional framework guiding this study.

Figure 4.1

Co-Teaching as a Mechanism for Collective Teacher Efficacy



Note. Figure 4.1 presents a cyclical process illustrating how collective teacher efficacy is impacted when co-teaching partnerships are grounded in relational trust, shaped by collaboration and reciprocal learning, characterized by instructional responsiveness, and fed by evidence of student growth.

Chapter 5 - Conclusions

This chapter interprets and synthesizes the findings of this basic qualitative study, which explored the experiences of Kansas general and special education co-teachers working in inclusive classroom environments. Specifically, the study examined how co-teachers perceive and develop collective teacher efficacy within their partnerships and how they interpret the influence of co-teaching practices on student outcomes. Data collected through multiple interviews across five co-teaching pairs and four individual co-teachers were analyzed using qualitative coding methods to identify themes related to the research question and conceptual framework, which integrated co-teaching, collective teacher efficacy, and student outcomes. These themes formed the development of an integrated conceptual model grounded in both the study's findings and the existing literature.

Within this chapter, tables and models are used to enhance transparency and trustworthiness by illustrating the analytic process (Bloomberg, 2023). The discussion begins with responses to the central research question and two sub-research questions based on the study's findings and relevant literature. Next, a synthesis of findings is presented, followed by the conceptual integration of findings and revised conceptual model. Finally, implications for practice are discussed, with particular attention to school leaders and the presentation of a practical tool for implementation.

Chapter 4 presented a table organizing the eight themes identified through analysis according to the central research question and sub-research questions with a brief narrative. This section provides a full response to the central and sub-research questions based on the study's findings, analysis, and existing literature.

Discussion by Research Question

Central Research Question

What are the experiences of Kansas general and special education co-teachers who serve students in inclusive classroom environments?

Five of the eight themes informed the interpretation of this central research question:

(1) Relational Trust as the Foundation for Shared Instructional Ownership in Co-Teaching, (2) Co-Teaching as a Mechanism for Reciprocal Professional Learning, (3) Structural and Organizational Supports Enabling Co-Teaching and Collective Teacher Efficacy, (4) Structural and Organizational Constraints Limiting Co-Teaching and Collective Teacher Efficacy, (5) A Continuum of Leadership Engagement and Understanding Influencing Co-Teaching Implementation. Together, these themes illustrate how participants described their experiences co-teaching in inclusive learning environments.

Participants described their co-teaching experiences as grounded in trust and shared instructional ownership, suggesting that effective partnerships begin with strong interpersonal relationships and trust in one another's instructional competence. This is consistent with existing literature that positions relationships as one of the most important components for effective practice (Byers, 2024; Friend et al., 2010; Rytivaara et al., 2019; Solis et al., 2012; Strogilos et al., 2023). Several participants pointed to friendships with their co-teaching partners as strengthening their collaborative practices, and some indicated that the practice of co-teaching furthered those relationships, consistent with prior studies where participants identified social relationships as increasing the effectiveness of their co-teaching practice (Pratt, 2014; Strogilos & King-Sears, 2019). Trust was consistently emphasized, often in tandem with discussion of

relationships. Trust is identified as a key component of effective co-teaching partnerships and for educator collaboration in general (Dover, 2021; Strogilos et al., 2023, Tschannen-Moran, 2000).

A shared sense of responsibility and ownership for student success was indicated as paramount. When co-teachers shared role clarity and both felt like the leader of the classroom, participants expressed personal satisfaction with the collaborative model. The concept of parity, where both co-teachers are perceived as equal in terms of instructional practice and decision-making authority, is fundamental effective practice and positive educator perceptions of the model (Conderman & Liberty, 2018; Cook & Friend, 1995; Pratt, 2014; Villa et al., 2013). Participants' descriptions of trust and shared instructional ownership suggest that relational foundations play a critical role in the development of effective co-teaching partnerships and in fostering parity between co-teachers.

One co-teaching dyad emerged as a thematic outlier within the context of this study. Although both teachers reported strong relational trust, instructional leadership within the classroom was perceived as uneven, particularly for the special education teacher. This finding suggests a lack of instructional parity despite the presence of relational trust. While participants across the study identified relationships and trust as foundational to shared instructional ownership, these findings suggest that relational trust may not automatically result in shared instructional roles within the classroom. Prior literature attributes the absence of parity to limited collaborative planning and the assignment of supportive roles to special education teachers; however, these dynamics have not been examined exclusively in relation to trust or the quality of the co-teaching relationship (Conderman & Liberty, 2018; Pratt, 2014). Lack of parity is a consistent thread throughout co-teaching research, remaining one of the key reasons why educator perceptions of the co-teaching model vary. Moreover, much of the literature identifies

that when one co-teacher remains in a supportive role, there remains a lack of collaborative instructional strategies or academic benefits (Murawski & Lochner, 2011; Scruggs et al., 2007; Strogilos et al., 2023; Villa et al., 2013).

Data consistently identified co-teaching as a form of ongoing professional learning through collaboration. Shared planning and classroom spaces were depicted as embedded professional learning, because teachers were learning from each other during collaborative planning and teaching. In some instances, newer teachers identified co-teaching as a form of mentorship. Complementary expertise was also emphasized, with co-teachers describing how they played to one another's strengths during classroom instruction and relied on the differing forms of knowledge each brought to the partnership, benefitting their own learning and providing resources for students. Prior literature identifies co-teaching as embedded professional learning (Pratt, 2014; Rytivaara et al., 2024) and a means of bringing together teachers with complementary expertise (Villa et al., 2013). Participants' descriptions of professional learning through collaboration highlighted how co-teaching influenced their instructional practices, but also how they interpreted their professional growth as changed and shaped through collaboration.

Participants further described their experiences as impacted or constrained by organizational conditions. They explained structural conditions essential for effective practice that are well-documented, including provision of a common planning time during the school day (Friend, 2010; Pratt, 2014; Scruggs et al., 2007; Stefanidis et al., 2019; Strogilos et al., 2023; Walsh, 2012; Villa et al., 2013) and implementation of initial and sustained professional learning specific to co-teaching (Pancsofar & Petroff, 2013; Pratt, 2014; Strogilos et al., 2023; Walsh, 2012). While professional growth occurred within co-teaching partnerships, the desire for

ongoing feedback and learning related to co-teaching specifically suggests these partners were reflective and interested in continuous improvement.

Several structural conditions were identified that constrained co-teaching practices, including scheduling instability, limited co-planning time, complex classroom environments, and high concentrations of students with intensive learning needs within a single classroom. Research consistently identifies the lack of co-planning time as one of the most significant barriers to effective co-teaching implementation (Friend et al., 2010; Strogilos et al., 2023). Participants further described classroom contexts in which disproportionate numbers of students with disabilities or other intensive learning needs were assigned to a single co-taught classroom. Although co-teaching is intended to increase access to the general education curriculum within heterogeneous learning environments, such classroom compositions may challenge the intended structure of inclusive practice (Villa et al., 2013).

Scholars have suggested that the proportion of students with disabilities within a classroom should generally reflect the overall percentage within the school population, often recommending that the number not exceed approximately 30% of the class (Bernhardt & Murawski, 2015; Villa et al., 2013). When classroom composition substantially exceeds these recommended proportions, the complexity of the instructional environment may increase, even in the presence of two teachers. Participants indicated that these conditions contributed to increased instructional demands and influenced perceptions of schoolwide collective efficacy. Because scheduling and classroom assignment decisions are typically made at the administrative level, these findings highlight how leadership engagement and understanding of co-teaching shape the structural conditions under which partnerships operate (DiPaola et al., 2004).

Finally, overall findings reflected a continuum of leadership engagement. School administrator involvement varied widely across contexts, yet it is well documented as essential to the effectiveness of co-teaching practices (Bernhardt & Murawski, 2015). Beyond the need for administrators to be sufficiently involved to address structural conditions necessary for successful co-teaching, their role as instructional leaders requires the knowledge and skills to provide meaningful feedback to educators engaging in the practice (DiPaola et al., 2004; Murawski & Lochner, 2011; Treadway, 2026). Varying levels of administrator involvement suggest that leadership understanding may influence both the structural conditions provided to co-teachers and the degree to which the model is supported as an instructional practice within schools.

Collectively, these findings suggest that Kansas co-teachers' experiences in inclusive classrooms are shaped by a combination of relational, instructional, and organizational factors. Participants indicated that effective co-teaching partnerships are grounded in relational trust, shared instructional ownership, and ongoing collaborative learning between partners. At the same time, their experiences were influenced by structural conditions such as access to co-planning time, classroom composition, and varying levels of leadership engagement and understanding of co-teaching practices. These interconnected factors shaped how participants navigated their roles and collaborated to provide instruction in inclusive learning environments. The following sections explore these findings further through discussion of the study's sub-research questions.

Sub-Research Question 1

How do co-teachers perceive and describe the presence or development of Collective Teacher Efficacy (CTE)?

Four of the eight themes informed the interpretation of this sub-research question:

(1) Relational Trust as the Foundation for Shared Instructional Ownership in Co-Teaching, (2) Co-Teaching as a Mechanism for Reciprocal Professional Learning, (3) Student Growth as a Reinforcement of Collective Teacher Efficacy, and (4) A Continuum of Leadership Engagement and Understanding Influencing Co-Teaching Implementation. Collectively, these themes illustrate how participants described the presence and development of collective teacher efficacy within their co-teaching experiences.

Participants described collective teacher efficacy as emerging through sustained collaboration, shared instructional responsibility, and evidence of student success. Within co-teaching partnerships, relational trust and shared instructional ownership strengthened teachers' confidence in their collective ability to support student learning. Collaborative practice emerged as a key mechanism through which participants described the development of collective teacher efficacy. Engaging in shared planning and collaborative instructional decision-making created opportunities for co-teachers to develop a common understanding of instructional goals and strategies. These collaborative processes supported teachers' confidence in their ability to address diverse learning needs within the classroom.

Participants also described reciprocal professional growth that occurred through co-teaching. In contrast to traditional professional development structures in which teachers passively receive information, participants characterized their experiences as "learning by doing." Through co-teaching, teachers observed one another's instructional strategies, exchanged

feedback, and adjusted instruction in real time. These experiences enhanced their instructional capacity and strengthened their belief that their collaborative practices positively influenced student learning. For example, one participant described how a co-teaching partner's expertise clarified the level of rigor expected when teaching certain grade-level standards, which supported her efforts to maintain high expectations for students with disabilities. Another participant described acquiring strategies for building relationships with students and developing skills to effectively deescalate challenging situations in the classroom.

Scholars note that regular, structured opportunities for collaboration focused on instructional strategies and student learning contribute to the development of collective teacher efficacy (Donohoo, 2017; Goddard et al., 2015; Hoogsteen, 2020). Additionally, purposeful observation of peers can strengthen collective efficacy by providing vicarious experiences and social persuasion, both of which influence teachers' beliefs about their collective instructional capabilities (Donohoo, 2017; Faddis et al., 2023; Goddard et al., 2004; Hattie et al., 2025). Where collaborative practice was not in place, and the model was not fully realized, descriptions of collective efficacy were uneven, suggesting that lack of collaboration limited professional growth through co-teaching (Cook et al., 2017).

As participants described effective co-teaching practices grounded in relational trust and collaboration, they emphasized that what they could accomplish together exceeded what they could achieve independently. This sense of shared responsibility for students, interdependence, and collective belief in their instructional impact reflects core characteristics of collective teacher efficacy (Donohoo, 2017; Goddard et al., 2004). Participants frequently explained that evidence of student growth reinforced collective teacher efficacy within their co-teaching partnerships. Improvements in students' academic skills, independence, and confidence provided tangible

evidence that their collaborative instructional practices were making an impact. Teachers referenced multiple sources of evidence, including progress on assessments, informal classroom observations, and pre- and post-assessment data from instructional units.

The regular use of data to inform instructional decisions and evaluate classroom practices reflects elements of a collective efficacy feedback loop, in which beliefs about instructional effectiveness are reinforced through ongoing evidence of student outcomes (Donohoo et al., 2018). Evidence of student success that teachers attribute directly to their instructional practices has been identified as a key driver of collective efficacy beliefs, particularly when specific data demonstrates the impact of those practices (Hattie et al., 2024). These findings suggest that observing measurable student growth functioned as a powerful reinforcement of teachers' collective belief that their collaborative instructional practices were effective.

While evidence of student growth reinforced teachers' confidence in their collective instructional impact, participants also described how the broader school context influenced the development and sustainability of collective teacher efficacy. In particular, the extent to which school leadership recognized, supported, and understood co-teaching practices shaped how these collaborative efforts were experienced. For example, one co-teaching dyad described how the review of student data sometimes felt evaluative rather than supportive. Other participants noted an absence of leadership involvement related to co-teaching, including limited administrative presence during co-taught lessons. While some co-teachers expressed neutrality regarding the lack of leadership engagement, others suggested that clearer communication about the vision for co-teaching and occasional recognition of collaborative efforts would help validate their work and reduce confusion among staff.

Collective teacher efficacy literature identifies school leaders as highly influential in shaping the conditions under which collective beliefs develop (Donohoo et al., 2018). Researchers describe collective efficacy as “malleable,” emphasizing that leaders can intentionally cultivate it to improve student outcomes (Donohoo et al., 2018). When school leaders establish a culture that promotes collaboration, provide structured opportunities for shared inquiry, and encourage educators to focus on evidence of student learning, the conditions necessary for collective efficacy are more likely to emerge (Donohoo et al., 2018; Hattie & Zierer, 2025). Leaders therefore play an important role in creating school environments where educators feel psychologically safe to take risks and critically analyze student data to improve outcomes (Donohoo et al., 2018).

Although collective teacher efficacy was not measured quantitatively in this study, participants provided detailed descriptions that illustrated strong collective beliefs within their co-teaching partnerships. These descriptions reflected core characteristics of collective efficacy, including shared responsibility for student outcomes, confidence in their joint instructional decision-making, and belief in their collective capacity to support diverse learners (Tschannen-Moran & Barr, 2004). Notably, participants frequently described strong collective efficacy within their co-teaching partnerships even when leadership involvement in co-teaching practices was perceived as limited. While collective efficacy literature consistently identifies school leadership as a critical factor in shaping the conditions under which collective efficacy develops, the findings from this study suggest that collective efficacy may also emerge through established collaborative structures, such as co-teaching partnerships.

This pattern suggests that co-teaching partnerships may represent a relational context where collective efficacy beliefs emerge through shared instructional experiences. Within co-

teaching partnerships, teachers engaged in sustained collaboration, reciprocal learning, and shared problem solving centered on student needs. These interactions provided repeated opportunities for teachers to experience mastery experiences, vicarious learning, and social persuasion, which are recognized as key sources of efficacy beliefs (Bandura, 1997; Donohoo, 2017; Goddard et al., 2004). As a result, effective co-teaching partnerships appeared to serve as settings in which collective efficacy beliefs could develop and be reinforced through daily instructional practice.

At the same time, participants' reflections on leadership engagement indicate that broader school structures still influence how collaborative practices are experienced. When school leaders communicate a clear vision for co-teaching, recognize collaborative work, and create structures that support shared inquiry, they can strengthen the conditions under which collective efficacy develops (Donohoo et al., 2018; Hattie & Zierer, 2025). Conversely, limited or unclear leadership engagement may mean teachers must rely more heavily on their immediate professional relationships to sustain collaborative practice and confidence in their instructional impact.

Taken together, these findings suggest that while school leadership plays an important role in shaping the broader organizational context for collective teacher efficacy, co-teaching partnerships themselves may act as a powerful site for the development and reinforcement of collective efficacy beliefs. Through sustained collaboration, shared responsibility for student learning, and ongoing evidence of student growth, co-teachers in this study developed a strong sense of collective capability within their partnerships. In contrast, where the co-teaching model is not fully realized, collective efficacy perceptions are unlikely to be positively impacted (Hattie & Zierer, 2025).

Building on participants' descriptions of collective teacher efficacy within co-teaching partnerships, the next section examines how teachers interpreted the influence of these collaborative practices on student learning and outcomes.

Sub-Research Question 2

How do co-teachers interpret the influence of their co-teaching practices on student learning and outcomes?

Three of the eight themes informed the interpretation of this sub-research question: (1) Expanding Instructional Access and Responsiveness through Co-Teaching, (2) Fostering Student Engagement and Belonging within Co-Taught Classrooms, and (3) Student Growth as a Reinforcement of Collective Teacher Efficacy. Together, these themes suggest that co-teachers interpreted student outcomes not only through academic growth but also through changes in instructional responsiveness and the inclusive structures created within co-taught classrooms.

Participants consistently described how co-teaching enabled more responsive instruction that addressed diverse student needs. They emphasized that flexible grouping, small-group instruction, and differentiated learning supports were more feasible in co-taught classrooms, allowing teachers to provide targeted assistance that may not have been possible in a solo-taught classroom. This aligns with prior research in which teachers identified the use of differentiated and small-group instructional strategies in co-taught classrooms as influential to student learning (Brusca-Vega et al., 2011; Bryant-Davis et al., 2012; Strogilos et al., 2023).

Several participants explained how direct, whole group instruction was complemented with the use of targeted groups to address skill deficits while also providing enrichment for learners who had already mastered concepts. In this way, participants evaluated effectiveness through the instructional strategies enabled by co-teaching. Participants emphasized that students

were exposed to on-grade-level instruction, ensuring access to the general education curriculum. However, they described that co-teaching enabled students to receive targeted support beyond whole-group instruction. This targeted instruction also allowed teachers to monitor learning for a smaller group of learners in an ongoing fashion, which provided an enhanced ability to target and build instruction but also more frequent opportunities to see student success. This informed their evaluation of co-teaching's effectiveness while also reinforcing their collective teacher efficacy.

As participants described the use of small group instruction, one referred to it as "zone defense," reflecting the shared responsibility and active roles of both co-teachers to ensure all student needs were met. The structures they described match the parallel co-teaching approach, supported in the literature as a beneficial approach that enables greater individualization, differentiation, and collection of data. This approach ensures parity through the active use of both educators (Villa et al., 2013; Wilson & Blednick, 2011).

The primary cautions associated with the parallel teaching approach include ensuring that groups are formed based on instructional needs rather than labels, remain fluid rather than fixed, and that the same students are not repeatedly assigned to the same teacher (Villa et al., 2013; Wilson & Blednick, 2011). Notably, all participant groups that described using this approach emphasized that grouping was flexible, changed regularly in response to student data, and allowed both teachers to work with all students. Participants' intentional use of this structure to leverage the expertise and presence of both educators reflects shared instructional ownership and equitable expectations for all learners. Their collaborative decision-making around grouping and instruction also reflects elements of collective teacher efficacy, as teachers demonstrated a shared belief in their combined ability to organize instruction, respond to student needs, and positively influence student learning.

Participants also described how co-teaching influenced classroom culture and student engagement. They indicated that two adults in the classroom reduced stigma by normalizing and increasing student access to support, which allowed students with diverse learning needs to participate and engage more fully in classroom activities; a concept that is also identified in literature (Beninghof, 2020; Cook & Friend, 1995; Strogilos et al., 2023). Participants noted that peer acceptance and diverse friendships developed within these classrooms, which they attributed to both the inclusive structure of these classrooms and the ways in which teachers modeled collaboration and mutual respect. Increased access to peer models and the resulting social-emotional benefits have also been attributed to co-taught environments (Cook et al., 2017; Murawski & Lochner, 2010; Scruggs et al., 2007; Strogilos et al., 2023; Walther-Thomas, 1997).

Finally, participants interpreted the impact of co-teaching through evidence of academic growth. Teachers frequently described observing improvements in student understanding, skill development, and overall academic progress. Both formal and informal measures were referenced when describing these improvements. Some participants pointed to standardized assessment data that compared performance across grade levels, while others relied on daily observation of student progress during classroom instruction. This is consistent with research that indicates that assessment practices are most meaningful at the classroom level, because this data can be used by educators to drive and evaluate instruction and student progress (Erkens et al., 2017; Reeves, 2019). Across interviews, academic growth emerged as a central indicator through which teachers evaluated the effectiveness of their co-teaching practices.

These findings suggest that co-teachers often prioritized evidence of student growth when interpreting the effectiveness of their instructional practices. The use of both formal and informal data allowed teachers to monitor student progress closely and adjust instruction accordingly.

Additionally, the presence of two certified educators enabled more continuous observation of student learning, which appeared to strengthen teachers' confidence in the effectiveness of their instructional practices. In this way, observed student growth not only served as evidence of instructional impact but also reinforced teachers' perceptions of collective teacher efficacy within their co-teaching partnerships as reflected in the overlap between themes identified across the research questions.

Researchers debate the impact of co-teaching on academic achievement, yet few studies have been organized around student growth specifically (King-Sears et al., 2021; Stefanidis et al., 2023). Within these co-teaching partnerships, participants consistently discussed the impact of co-teaching as impacting student growth, and how this reinforced their perceptions of collective teacher efficacy. These findings are consistent with research indicating that collective teacher efficacy is reinforced when educators observe tangible evidence of student learning (Donohoo, 2017; Faddis et al., 2023; Hattie et al., 2024). When teachers directly attribute student progress to their collaborative instructional practices, their belief in their collective capability to support student learning is further strengthened. Notably, student growth emerged as a theme across both research questions, reinforcing participants' perception that collaborative instructional practices were closely tied to observable student outcomes.

When classroom instruction remains largely unchanged and one co-teacher functions more in a support role, academic achievement is unlikely to be any different than if the classroom were taught by one instructor. Most participants described classroom instruction that was not the same as when they taught in isolation, suggesting that how co-teaching is enacted from co-planning to co-reflecting is a key factor in terms of student outcomes (Hattie & Zierer, 2025; Pancsofar & Petroff, 2016; Scruggs et al., 2007; Strogilos et al., 2023).

Taken together, these findings suggest that co-teachers interpreted the influence of their co-teaching practices on student learning through multiple interconnected lenses. Participants viewed co-teaching as enabling more responsive instruction, fostering inclusive classroom environments that supported student engagement, and contributing to observable academic growth. Rather than attributing outcomes solely to traditional measures of achievement, teachers frequently emphasized how collaborative instructional structures allowed them to better meet diverse student needs and monitor learning more closely. In doing so, participants interpreted student outcomes as evidence of the effectiveness of their shared instructional practices. These interpretations also reinforced their collective teacher efficacy, as teachers described increased confidence in their joint ability to organize instruction, respond to student needs, and positively influence student learning. Ultimately, participants' reflections suggest that co-teaching not only shaped instructional practices but also strengthened teachers' shared beliefs about their capacity to support meaningful student outcomes.

Synthesis of Findings

Collectively, the findings across the central and sub-research questions indicate that co-teaching partnerships function as complex, relational systems in which instructional practice, collective teacher efficacy, and student outcomes are interdependent. Shared instructional ownership, sustained collaboration, and ongoing evidence of student growth contributed to strong efficacy beliefs, while structural and leadership conditions shaped how these practices were enacted. This study contributes to the literature by positioning co-teaching not only as an instructional model, but also as a relational context through which collective efficacy is developed and sustained in inclusive classrooms. Effective co-teaching partnerships function not only as instructional structures, but also as professional contexts in which collective efficacy

beliefs are developed and reinforced through daily collaborative practice. This study contributes to the literature by identifying evidence of student progress as central to how co-teachers interpret the influence of their practice and to their efficacy beliefs. These findings suggest that when appropriate structural and leadership conditions are in place, co-teaching partnerships serve as critical relational and instructional contexts for sustaining collective teacher efficacy. In particular, when co-teaching is enacted across all phases of the instructional process – planning, teaching, assessment, and reflection – and informed by evidence of student growth, collective teacher efficacy is strengthened.

Co-Teaching as a Mechanism for Collective Teacher Efficacy

Collective teacher efficacy emerged as a central thread across participants and study findings. A key contribution of this research is the identification of co-teaching, when enacted with fidelity to its intended collaborative design, as a mechanism through which collective teacher efficacy is developed and reinforced. Conversely, when essential conditions were absent, participants described constraints that limited both collaborative practice and the development of collective efficacy. Across interviews, participants' descriptions of co-teaching revealed characteristics associated with collective teacher efficacy. Specifically, many of the experiences within co-teaching partnerships reflected the presence of key efficacy sources. These included mastery experiences (successfully performing a task), vicarious learning (observing others perform a task), social persuasion (encouragement or feedback from others), and affective influences (emotional responses that shape confidence in capability) (Bandura, 1997; Donohoo, 2017).

Table 5.1 provides examples of how these efficacy sources were reflected in participants' descriptions of their co-teaching experiences.

Table 5.1*Sources of Collective Teacher Efficacy Reflected in Participant Descriptions*

Source of Efficacy	Co-Teaching Context	Participant Evidence
Mastery Experiences	Evidence of student growth attributed to intentional co-teaching practices	<i>Avery:</i> “Not to brag on ourselves, but our students did do the best on the i-Ready diagnostic of the whole grade...from where they started to where they finished. And that’s students with and without IEPs.”
Vicarious Experiences	Learning instructional strategies through observation of a co-teaching partner	<i>Alex:</i> “I have so much respect for my co-teacher that it makes me want to be better. I’ve learned so much just by watching her teach, and seeing what she does with behaviors, and kids who are having a tough time learning a concept. She just has a wealth of knowledge about all that, and that’s really just helped me in my classroom when she’s not with me. She’s just helped me be a better teacher.”
Social Persuasion	Encouragement and validation from a co-teaching partner	<i>Dakota:</i> “With a special ed. background, I can add a different spin on things to help reach the kids who might not be understanding. I’ve had the co-teachers this year say...that was a good strategy. So, that makes me feel good.”
Affective States	Reduced isolation and improved collaborative work environment	<i>Parker:</i> “I think it’s also been very beneficial for quality of life at school. I mean, when I was in my previous district where there was no sort of co-teaching, there was a divide between myself and the rest of the staff...you just don’t really get out, and you don’t see the kids... I just think the quality-of-life aspect is beneficial. You get to know more kids...just seeing different ideas of approaching ways to teach stuff. Tools, resources, everything. You’re just so much more collaborative...I think that’s very beneficial.”

Note. Table presents evidence of efficacy sources (Bandura 1977) aligned to co-teaching contexts with evidence through participant quotes.

Conceptual Integration of Findings

Participants described their experiences within co-teaching partnerships as a progression from relational conditions to collaborative instructional practices and, ultimately, student outcomes. Across accounts, they consistently emphasized that effective co-teaching partnerships begin with strong relationships. From this foundation, trust, parity and shared instructional ownership created the conditions necessary for co-teachers to engage in collaborative practice and assume shared responsibility for student learning. These relational elements supported open communication, mutual respect, and a willingness to engage in shared instructional decision-making.

Building upon this relational foundation, collaborative practice emerged as a central feature of their co-teaching experiences. Shared planning and complementary expertise enabled teachers to strengthen their collective instructional capacity. Through ongoing collaboration, co-teachers exchanged strategies, observed one another's instructional approaches, and engaged in continuous professional learning within the classroom context. These collaborative interactions contributed to teachers' confidence in their shared ability to support diverse learners.

As collaborative practices developed, participants described how co-teaching enabled greater instructional responsiveness. The presence of two educators allowed for flexible grouping, small-group instruction, and differentiated supports that addressed diverse student needs. Teachers emphasized that these practices enabled more responsive instruction while maintaining access to grade-level content for all students. In this way, collaboration translated directly into instructional strategies that supported student learning.

Participants interpreted the impact of their instructional practices primarily through student outcomes. Evidence of student growth and increased engagement served as indicators of

the effectiveness of their co-teaching efforts. Observing student progress reinforced teachers' belief that their co-teaching practices were positively influencing learning outcomes. In addition to academic growth, participants also noted that co-teaching supported the development of inclusive classroom cultures in which students felt supported.

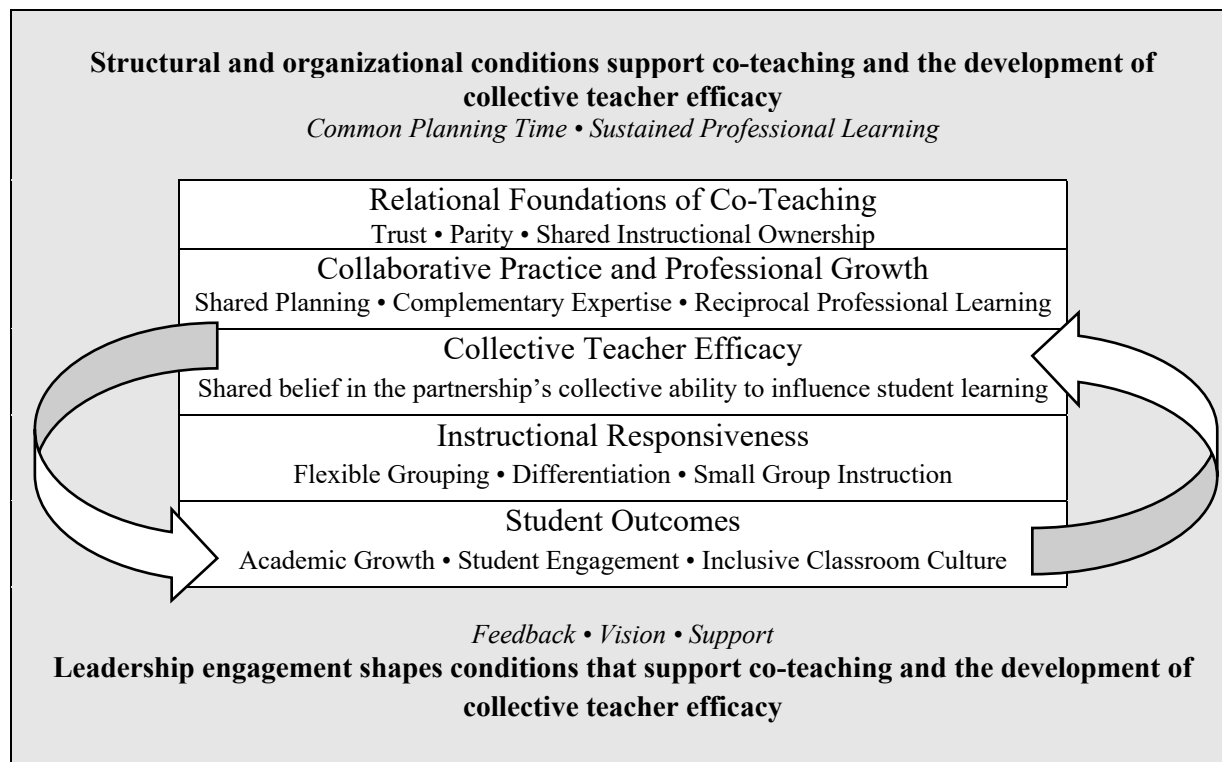
While this progression highlights relational and instructional processes within co-teaching partnerships, participants also emphasized the influence of organizational conditions on their work. Structural factors such as scheduling, access to co-planning time, and classroom compositions shaped the conditions under which co-teaching partnerships operated. In addition, participants described varying levels of leadership engagement that influenced how co-teaching was supported within their schools. These organizational and leadership factors framed the environment in which co-teaching practices developed and were sustained.

Together, these findings suggest that co-teaching partnerships operate as systems of interconnected relational, instructional, and organizational factors. Relational trust and shared instructional ownership provide the foundation for collaborative practice, which in turn enables responsive instruction and contributes to student outcomes. These experiences reinforce teachers' beliefs in their collective ability to support student learning, strengthening collective teacher efficacy within co-teaching partnerships. Importantly, these findings suggest that co-teaching partnerships, when fully realized, function as critical relational and instructional contexts through which collective teacher efficacy is developed and sustained within inclusive classroom environments.

Figure 5.1 presents the revised conceptual framework derived from participants' experiences, illustrating the integration of co-teaching, collective teacher efficacy, and student outcomes.

Figure 5.1

Conceptual Integration: Co-Teaching, CTE, Student Outcomes



Note. The model illustrates how relational foundations support collaborative practice, enabling instructional responsiveness that contributes to student outcomes. Evidence of student growth reinforces collective teacher efficacy within co-teaching partnerships, while structural and leadership conditions shape the environment in which these processes occur.

Implications for Practice

The findings of this study highlight several practical considerations for schools implementing co-teaching within inclusive learning environments. Participants consistently emphasized relationships and trust as foundational to effective collaboration. Within these partnerships, collaborative instructional practices were enacted in ways that were responsive to the needs of diverse learners. These practices were often supported through targeted strategies aligned with the parallel teaching approach (Villa et al., 2013).

When evidence of student growth was present, it reinforced two outcomes simultaneously: teachers' perceptions of the effectiveness of their collaborative instructional approach and their shared belief in their collective ability to influence student learning. This recurring feedback loop, in which student data informs both instructional decision-making and collective beliefs about instructional capability, aligns with research on collective teacher efficacy (DeWitt, 2019; Donohoo & Katz, 2019; Hattie, 2023). As illustrated in Figure 5.1, when relational, instructional, and organizational conditions are aligned, co-teaching partnerships may strengthen collective teacher efficacy and contribute to positive student outcomes.

Implications for School Leadership

The findings of this study highlight several leadership practices that may support the development of effective co-teaching partnerships and strengthen collective teacher efficacy. Figure 5.2 summarizes these leadership actions, drawing on both the findings of this study and prior research. Then, a narrative is provided incorporating findings of the study and established research.

Figure 5.2

Leadership Actions to Support Co-Teaching and Collective Teacher Efficacy

Leadership Focus	Leadership Actions	Connection to Study Findings
Step 1: Prioritize Structures that Support Collaborative Planning	• Schedule protected common planning periods for co-teaching teams. • Reduce scheduling instability that disrupts co-planning. • Structure planning time around instructional decision-making and student support strategies.	Participants consistently identified shared planning time as essential to effective co-teaching. Regular opportunities to plan together supported instructional alignment, clearer role expectations, and stronger collaboration.
Step 2: Provide Ongoing Professional Learning Focused on Co-Teaching	• Provide professional learning focused on co-teaching strategies. • Facilitate collaborative professional learning communities for co-teachers. • Offer instructional coaching focused on co-teaching practices.	Participants described co-teaching partnerships as opportunities for reciprocal professional growth but indicated formal training was limited. Targeted professional learning may strengthen implementation and instructional collaboration.
Step 3: Foster Leadership Practices that Promote Collective Teacher Efficacy	• Frame instructional data discussions as collaborative problem-solving opportunities rather than evaluative conversations. • Recognize and celebrate examples of co-teaching success. • Demonstrate an understanding of co-teaching practices through active involvement and support.	Leadership engagement influenced how supported teachers felt when implementing co-teaching practices. Supportive leadership behaviors may strengthen teachers' confidence in their collective instructional capacity.
Step 4: Support Inclusive Classroom Practices Through Strategic Staffing and Resource Allocation	• Carefully consider student placement and class composition. • Ensure co-teaching partnerships are stable across time when possible. • Provide ongoing walkthrough feedback specific to co-teaching that both teachers receive.	Participants described structural challenges including high concentrations of students with disabilities and staffing instability. Strategic leadership decisions can support more effective inclusive classroom environments.
Step 5: Encourage Relationship Development Within Co-Teaching Partnerships	• Provide time and opportunities for co-teachers to build relationships. • Avoid frequent reassignment of co-teaching partners. • Encourage collaborative reflection on instructional practices.	Relational trust emerged as a foundational component of effective co-teaching partnerships. Supporting relationship development may strengthen teachers' willingness to share instructional responsibilities and engage in collaborative problem-solving.

Note. Table presents leadership actions that support co-teaching partnerships and the development of collective teacher efficacy, aligned with the findings of this study.

Step 1: Prioritize Structures That Support Collaborative Planning

Participants in this study described shared planning time as essential for effective collaboration during the school day. For example, one participant explained that a common grade level planning period is provided, but often gets interrupted or used for other responsibilities. She shared, “I think if we did have more time, a set time, where it’s ... this day, no interruptions, no other meetings, we could be more effective.” Access to shared planning time has been widely identified in the literature as a critical condition for effective co-teaching implementation (Rytivaara et al., 2019; Scruggs et al., 2007; Solis et al., 2012; Strogilos et al., 2023). When school leaders ensure co-teachers have regular, protected opportunities for co-planning, it sends a message about the importance of the collaborative model and provides a space for co-teachers to be successful through collaboration (Murawski & Bernhardt, 2015; Villa et al., 2013).

Step 2: Provide Ongoing Professional Learning Focused on Co-Teaching

While most participants in the study had received formal initial training in co-teaching, they expressed the need for ongoing training that was differentiated to their needs. For instance, a veteran co-teaching team shared: “Some targeted training specific to us would be nice.” Another co-teacher suggested that principal feedback on walkthrough observations could be targeted to co-teaching practices, and that it would be helpful if both teachers received a copy of the feedback. The importance of professional development specific to co-teaching is well-established in the literature. (Scruggs et al., 2007; Solis et al., 2012; Strogilos et al., 2023). As school leaders prepare professional learning opportunities, co-teaching should be included in some form. Creating professional learning communities, providing opportunities to observe other teams, and utilizing instructional coaching are all ways the practice can be supported in addition to more formal measures (Murawski & Bernhardt, 2015; Villa et al., 2013).

Step 3: Foster Leadership Practices that Promote Collective Teacher Efficacy

While collective teacher efficacy has not been widely examined within the context of co-teaching partnerships, existing research identifies several leadership practices that promote the development of collective teacher efficacy. When teacher teams can connect their instructional actions as evidence of student learning, their shared belief in their collective impact on student achievement is strengthened (Donohoo & Katz, 2019; Hattie, 2023). School leaders can support this process by creating opportunities for teachers to review student data collaboratively and reflect on the impact of their instructional practices. These findings extend existing research by illustrating how collective teacher efficacy can be fostered within co-teaching partnerships through structured collaboration and shared analysis of student learning. Further, the collective focus on student growth measures demonstrated in this study provides a rationale for leaders to consider how learning is being measured and monitored, and how teachers are exposed to measurements of growth.

A key way school leaders can support the development of collective teacher efficacy is by fostering a culture of psychological safety in which teachers feel comfortable engaging in problem solving and taking instructional risks (Hite & Donohoo, 2021). However, participants' experiences suggested that the tone of data discussions can influence how these opportunities are perceived. For example, one participant described feeling like she was “in trouble” during a data review. In contrast, when data conversations are framed as collaborative, teachers may be more willing to share challenges, reflect on practices, and learn from one another.

Fostering a climate where educators feel a sense of belonging, collaborate productively, and feel empowered builds a foundation for collective efficacy (Donohoo & Forbes, 2025). There are direct actions school leaders can take to improve the culture within the school

environment. Improving and modeling communication, embedding collaboration norms, and actively seeking teacher feedback are three specific action steps (Donohoo & Forbes, 2025). Just as relational trust was foundational for the formation of effective co-teaching partnerships, a non-threatening culture provides the basis for effective data review.

Some of the enabling conditions established in the research can support collective teacher efficacy, including informal teacher leadership, embedded reflection, and formal structures for data review (Hite & Donohoo, 2021). School leaders can tap into these sources to support their efforts. Utilizing strong co-teaching teams to serve as models or department leaders to model data review provides an opportunity for shared leadership and affirmation. Leaders should take caution to ensure the same educators are not always selected.

Step 4: Support Inclusive Classroom Practices Through Strategic Staffing and Resource Allocation

Participants described the structural barriers that made implementation of co-teaching more difficult. These included the complexity of the composition of learners in the classroom. One co-teacher explained the assignment of several students with IEPs to her classroom, and that additional learners come in because she has a co-teacher. She explained, “I think the biggest issue is the extra kids that come in, and it just make for a lot of kids even though you have two teachers. There were days I would have 31 kids...14 with IEPs, and additional struggling learners.” Research recommendations suggest the number of students with IEPs, 504 plans, and other identified needs not exceed one third of the classroom’s make-up (Bernhardt & Murawski, 2015; Pancsofar & Petroff, 2013; Villa et al., 2013) and emphasizes the school leader’s role in avoiding classrooms with support like co-teaching becoming a “dumping ground” (DiPaola, 2004, p. 4). Leaders are responsible for the structures in which teachers can excel. Prioritizing

balanced classroom composition is critical for effective instruction and maintaining inclusive, heterogeneous learning environments. Working with special education case managers, school psychologists, and other knowledgeable personnel can help ensure classroom composition is manageable.

Step 5: Encourage Relationship Development Within Co-Teaching Partnerships

Participants regularly described relationships and trust as foundational to effective partnerships. Trust in each other's instructional competence and a shared sense of responsibility for student learning grew over time as co-teaching partnerships remained consistent. One participant shared, "I just have so much respect for my co-teacher. I don't know if it's because we've worked so long together, but sometimes we just have the same thoughts." Prior research similarly identifies relational trust as a critical component of effective partnerships (Pratt, 2014; Solis et al., 2012; Strogilos et al., 2023; Strogilos & King-Sears, 2019). Providing structured time and opportunities for co-teachers to build and sustain relationships can be done in a variety of ways. Leaders can provide paid time at the beginning of the year, excuse co-teachers from staff meetings or other duties, and ensure regular and structured plan time. Where co-teaching is successful, leaders may consider avoiding breaking up the partnership. Finally, sometimes co-teachers may need an intervention, or "marriage counseling" (Villa et al., 2013). Taking the time to check in on teachers and making space for reflective conversations is an essential component of the school leader's role.

Implications for Co-Teaching Partnerships

While school leaders play a critical role in establishing the structural conditions that support co-teaching, teachers themselves influence the relational and collaborative practices that sustain effective partnerships. The findings of this study suggest several practices that may

support co-teachers in strengthening collaboration and collective teacher efficacy within inclusive classrooms. Figure 5.3 provides a teacher-oriented checklist that summarizes these practices, rooted in the experiences of the participants in this study. Regular reflection, structured check-ins, and a sustained commitment to collaborative practices can strengthen both teacher collaboration and student outcomes.

Figure 5.3

Checklist for Effective Co-Teaching Practice

Focus Area	Reflection Questions for Co-Teaching Partners	Suggested Actions
Relational Foundations	• Do both teachers feel like equal instructional partners? • Is there trust and open communication within the partnership?	Establish shared expectations for roles and decision-making. Schedule regular check-ins to discuss instruction and classroom challenges.
Shared Instructional Ownership	• Are both teachers actively involved in planning and delivering instruction?	Alternate leadership during lessons and ensure both teachers work with all groups of students.
Collaborative Planning	• Do co-teachers have structured time to plan instruction together?	Use planning time to review curriculum goals, identify student needs, and coordinate instructional strategies.
Leveraging Complementary Expertise	• Are both teachers using their unique expertise and strengths to support student learning?	Share strategies and instructional approaches that reflect both general and special education perspectives.
Instructional Responsiveness	• Are instructional strategies flexible enough to address diverse learner needs?	Implement flexible grouping, differentiation, and small-group instruction to support targeted learning.
Collaborative Data Use	• Do co-teachers review student data together to inform instruction?	Regularly analyze assessment data and adjust instructional strategies collaboratively.
Student Engagement and Inclusion	• Are all students actively participating and supported within the classroom environment?	Promote inclusive classroom structures that encourage peer collaboration and engagement for all learners.
Reflection on Impact	• Do teachers reflect on how their collaboration affects student outcomes?	Discuss student progress and identify instructional practices that contributed to success.

Note. Teacher checklist for reflection and actions to promote effective co-teaching.

Recommendations for Future Research

This study contributes to the limited body of research examining collective teacher efficacy within co-teaching partnerships in inclusive classroom settings. A qualitative approach was employed to gain insight into the experiences and perspectives of educators directly engaged in co-teaching practice. The findings identified perceived relationships among collaborative instructional practices, student learning outcomes, and the development of collective teacher efficacy within co-teaching partners. These findings suggest several avenues for future research.

First, studies could extend this work through mixed methods designs that integrate quantitative measures of student outcomes with qualitative exploration of co-teachers' perceptions and experiences. While participants in this study described evidence of student growth associated with their co-teaching practices, the relationship between co-teaching, collective teacher efficacy, and student outcomes was not examined through quantitative analysis. Mixed methods approaches could provide a more comprehensive understanding of how collaborative instructional practices influence both efficacy beliefs and measurable student achievement.

Second, future researchers may employ established instruments designed to measure collective teacher efficacy within co-teaching contexts. Several validated tools exist for measuring collective teacher efficacy; however, one more recently developed instrument focused specifically on collective efficacy related to inclusive instructional practices (Sharma et al., 2024). Utilizing such measures could provide additional insight into how collective teacher efficacy develops within co-teaching partnerships and how these beliefs relate to instructional practices and student outcomes.

Third, additional research examining the relationship between co-teaching and student academic growth may further clarify the instructional impact of collaborative teaching models. Although participants in this study described perceived improvements in student engagement and learning, future studies could incorporate longitudinal analyses of growth data to determine which co-teaching practices contribute to measurable outcomes. Such research could employ a cohort-based design in which student growth is examined over time to better understand the relationship between sustained enrollment in co-taught classes and measurable student outcomes.

Finally, future research may benefit from examining co-teaching and collective teacher efficacy from a leadership perspective. School leaders play a critical role in establishing the structural and organizational conditions that support collaborative teaching practices. Incorporating the perspectives of principals or instructional leaders could provide additional insight into how leadership practices, scheduling structures, and organizational supports influence the development of collective teacher efficacy within co-teaching partnerships.

Conclusion

The purpose of this basic qualitative study was to explore the experiences of general and special education teachers engaged in co-teaching partnerships in inclusive learning environments. Specifically, the study examined how co-teachers described the development of collective teacher efficacy within their partnerships, and how these practices influenced their perceptions of student learning and outcomes. Eight themes emerged through analysis and were synthesized into an interconnected, cyclical framework. Within this framework, the study's findings are depicted: when relational, collaborative, and instructional practices intertwine, student growth outcomes result. Evidence of student growth reinforces co-teacher collective efficacy perceptions and impressions of the impact of their practices.

The study's findings highlight that when the right conditions are in place, and co-teaching is fully realized, it provides a context for collective teacher efficacy perceptions to be impacted. As school leaders work to establish structures and supports to ensure all student learning needs are met, creating opportunities to strengthen collective teacher efficacy benefits teachers and learners (Donohoo, 2017b). While co-teaching is a popular service delivery model used in special education, it can be considered a structured way to leverage collaboration and educator expertise to meet the needs of diverse learners in inclusive classrooms (Villa et al., 2013). While scholars debate the exact academic impact of co-teaching (Cook et al., 2017; King-Sears et al., 2021), collective teacher efficacy is indicated as the single most influential factor impacting student achievement (Donohoo, 2018; Eels, 2011; Hattie et al., 2024).

When co-teaching is reduced to the presence of two adults in a classroom, it is unlikely to produce outcomes different from traditional solo instruction (Hattie & Zierer, 2025). In contrast, when co-teaching is fully implemented as a collaborative instructional model grounded in relational trust, characterized by a shared commitment to learners and instructional responsiveness, and informed by evidence of student growth, it represents a powerful opportunity to improve student outcomes while strengthening collective teacher efficacy within inclusive classroom environments.

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Appendix A - Recruitment Email and Interest Form

Recruitment Email #1 & Interest Form

Subject: Reminder: Invitation to Participate in Co-Teaching Research Study

To: Kansas Co-Teachers affiliated with the Kansas Co-Teaching Project

Dear [Recipient Name],

My name is Nichole Honeywell, and I am a doctoral candidate in the Educational Leadership Department at Kansas State University. I am conducting a research study to explore the experiences of general and special education teachers who co-teach in inclusive classrooms across Kansas. This study aims to better understand the experiences of co-teachers, including how co-teachers perceive their collective impact on student learning.

I am reaching out to invite you to participate in this study. Eligible participants meet the following criteria:

- Have at least one year of co-teaching experience
- Are a general or special education teacher
- Work in a school district that has participated in the Kansas Co-Teaching Project

Study Overview:

Your participation would include completing a pre-interview questionnaire, taking part in one individual and one paired interview, and responding to a brief follow-up email. Participation is entirely voluntary, and you may withdraw at any time without penalty. Your responses will be kept confidential and will not be shared with your district or supervisors.

To thank you for your time, participants may receive up to \$50 in Amazon gift cards: \$25 after completing the individual interview and an additional \$25 after completing the paired interview.

If you are interested in participating, please complete a brief interest form (attached).

Thank you for considering this opportunity to contribute to the growing body of research on co-teaching and inclusive education. Your voice and experiences are incredibly valuable and provide insight into supporting educators and impacting student learning.

Respectfully,

Nichole Honeywell, Doctoral Student, College of Education, Kansas State University
nhoneywell@ksu.edu

William T. Holmes, Ed.D., Assistant Professor, Department of Education Leadership, College of Education, Kansas State University
wtholmes@ksu.edu

Participant Interest Form

Name: _____

Email Address: _____ School District: _____

Please select all that apply to you:

_____ Have at least one year of co-teaching experience

_____ Are a general or special education teacher

_____ Work in a school district that has participated in the Kansas Co-Teaching Project

Please indicate your willingness to participate in each part of the study:

1. Complete a pre-interview demographic questionnaire (10 – 15 min.)

_____ Yes _____ No

2. Participate in an individual interview with the researcher
(Zoom or in person, 45 – 60 minutes)

_____ Yes _____ No

3. Participate in a paired interview with your co-teaching partner and the researcher
(Zoom or in person, 45 – 60 minutes)

_____ Yes _____ No

4. Complete a short set of 3 to 5 follow-up questions via email (5-10 min.)

_____ Yes _____ No

5. I prefer to be contacted:

_____ Via email _____ Via phone

Appendix B - Confirmation of Participation Email

Subject: Confirmation of Participation - Co-Teaching Research Study

Dear [Co-Teacher Names],

Thank you for your interest in participating in my co-teaching research study! This study is part of my dissertation research and is designed to better understand co-teachers' experiences in inclusive classrooms and how they perceive their collective impact on student learning. Based on your responses to the Participant Interest Survey, you meet the eligibility criteria and are invited to participate.

Your participation includes:

- **Completion of a Pre-interview demographic questionnaire** (includes basic demographic questions and a copy of the interview questions in advance)
- **Your Choice of Interview Format:**
 - **Individual interview only** (30 – 45 minutes via Zoom or in person)
 - **Individual interview and Paired interview with your co-teaching partner**
 - **Paired interview** (30 – 45 minutes via Zoom or in person)
- **Brief follow-up** (3 to 5 follow-up questions sent via email)

Your participation is completely voluntary, and you may withdraw at any time without penalty. Your identity, as well as your school and district, will remain confidential. All data will be securely stored on my password-protected device and destroyed at the conclusion of the study.

To thank you for your time, participants may receive up to \$50 in Amazon gift cards: \$25 after completing the individual interview and an additional \$25 after completing the paired interview.

I'm truly grateful for your willingness to share your experiences. Please click the link below to confirm your consent to participate and schedule your **individual interview**:

Once you complete the form, I'll follow up with a confirmation email and your pre-interview questionnaire.

Thank you again for your time, your insights, and your contribution to this important research. Should you have any questions, please respond to this email.

Nichole Honeywell, Doctoral Student, College of Education, Kansas State University
nhoneywell@ksu.edu

William T. Holmes, Ed.D., Assistant Professor, Department of Education Leadership, College of Education, Kansas State University
wtholmes@ksu.edu

Appendix C - Pre-Interview Questionnaire

Collective Teacher Efficacy and Student Achievement in Inclusive Classrooms: Kansas Co-Teachers' Perspectives for Leadership Practice	
Thank you again for agreeing to participate in this research study. This pre-interview questionnaire is designed to collect basic demographic information and gather some of the details related to your co-teaching experiences and perceptions in preparation for the interview.	
Demographic Information	
Please enter your first and last name: _____	
<i>Note: Your name is requested only to match your responses with your interview data. All names will be replaced with pseudonyms in transcripts and reports to protect your confidentiality.</i>	
Please enter the name of the school district where you work: _____	
<i>Note: Your school district's name is requested only to provide context for your interview (e.g., district size). All school district names and identifiable information will be replaced with pseudonyms in transcripts and reports to protect your confidentiality.</i>	
What is your Gender? (Please check one) ☐ Male ☐ Female ☐ Prefer Not to Answer	What is your Race? ☐ American Indian/Alaskan Native ☐ Asian or Asian-American ☐ Black/African American ☐ Hispanic or Latino/a ☐ Native Hawaiian/Pacific Islander ☐ White ☐ Other
What is your Age: (Please check one) ☐ Under 20 ☐ 50 – 59 ☐ 21 – 29 ☐ 60 – 69 ☐ 30 – 39 ☐ 70 or older ☐ 40 – 49	What is the highest educational degree you have obtained? ☐ High school degree or equivalent (e.g., GED) ☐ Some college but no degree ☐ Associate degree ☐ Bachelor degree ☐ College coursework beyond a Bachelor degree ☐ Graduate Degree ☐ Doctoral Degree (Ph.D. or Ed.D.)
How many years of experience do you have as a teacher in any role? _____ Total Years of Teaching Experience	How many years of experience do you have as a teacher in a co-teaching role? _____ Total Years of Co-teaching Experience

Have you co-taught with your current co-teaching partner for <i>more than one</i> academic year? ☐ Yes ☐ No		If <i>YES</i> : How many years have you spent co-teaching with the same co-teaching partner? _____ Total Number of Years
Which of the following roles apply to your current teaching assignment? (Select all that apply):		
Teaching Assignment: ☐ General Education Teacher ☐ Special Education Teacher ☐ Elementary Teacher (PreK – 5 th Grade) ☐ Middle School Teacher (6 th – 8 th Grade) ☐ High School Teacher (9 th – 12 th Grade)	Content Area: ☐ English Lang. Arts ☐ Math ☐ Science ☐ Social Studies ☐ Other (Describe below):	Co-Teaching Assignment: ☐ Co-teach at least part of the school day ☐ Co-teach with one person ☐ Co-teach with two people ☐ Co-teach with more than two people
Co-Teaching: Professional Learning and Planning		
Which of the following statements best describe your professional learning and experience with co-teaching? (Select all that apply)		
☐ I have had no formal training on the topic of co-teaching. ☐ I have read articles or books about the topic. ☐ I have attended a staff meeting or in-service where this topic was presented. ☐ I have attended a conference on co-teaching. ☐ I have attended more than one conference on co-teaching. ☐ I have attended at least one in-district training on co-teaching. ☐ I have attended more than one in-district training on co-teaching. ☐ I am a trained co-teaching coach in my district. ☐ I have experienced an observation with a follow-up debrief session from a coach specific to co-teaching.		
Please describe any professional learning or other training you have experienced that was not listed above (optional):		
Do you and your co-teacher have scheduled shared planning time during the school day? (e.g., a common planning period, time reserved during team meetings, PLC) ☐ Yes ☐ No	How many total hours per week do you and your co-teacher typically dedicate to co-planning lessons, either during or outside of the school day? ☐ less than one hour ☐ 1 – 3 hours ☐ 4 – 6 hours ☐ 7 – 10 hours ☐ 11 – 15 hours ☐ More than 15 hours	On average, how many hours per month do you and your co-teacher typically dedicate to co-planning lessons, either during or outside of the school day? ☐ None ☐ less than one hour ☐ 1 – 3 hours ☐ 4 – 6 hours ☐ 7 – 10 hours ☐ 11 – 15 hours ☐ More than 15 hours

Co-Teaching Perceptions

The following items ask you about your perceptions of co-teaching. Please answer based on your own experiences.

My co-teacher and I share equal responsibility for all students in the classroom.

___ Strongly Agree ___ Agree ___ Disagree ___ Strongly Disagree

Co-teaching allows us to better meet the needs of all students than a traditional, single teacher model.

___ Strongly Agree ___ Agree ___ Disagree ___ Strongly Disagree

Students in co-taught classrooms perform better than students in solo-taught or para-supported classrooms.

___ Strongly Agree ___ Agree ___ Disagree ___ Strongly Disagree

My co-teacher and I effectively support positive student behavior in our classroom.

___ Strongly Agree ___ Agree ___ Disagree ___ Strongly Disagree

Is there anything else you'd like to add about your experiences co-teaching and how you and your partner work together to meet students' needs?

School Leader Support

The following items ask about the role of school leaders in supporting co-teaching. Please respond based on your own experiences and perceptions.

My school leaders value co-teaching as an instructional model.

___ Strongly Agree ___ Agree ___ Disagree ___ Strongly Disagree

My school leaders understand the challenges associated with co-teaching and work to address them.

___ Strongly Agree ___ Agree ___ Disagree ___ Strongly Disagree

My school leaders promote a vision of inclusive education for all students.

___ Strongly Agree ___ Agree ___ Disagree ___ Strongly Disagree

My school leaders monitor and evaluate the impact of co-teaching on student learning.

___ Strongly Agree ___ Agree ___ Disagree ___ Strongly Disagree

Is there anything else you'd like to add about your experiences with school leader support for co-teaching?

Is there anything else you would like me to know before your interview?

Do you have any concerns related to participating in an interview with your co-teaching partner (if applicable)?

Individual Interview Questions

<i>Interview Question</i>		<i>Optional Space for Notes/Ideas</i>
1	Tell me a little about your journey as a co-teacher. How did you first become involved in co-teaching?	
2	Describe your professional learning or training in co-teaching.	
3	How would you describe your working relationship with your co-teacher, and how has it evolved over time?	
4	Describe what effective co-teaching looks like.	
5	What challenges have you experienced as a co-teacher? How have you worked through those challenges?	
6	Share a specific example of a time when your co-teaching had a positive impact on student learning.	
7	In your experience, how does a lesson with a co-teacher differ from a lesson delivered by one instructor?	
8	Can you describe how you and your co-teacher approach meeting the needs of all students in your classroom?	
9	What role do school or district leaders play in supporting or hindering your co-teaching efforts? What kind of support would make the most difference for your students?	
10	In what ways has your experience with co-teaching influenced your professional growth, both inside and outside of the co-taught classroom?	
	Is there anything you would like to talk about or share before the interview with your co-teaching partner?	

Co-Teaching Pair Interview Questions

<i>Interview Question</i>		<i>Optional Space for Notes/Ideas</i>
1	Tell me a little about your experience as co-teaching partners (e.g., how you were paired up, etc.)	
2	Describe a typical lesson or unit planning process.	
3	Which co-teaching approaches do you use most frequently, and why? (Supportive, complementary, parallel, team)	
4	What data do you use to evaluate the effectiveness of your co-teaching class?	
5	How would you describe the students in your co-taught classroom? What are some of the learning needs, strengths, and challenges of students in your co-taught class?	
6	How do you manage behavior in your co-taught classroom?	
7	Tell me about the workload involved with co-teaching.	
8	What do you need from school or district leaders to make co-teaching successful?	
9	To what extent do you and your co-teacher believe your work makes a difference for all students?	
10	If you could make one recommendation to school leaders about supporting co-teaching, what would it be?	
	Is there anything else you would like to share?	

Appendix D - Semi-Structured Interview Protocol (Individual)

Research Study: Collective Teacher Efficacy and Student Achievement in Inclusive Classrooms: Kansas Co-Teachers' Perspectives for Leadership Practice

Date: _____ **Time of Interview:** _____ **Location:** _____

Interviewee: _____

Semi-Structured Interview Protocol for Individual Co-Teachers

You have been invited to participate in this interview because I am interested in learning about your opinions and perspectives related to co-teaching. For the purposes of this study, your experiences include time spent instructing students and time spent outside the classroom engaged in shared planning and preparation.

I am also interested in hearing any thoughts you may have about collective teacher efficacy, which refers to educators' shared belief that they can positively impact student outcomes through intentional actions.

I will record this interview to accurately transcribe the discussion, and the recordings will be saved in a folder on my password-protected computer until it is time to be erased permanently. Only I will have access to the transcription and recording. Co-teacher names and the names of schools and districts will be changed, as well as any other names or places mentioned during the interview, to protect participant identity.

Please share your thoughts as openly and honestly as possible. Your feedback is valuable in guiding future research. Should you wish to stop participating or not respond to any question for any reason, you may do so at any point during this interview without penalty.

Do you have any questions before we begin?

[Answer any participant questions before beginning]

It is anticipated that this interview will take 30 – 45 minutes. Are you comfortable with starting the recording for the interview now?

[Receive consent prior to pressing "Record"]

I have started the recording. Before we begin, can you please confirm that you understand and consent to having this interview recorded and transcribed?

[Wait for response]

Thank you!

1	Tell me a little about your journey as a co-teacher. How did you first become involved in co-teaching?
2	Describe your professional learning or training in co-teaching.
3	How would you describe your working relationship with your co-teacher, and how has it evolved over time?
4	Describe what effective co-teaching looks like.
5	What challenges have you experienced as a co-teacher? How have you worked through those challenges?
6	Share a specific example of a time when your co-teaching had a positive impact on student learning.
7	In your experience, how does a lesson with a co-teacher differ from a lesson delivered by one instructor?
8	Can you describe how you and your co-teacher approach meeting the needs of all students in your classroom?
9	What role do school or district leaders play in supporting or hindering your co-teaching efforts? What kind of support would make the most difference for your students?
10	In what ways has your experience with co-teaching influenced your professional growth, both inside and outside of the co-taught classroom?
	Is there anything you would like to talk about or share before the interview with your co-teaching partner?

Appendix E - Semi-Structured Interview Protocol (Dyads)

Research Study: Collective Teacher Efficacy and Student Achievement in Inclusive Classrooms: Kansas Co-Teachers' Perspectives for Leadership Practice

Date: _____ **Time of Interview:** _____ **Location:** _____

Interviewee 1: _____

Interviewee 2: _____

Semi-Structured Interview Protocol for Co-Teaching Dyads

You have been invited to participate in this interview because I am interested in learning about your experiences and perspectives as a co-teaching pair. For the purposes of this study, these experiences include both time spent instructing students together and time spent outside the classroom engaged in shared planning and preparation.

I am also interested in hearing your thoughts on *collective teacher efficacy*, which refers to educators' shared belief, through intentional actions, they can positively impact student outcomes.

This interview will be recorded to ensure an accurate transcription of our discussion. Recordings will be stored securely on my password-protected computer and permanently deleted after the study is complete. Only I will have access to the recording and transcripts. To protect your identity, pseudonyms will be used for you, your school, your district, and for any other names or places mentioned.

Please share your thoughts as openly and honestly as possible. Your feedback is valuable and will help guide future research. If at any time you wish to stop participating, pause, or skip a question, you may do so without penalty.

Before we begin, I'd like to share a few guidelines for this dyadic interview.

1. All perspectives are valuable and welcome. There are no right or wrong answers to the questions I will ask.
2. This interview is meant to be a collaborative dialogue about your co-teaching experiences. At times, you may agree, and at other times, you may have different viewpoints. Please feel comfortable sharing differences respectfully. These differences can really help us understand the bigger picture.

3. Everything you share will remain confidential. No names will be attached to specific comments.
4. Please allow each person to finish speaking before responding so that all voices can be heard.
5. Last, remember that your participation is entirely voluntary. You may choose not to answer a question and may request to pause or stop the interview at any time.
 - Do either of you have any questions before we begin?
[Answer any participant questions before beginning]
 - It is anticipated that this interview will take 30 – 45 minutes. Are you both comfortable with starting the recording for the interview now?
[Receive consent from both prior to pressing “Record”]
 - I have started the recording. To confirm, can each of you state that you understand and consent to having this interview recorded and transcribed?
[Wait for both responses]

Thank you!

1	Tell me a little about your experience as co-teaching partners (e.g., how you were paired up, etc.)
2	Describe a typical lesson or unit planning process.
3	Which co-teaching approaches do you use most frequently, and why? (Supportive, complementary, parallel, team)
4	What data do you use to evaluate the effectiveness of your co-teaching class?
5	How would you describe the students in your co-taught classroom? What are some of the learning needs, strengths, and challenges of students in your co-taught class?
6	How do you manage behavior in your co-taught classroom?
7	Tell me about the workload involved with co-teaching.
8	What do you need from school or district leaders to make co-teaching successful?
9	To what extent do you and your co-teacher believe your work makes a difference for all students?
10	If you could make one recommendation to school leaders about supporting co-teaching, what would it be?
	Is there anything else you would like to share?

Appendix F - Research Question and Data Source Alignment

Central Research Question: <i>What are the experiences of Kansas general and special education co-teachers who serve students in inclusive classroom environments?</i>		
Data Source	Interview Question	Research Rationale/Objective
(1) Pre-Interview Questionnaire: Individual Response	Collection of demographic information and details related to co-teaching professional development, existence of common planning time, time spent shared planning. Provides background and context about each teacher prior to the interview, and contributes information for a descriptive account (Braun & Clarke, 2013).	
(2) Semi-Structured Interview: Individual Teachers	(1) Tell me a little about your journey as a co-teacher. How did you first become involved in co-teaching?	Understand how the individual teacher was introduced to co-teaching, begin to develop a sense of attitudes and perceptions.
	(2) Describe your professional learning or training in co-teaching.	Professional learning identified as essential element of effective co-teaching (Beninghof, 2020; Chatzigeorgiadou & Barouta, 2022; Pancsofar & Petroff, 2013; Scruggs et al., 2007; Strogilos et al., 2023).
	(3) How would you describe your working relationship with your co-teacher, and how has it evolved over time?	Identify how the teacher perceives the relationship and anticipate any challenges in the interviews with co-teaching partners. Successful co-teaching is impacted by relational dynamics (Hattie & Zierer, 2025; Villa et al., 2013).
	(5) What challenges have you experienced as a co-teacher? How have you worked through those challenges?	Explore teacher identified challenges, including those that align with research indicated barriers (Conderman, 2018; Cook et al., 2017; Harbort et al., 2007; Scruggs et al., 2007; Strogilos et al., 2023).
	(10) In what ways has your experience with co-teaching influenced your professional growth, both inside and outside of the co-taught classroom?	Prior research indicates that co-teachers describe the practice as embedded professional development, and cite the benefits of learning from each other (Strogilos et al., 2023; van Hover et al., 2012; Villa et al., 2013).

(3) Semi-Structured Interview: Co-Teacher Pairs	(1) Tell me a little about your experience as co-teaching partners (e.g., how you were paired up, etc.)	Gain a sense of the co-teaching relationship, and any differences between what was shared during the individual interviews. Ease into the interview and make participants feel comfortable (Tisdell et al., 2025).
	(7) Tell me about the workload involved with co-teaching.	Determine co-teachers' perception of workload (Muraski & Swanson, 2001; Strogilos et al., 2023).
	(10) If you could make one recommendation to school leaders about supporting co-teaching, what would it be?	Captures the essence of the co-teachers' perceptions of what is needed to support effective practices.

Sub-Question 1: Data Source Alignment

Sub-Question 1: How do co-teachers perceive and describe the presence or development of Collective Teacher Efficacy (CTE)?		
Data Source	Interview Question	Research Rationale/Objective
(1) Pre-Interview Questionnaire: Individual Response	None of the questions in the pre-interview questionnaire specifically target CTE, but a space is provided for participants to include any additional comments.	
(2) Semi-Structured Interview: Individual Teachers	(2) Describe your professional learning or training in co-teaching.	Professional development is associated with development of CTE (Cantrell & Callaway, 2008; Donohoo, 2017; Donohoo & Katz, 2019).
	(3) How would you describe your working relationship with your co-teacher, and how has it evolved over time?	Identified sources of CTE include affective states (Bandura 1977, 1993; Goddard et al., 2004), shared responsibility, and positive interdependence (Donohoo & Katz, 2020).
	(6) Share a specific example of a time when your co-teaching had a positive impact on student learning.	Mastery experiences are the largest source of CTE (Bandura, 1977; Donohoo et al., 2020; Goddard et al., 2004).
	(7) In your experience, how does a lesson with a co-teacher differ from a lesson delivered by one instructor?	Gain insight into co-teacher perception of ability to meet student needs together (Donohoo, 2017; Murawski, 2009) and if co-teaching is operating as designed (Hattie & Zierer, 2025).
	(8) Can you describe how you and your co-teacher approach meeting the needs of all students in your classroom?	Teachers with high levels of CTE believe they can influence all students' learning (Donohoo, 2017; Sharma et al., 2024; Tschannen-Moran & Barr, 2004).
	(9) What role do school or district leaders play in supporting or hindering your co-teaching efforts? What kind of support would make the most difference for your students?	Administrators can set the tone for CTE to flourish through structured collaboration and teacher leadership (Donohoo, 2017; Donohoo & Katz, 2020).

(3) Semi-Structured Interview: Co-Teacher Pairs	(2) Describe a typical lesson or unit planning process.	Shared planning can create interdependence and assist in the development of CTE (Bandura, 2000; Donohoo, 2017; Tschannen-Moran & Barr, 2004).
	(4) What data do you use to evaluate the effectiveness of your co-teaching class?	CTE is fed by evidence of impact (Goddard & Kim, 2018; Hattie, 2023).
	(5) How would you describe the students in your co-taught classroom? What are some of the learning needs, strengths, and challenges of students in your co-taught class?	Teachers with high perceptions of CTE view their students as capable (Hattie, 2023; Tschannen-Moran & Barr, 2004).
	(6) How do you manage behavior in your co-taught classroom?	Educators with higher levels of CTE are less likely to exclude children from the classroom based on problem behavior (Goddard et al., 2007).
	(8) What do you need from school or district leaders to make co-teaching successful?	Leaders influence CTE through supportive leadership and structures for collaboration (Donohoo et al., 2020).
	(9) To what extent do you and your co-teacher believe your work makes a difference for all students?	Teachers with high perceptions of CTE believe they are the common denominator in their students' success (Donohoo, 2017; Hattie, 2023).

Sub-Question 2: Data Source Alignment

Sub-Question 2: How do co-teachers interpret the influence of their co-teaching practices on student learning and outcomes?		
Data Source	Interview Question	Research Rationale/Objective
(1) Pre-Interview Questionnaire: Individual Response	Collection of information related to planning time, which is identified as essential for effective co-teaching (Strogilos et al., 2023). Questionnaire includes space for additional information to be shared.	
(2) Semi-Structured Interview: Individual Teachers	(4) Describe what effective co-teaching looks like.	Gain a sense of the teacher's perception of true co-teaching (Friend et al., 2010; Villa et al., 2013; Hattie, 2023).
	(6) Share a specific example of a time when your co-teaching had a positive impact on student learning.	Understand perception of impact on student outcomes through a specific example (Donohoo et al., 2020).
	(7) In your experience, how does a lesson with a co-teacher differ from a lesson delivered by one instructor?	Effective co-teaching should create a vastly different classroom than solo teaching (Hattie & Zierer, 2025; Murawski & Lochner, 2018).
	(8) Can you describe how you and your co-teacher approach meeting the needs of all students in your classroom?	Identify teacher approaches to meeting student needs (Strogilos et al., 2023; Villa et al., 2013).
(3) Semi-Structured Interview: Co-Teacher Pairs	(2) Describe a typical lesson or unit planning process.	Effective co-teaching results from effective planning and differentiated instruction (Villa et al., 2013).
	(3) Which co-teaching approaches do you use most frequently, and why? (Supportive, complementary, parallel, team)	Supportive is the most used approach (Scruggs et al., 2007) but the least effective (Villa et al., 2013).
	(4) What data do you use to evaluate the effectiveness of your co-teaching class?	Use of data to drive instruction is a key component of instructionally responsive co-teaching (Hattie & Zierer, 2025; Murawski & Lochner, 2017).

	(6) How do you manage behavior in your co-taught classroom?	Some co-teachers report improved student behavior (Scruggs et al., 2007; Strogilos & Stefanidis, 2015).
	(7) Tell me about the workload involved with co-teaching.	Perspectives vary on the impact of co-teaching on teacher workload (Murawski & Swanson, 2001; Villa et al., 2013).
	(9) To what extent do you and your co-teacher believe your work makes a difference for all students?	Some co-teachers indicate combined efforts achieve results (Scruggs et al., 2007). Shared beliefs in ability to make a difference have demonstrated positive outcomes for students (Strogilos & Stefanidis, 2015).

Appendix G - Invitation and Informed Consent

Letter of Invitation to Participate in a Research Study

Title of Study: Collective Teacher Efficacy and Student Achievement in Inclusive Classrooms: Kansas Co-Teachers' Perspectives for Leadership Practice

Principal Investigator: William T. Holmes, Ed.D., Assistant Professor, Department of Education Leadership, College of Education, Kansas State University

Student Principal Investigator: Nichole Honeywell, Doctoral Student, College of Education, Kansas State University

Dear Participant,

I, Nichole Honeywell, from the Department of Educational Leadership in the College of Education, Kansas State University, invite you to participate in a research project entitled, "Collective Teacher Efficacy and Student Achievement in Inclusive Classrooms: Kansas Co-Teachers' Perspectives for Leadership Practice".

The purpose of this study is to examine the experiences of general and special education teachers engaged in co-teaching in Kansas public schools. The study focuses on co-teachers' understanding and perceptions of collective teacher efficacy, as well as their perspectives on the ways in which co-teaching influences student outcomes.

The expected duration of participation is a total estimated time commitment of approximately two to two and a half hours. Participation includes completion of a 5–10-minute pre-interview questionnaire, up to two interviews lasting 45-60 minutes each, and a 5–10-minute reply to follow-up questions emailed from the researcher. The interviews will be conducted via Zoom, audio-recorded, and transcribed. Recordings and transcripts will be stored on the researcher's password-protected computer until the completion of the dissertation. At that time, all recordings will be permanently deleted, and transcripts will be securely destroyed.

Interviews will be conducted via Zoom from any location where participants feel comfortable. Times and dates of the interviews will be arranged collaboratively between the participant and the researcher. Participation is voluntary, and individuals may withdraw from the study at any time without penalty or loss of benefits to which they are otherwise entitled. As a small token of appreciation, participants may receive up to \$50 in Amazon gift cards. The first \$25 gift card will be provided after completion of the first interview. An additional \$25 Amazon gift card will be provided after completion of the second interview. Participants who choose to discontinue participation after the first interview will still receive the initial \$25 gift card. Acceptance of the gift card is voluntary, and participants may decline it if they wish.

There are no direct personal benefits anticipated for the participants in the study. However, participants may gain an opportunity to reflect on their professional experiences, which could enhance their own practice. The findings of this study may contribute to a deeper understanding of co-teaching, collective teacher efficacy, and their relationship to student outcomes in Kansas

public schools. This knowledge may inform future professional development, district practices, and research aimed at improving inclusive education.

To maximize the use of the information from this study, identifiers of participants will be removed from the identifiable private information and after such removal, the information could be used for future research studies or distributed to another investigator for future research without additional informed consent.

If you have any pertinent questions about your rights as a research participant, please contact the Kansas State University of Research Compliance Office at 203 Fairchild Hall Manhattan, KS, 66502, at 785-532-3224; 785-532-3278 fax; o comply@k-state.edu

If you have any questions, please feel free to contact me (see below for contact information).

Thank you,
Nichole Honeywell, Doctoral Student, College of Education, Kansas State University,
nhoneywell@ksu.edu

Terms of participation:

I understand this project is research, and that my participation is voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

Participant Name: _____

Participant Signature: _____ Date: _____

Witness to Signature: _____ Date: _____

Appendix H - IRB Approval



Office of Research Integrity,
Compliance and Security

TO: William "Toby" Holmes
Educational Leadership

FROM: Lisa Rubin, Chair
Committee on Research Involving Human Subjects

DATE: 12/05/2025

RE: Approval of Proposal Entitled, "Collective Teacher Efficacy and Student Achievement in Inclusive Classrooms: Kansas Co-Teachers' Perspectives for Leadership Practice."

Proposal Number IRB-13364

The Committee on Research Involving Human Subjects has reviewed your proposal and has granted full approval. This proposal is **approved for three years from the date of this correspondence.**

APPROVAL DATE: 12/05/2025

EXPIRATION DATE: 12/04/2028

In giving its approval, the Committee has determined that:

No more than minimal risk to subjects

This approval applies only to the proposal currently on file as written. Any change or modification affecting human subjects must be approved by the IRB prior to implementation. All approved proposals are subject to continuing review, which may include the examination of records connected with the project. Announced post-approval monitoring may be performed during the course of this approval period by URCO staff. Injuries, unanticipated problems or adverse events involving risk to subjects or to others must be reported immediately to the Chair of the IRB and / or the URCO.

Electronically signed by Lisa Rubin on 12/05/2025 3:03 PM ET

Appendix I - Audit Trail

Dyad/Participant Emergent Themes

	Central Research Question	Sub-Research Question 1	Sub-Research Question 2
Dyad A: Riley & Jordan	• administrative structure and support • relational trust • shared planning time • uneven instructional leadership • workload tension	• trust and professional affirmation • shared moral purpose toward students • student growth reinforcing collective teacher efficacy • role dynamics within the partnership	• learner autonomy and engagement • academic growth as evidence of impact • experiential and life-connected learning increasing engagement and retention
Dyad B: Taylor and Casey	• classroom complexity and high-need concentration • ongoing and informal collaborative planning shaped by time constraints and structural limitations • shared instructional environment • relational trust and complementary instructional perspectives	• shared responsibility for student success • collective efficacy expressed through inclusive classroom culture and belonging • leadership climate as an influence on • collective teacher efficacy	• classroom-based evidence of student growth • social-emotional development (confidence and participation) • tension between classroom indicators of growth and standardized assessment measures
Dyad C: Avery and Quinn	• relational trust and instructional cohesion • shared instructional authority and teacher parity • co-teaching as embedded mentorship and professional growth • data-driven collaborative planning with curricular constraints • classroom composition and structural redistribution of workload • autonomy within limited formal leadership structures	• confidence in shared instructional capacity • increased student access to support • student growth data as evidence of impact	• academic growth through differentiated instruction • increased instructional responsiveness and behavioral support • classroom culture of belonging and peer support

Note. Table presents categories emerging from participant interviews according to central research question and sub-questions.

Dyad/Participant Emergent Themes

	Central Research Question	Sub-Research Question 1	Sub-Research Question 2
Dyad D: Alex and Peyton	• diverse and complex learner needs • structured planning routines refined over time • classroom composition and structural redistribution of workload • leadership engagement and understanding	• shared confidence and trust • collaborative instructional practice as collective professional learning • data-validated instructional impact • limited leadership visibility and support	• expanded instructional access through two teachers • differentiated instruction through flexible grouping and pre-assessment • academic growth as evidence of impact • student engagement and positive classroom culture
Dyad E: Rowan and Cameron	• sustained partnership builds instructional fluidity • shared classroom ownership and parity • complementary expertise and reciprocal professional growth • structural supports (planning time, training, observation)	• collective confidence developed over time • enhanced professional practice through collaborative instruction • shared responsibility for all students • collective efficacy reinforced by evidence of growth and external validation	• flexible instructional approaches • academic growth informed by assessment data • increased student confidence and independence • improving access and reduced stigma
Skyler	• professional learning and coaching support • administrative support and distributed leadership • structural design of co-teaching assignments • planning time constraints • partnership development • perceived role as support provider and modifier	• shared responsibility and collaborative practice • structural supports (common planning time) • leveraging strengths and developing trust	• differentiated instructional approaches • small-group instruction for flexible or targeted support

Note. Table presents categories emerging from participant interviews according to central research question and sub-questions.

Dyad/Participant Emergent Themes

	Central Research Question	Sub-Research Question 1	Sub-Research Question 2
Dakota	• role evolution • relational dynamics • time pressures and schedule instability • professional growth • behavior management	• complementary expertise • shared instructional responsibility • recognition and affirmation • curriculum implementation demands	• growth through willingness to use supports • pace slows but strengthens learning
Elliot	• limited training but practice-based learning • relational trust and friendship • instructional control and authority • modification as co-teacher's primary domain • scheduling instability as a structural barrier • balancing diverse academic needs	• efficacy anchored in test data • trust in co-teacher expertise (within boundaries) • collective problem-solving and advocacy • emotional security through shared responsibility	• growth through willingness to use supports • pace slows but strengthens learning
Parker	• professional growth and relational integration • personality alignment and sustained collaboration • structural limitations influencing inclusive placement	• shared mindset and role clarity • parity and shared instructional authority • leadership feedback systems misaligned with co-teaching practice	• expanded instructional depth through collaborative planning • deliberate division of instructional roles ("divide and conquer") • need-based, data-informed grouping • inclusive classroom culture reinforced through student-perceived parity

Note. Table presents categories emerging from participant interviews according to central research question and sub-questions.

Progression from Codes to Categories and Themes for Central Research Question

Codes	Categories	Themes
relational trust; relational trust and instructional cohesion relational trust and complementary instructional perspectives shared classroom ownership and parity shared instructional authority and teacher parity shared instructional environment	Partnership trust and collaboration Instructional parity and authority Instructional role dynamics	Relational Trust and Shared Instructional Ownership
shared planning time; structured planning routines refined over time; ongoing and informal collaborative planning shaped by time constraints and structural limitations data-driven collaborative planning with curricular constraints structural supports (planning time, training, observation)	Collaborative planning structures Planning constraints and adaptation Organizational supports for co-teaching	Structural Conditions Shaping Co-Teaching Practice
uneven instructional leadership complementary expertise and reciprocal professional growth co-teaching as embedded mentorship and professional growth sustained partnership builds instructional fluidity	Reciprocal expertise and learning Embedded mentorship and professional learning Partnership longevity and instructional adaptability	Complementary Expertise and Reciprocal Professional Growth
leadership engagement and understanding administrative structure and support autonomy within limited formal leadership structures limited leadership engagement	Administrative support and vision Leadership visibility and autonomy Limited leadership engagement	Leadership Engagement and Understanding: A Continuum
diverse and complex learner needs classroom complexity and high-need concentration classroom composition and structural redistribution of workload; workload tension	Diverse learner needs in inclusive classrooms Workload distribution and classroom composition	Classroom Complexity and Workload Distribution

Note. Codes represent participant patterns identified during initial analysis of interview data. Categories represent intermediate analytic groupings used to organize related codes prior to the development of overall themes.

Progression from Codes to Categories and Themes for Sub-Research Question 1

Codes	Categories	Themes
shared confidence and trust; trust and professional affirmation confidence in shared instructional capacity shared responsibility for all students; shared responsibility for student success; shared moral purpose toward students	Relational trust and professional affirmation Shared responsibility and moral purpose	Relational Trust and Shared Responsibility as the Foundation of Collective Teacher Efficacy
collaborative instructional practice as collective professional learning; enhanced professional practice through collaborative instruction; collective confidence developed over time role dynamics within the partnership; collective confidence developed over time	Collaborative professional learning Development of shared instructional leadership	Collaborative Practice Strengthening Collective Professional Capacity
academic growth as evidence of impact; student growth data as evidence of impact; student growth reinforcing collective teacher efficacy data-validated instructional impact collective efficacy reinforced by evidence of growth and external validation increased student access to support; learner autonomy and engagement; experiential and life-connected learning increasing engagement and retention; collective efficacy expressed through inclusive classroom culture and belonging	Evidence of student learning reinforcing efficacy Classroom impact and student engagement	Student Growth as Validation of Collective Instructional Impact
limited leadership visibility and support (contextual) leadership climate as an influence on collective teacher efficacy	Leadership context and organizational climate	Leadership Climate Influencing the Development of Collective Teacher Efficacy

Note. Codes represent participant patterns identified during initial analysis of interview data. Categories represent intermediate analytic groupings used to organize related codes prior to the development of themes.

Progression from Codes to Categories and Themes for Sub-Research Question 2

Codes	Categories	Themes
academic growth as evidence of impact academic growth as evidence of impact academic growth informed by assessment data classroom-based evidence of student growth data-validated academic growth tension between classroom indicators of growth and standardized assessment measures	Academic growth as evidence of effectiveness Interpreting evidence of student growth	Data-validated Academic Growth as Evidence of Impact
expanded instructional access through two teachers increased instructional responsiveness and behavioral support	Expanded instructional access and support	Instructional Responsiveness Through Co-Teaching
differentiated instruction through flexible grouping and pre-assessment meeting needs of all learners through flexible grouping and differentiated instruction flexible instructional approaches	Differentiated Instruction and Flexible Grouping	
classroom culture of belonging and peer support student engagement and positive classroom culture improving access and reduced stigma	Classroom culture and belonging	Student Engagement and Social Emotional Outcomes
increased student confidence and independence social-emotional development (confidence and participation) increasing engagement and retention learner autonomy and engagement	Student confidence and independence	

Note. Codes represent participant patterns identified during initial analysis of interview data. Categories represent intermediate analytic groupings used to organize related codes prior to the development of themes.

Alignment of Representative Codes, Categories, and Themes

Representative Codes	Categories	Themes
Trust; relationships; collective confidence developed over time Role clarity; role dynamics; parity; leader of the classroom Shared responsibility for all students; for student success Evolving co-teaching partnership; routines developed over time; shorthand planning over time; continuity Planning; common/shared planning; informal communication/habits	Relational/Interpersonal Trust Role Clarity and Parity Shared responsibility Partnership Development	Relational Trust and Shared Instructional Ownership
Collaborative instructional practice as collective professional learning; enhanced professional practice through collaborative instruction; learn by doing	Collaborative planning Professional learning through collaboration; reciprocal professional growth Complementary expertise; embedded mentoring	
Complement each other; content area expertise; different perspectives	Uneven instructional leadership	Collaborative Practice and Reciprocal Professional Growth
Lack of parity; lack of shared instructional roles	Evidence of academic growth from multiple sources	
Academic growth as evidence of impact; classroom-based evidence of student growth; student improvement/growth	Data as validation	Student Growth as Validation of Collective Instructional Impact
data-validated academic growth; instructional impact; comparative data	Growth reinforcing teacher beliefs	
Student growth reinforcing collective teacher efficacy; evidence of growth	Flexible instruction	Instructional Responsiveness Enabled by Co-Teaching
Flexible instructional approaches; flexible grouping; tag team	Differentiated instruction	
Differentiated instruction through flexible grouping and pre-assessment; meeting needs of all learners	expanded instructional access	Student Engagement and Inclusive Classroom Culture
Feedback/re-teaching; increased instructional responsiveness/behavioral support	Instructional strategy variety	
Hands-on strategies; experiential and life-connected learning; variety of strategies	Student engagement	Structural and Organizational Conditions Influencing Co-Teaching
Engagement; learner autonomy and engagement; increasing retention	Inclusive classroom culture	
Classroom culture of belonging and peer support; culture of belonging	Social and emotional development	A Continuum of Leadership Engagement and Understanding
Increased student confidence and independence; social-emotional development	Student belonging	
Improving access and reduced stigma; expanded instructional access through two teachers; increased student access to support	Structural Supports	
Professional learning; shared planning; collaborative planning practice	Structural Constraints	
classroom complexity; high concentration of SWD; teacher workload; schedule instability	Leadership engagement influencing CTE	
Leadership climate; valued/professional recognition	Minimal or neutral engagement; limited leadership understanding and visibility	
Admin priority; admin visibility; admin support		

Note. Representative codes are included to illustrate the analytic relationship between themes, categories, and broader coding.

Analytic Memos Samples

Date/Time	Reflexivity/Analytic Memo
1/16/26 10:05 am (following interview) Riley	Riley is a veteran high school special education teacher who is new to co-teaching. Over the last 1.5 years, they have co-taught high school science with the same co-teacher. During our interview, they emphasized the importance of relationships, stating that they and Jordan talk about their personal lives outside of school – Jordan has young children, and Riley has raised children. Spoke very highly of Jordan’s skillset, including understanding of special education. Co-teaching has made them feel appreciated and given them a voice. It has also taken a commitment of time, which she referenced throughout the interview. Co-teaching is not a choice at their high school; it is an expectation. Was initially hesitant to participate in a dyadic interview but changed her mind. I sensed a lack of confidence on her end, but a definite appreciation for her co-teacher. I was interested to learn that their co-taught class only has 4-5 students in it.
1/20/26 3:30 pm (following interview) Skyler	Skyler is an early career special education teacher but is not new to the field. In fact, they began their career as a special education paraeducator, where they co-taught with a special education teacher in a special education classroom. Adjusting with the rest of their team to new co-teachers, special ed. and general ed. This year, the team of special educators each co-teach in at least one of the four main content areas – ELA, math, science, and social studies. Last year, co-taught mainly science. This approach lent itself to collaboration with the other science instructors but was sometimes boring. Moreover, it limited the ability of special ed. teachers to effectively teach targeted study skills courses to students because of limited exposure and involvement in ELA and Math. This year, the number of preps (four – one for each content area) has been overwhelming and less effective. The team looks to make some adjustments next year to maximize the expertise and support; possibly co-teaching two content areas per special ed. teacher has been discussed. Leadership support in this high school is viewed as strong; it was the principal who connected the teachers with the co-teaching project and resources and support. Skyler is one of the co-teaching leaders in the building, assisting with schedules for teachers and paras. She serves on the BLT in this role. Skyler seemed to have a positive mindset about co-teaching, viewing it as positive for students. She believes that with some aligning of schedules and time, students will be successful because of this approach. Interestingly enough, the biggest success she has witnessed for students in co-taught settings has been re-teaching with small groups of students. One specific example included Chemistry equations. Skyler used visual representation of atoms to help the learners understand how to balance the equations. Citing class sizes of 25-30, she believes small group instruction, including in separate classrooms, has enabled the most success for students.

1/22/2026 8:00 am (following interview) Dakota	Dakota serves as a Kindergarten special education teacher. Their primary role is to support students with high incidence disabilities. They co-teach currently with two veteran Kindergarten teachers in the areas of Reading and Math. Previously, was a special education teacher supporting students in grades K-2 with emotional and behavioral disabilities. In that role, co-taught as well with grade special education teacher. Felt effective in both roles, but current role seems to be most effective in terms of the data that the teams use. Spoke of collaboration, especially with regards to a new curricular resource in the area of math. They also referenced the amount of time needed as a challenge and how much time is spent outside of the school day. Math – weekly small groups are changed based upon data. Teachers write notes for next year related to what to change. Strategies she presents are received well by the co-teachers, which makes her feel good. Two people – two perspectives – just like kids. Ability to present information in different ways. Ability to “tag out” when needed. Would choose to co-teach – if given the right partnership. Has been fortunate in their partnerships. Would be hard to co-teach with someone who took a passive role. Unsure of how admin support the work other than behind the scenes. Believes teachers have had all the training needed. Current role – math co-teacher – most closely aligned with definition of training according to the presentations.
1/26/2026 10:00 am (following interview) Taylor	Taylor is a third-grade teacher. This is their first-year co-teaching with an early career special education teacher. She did not have any formal training in co-teaching. Taylor spoke about the culture of belonging that has been intentionally created in the classroom – lots of examples of peer mentoring/collaborative learning. This is also intentionally modeled between the two co-teachers. Taylor stated that their co-teacher is one of their best friends, and this relationship has allowed co-teaching to flourish in the classroom. Some key words mentioned: accountability – to the second adult in the room Trust & Honesty – in co-taught relationship Sense of shared responsibility; example – constantly collaborating around data, including data from IEP goal progress monitoring Large class – needs in homeroom class as well as students who come in. As many as 31 students. When asked about a specific example of a time when co-teaching has positively impacted learners, Taylor beamed with pride. They shared about a student who began the year significantly below grade level, which created some behaviors that made some of the students scared. Another student who is high-achieving and shy, but mainly sticks within the comfort of his friend group. Co-teaching and a culture of belonging created a special moment: all students were given the opportunity to read out loud to practice and model fluency; every learner’s hand went up! Student walked over to peer – knelt down, put his arm around him, and said, “it’s okay, buddy. If you want to read out loud I will help you if you get stuck!”

	How can admin support: check-in, visit the classroom, see the positives that are happening. Don't just focus on what i-Ready assessments show. Feel somewhat "in trouble" – but know that great things are happening. Admin can support by: --Formal training --Classroom visits & walkthroughs, as well as check-ins --Time to plan – PLC Wednesday, or a sub cover for an hour; even once per month would be helpful. So much done outside of class & on weekends.
1/26/26 Coding	Analytic Memo: Initial coding of each transcript, including comparison: An emerging theme seems to be this idea that teachers view administrative/leadership support at the policy level through external supports (TASN) and more formal trainings. They also view co-teaching as a mandate from their administration. However, what teachers seem to express is a lack of administrative presence and support "in the trenches." They do not view support as being hands-on, responsive, or even "seen." Not all teachers expressed a deep desire for this level of support, yet all four mentioned it in some form. Essentially, lack of school leader - presence, dialogue, and affirmation P4 expressed that she and her co-teacher feel "badly" about a discussion with school leaders over their i-Ready data. Recently, scholars in the field have suggested that collective efficacy can be strengthened when leaders adopt a "strategic approach to combating the enemies of efficacy" (Donohoo & Forbes, 2025). In other words, building and district leaders can create the kind of environment where collective efficacy is likely to grow. The first "enemy" identified is the concept of blame. In contrast, creating a culture where feedback is both regular and normalized, leaders become coaches rather than evaluators (Donohoo & Forbes, 2025). As I reflect on P4's experiences and the feeling of being judged without direct support or affirmation, it seems that these conditions might lean more towards the "blame" realm.
1/26/26 Interview – Jordan	Jordan's excitement and enthusiasm for co-teaching was not a surprise to me, as Riley (co-teacher) had indicated that they had very positive emotions about the practice. They had some really specific examples that seem to resonate with the research related to co-teaching.

Appendix J - Codebook

CODE	DESCRIPTION
academic growth as evidence of impact	Participant references to student academic progress as an indicator that co-teaching practices are effective.
academic growth informed by assessment data	Descriptions of student progress supported by formal or informal assessment data used to evaluate learning outcomes.
accountability	Specific mentions of being mutually accountable to student outcomes, routines, or expectations within the pair.
admin priority	Statements about whether co-teaching is treated as a strategic focus or priority by administrators and systems.
admin support	The tangible, ongoing presence of administrators in the school to signal priorities and provide support; Direct assistance, resources, or decisions provided by administrators to enable co-teaching.
admin visibility	Regular, visible administrator engagement in classrooms to monitor and support co-teaching.
all students can learn & grow	Beliefs or assertions that every student is capable of learning and making progress given appropriate supports.
approaches	Descriptions of distinct pedagogical or collaborative stances co-teachers adopt.
classroom culture of belonging and peer support	Descriptions of an inclusive classroom environment where students feel accepted, supported, and connected to peers
behavior management	Strategies, practices, or challenges associated with maintaining student behavior and classroom order in co-taught settings.
bubble kids	Students who are on the cusp of proficiency who can make significant gains with timely, targeted intervention.
student engagement and positive classroom culture	Participant descriptions of increased student participation, motivation, and positive classroom dynamics associated with co-teaching.
challenge	General difficulties or obstacles described in relation to co-teaching work.
classroom-based evidence of student growth	Teacher observations of student improvement demonstrated through classroom activities, assignments, participation, or daily instructional interactions.
classroom composition	Descriptions of the size and mixture of student needs within a classroom that influence co-teaching practice and planning.
collaborative instructional practice as collective professional learning	Descriptions of how co-teaching partnerships foster shared learning, professional growth, and instructional development through collaboration.
collaborative groups	Small-group structures where both adults rotate, coach, or intentionally scaffold to meet diverse needs.
collective confidence developed over time	Participant descriptions of growing trust in the partnership and increased belief in their combined ability to support student learning.
collective efficacy expressed through inclusive classroom culture and belonging	References to teachers' shared belief in their collective impact on student success as reflected in inclusive classroom environments.
collective efficacy reinforced by evidence of growth and external validation	Instances where student progress or external feedback (e.g., assessment data, administrative recognition) strengthens teachers' belief in their collaborative effectiveness.
comparative data	References to district or school-level quantitative data used to compare outcomes across classrooms, grade levels, or student groups.

complement each other	Descriptions of how co-teachers' strengths and styles fit together to enhance instruction.
common or shared planning	The presence or lack of shared planning time where co-teachers and/or grade-level colleagues collaboratively design instruction.
content area expertise and confidence	Expressions of a teacher's subject knowledge and self-assuredness in delivering content within the co-teaching partnership.
contributions not received	When one co-teacher's planned input or materials are not used, acknowledged, or integrated by the partner.
control and teacher autonomy	Statements about desired or actual levels of decision-making power and independence in classroom instruction.
continuity	Stability and ongoing partnership continuity that supports coherent planning and instruction.
co-teaching approaches – supportive, complementary, parallel, team	Supportive - An approach where one or both adults focus on scaffolding, differentiation, or supplemental support rather than leading whole-group instruction. Team - An approach emphasizing joint planning, shared decision-making, and co-led instruction.
coverage and continuity	Instances describing continuity or disruption in co-teaching due to coverage issues, absences, or role shifts.
coverage burden across rooms	Captures experiences where a co-teacher must leave their partner's classroom, cover other teachers' students, or juggle students from multiple classrooms, creating discontinuity in co-teaching responsibilities.
curriculum familiarity/impact	How knowledge of and changes in curriculum (scope & sequence, materials) affect planning and co-teaching execution.
CTE as pair level vs. systems level	Differentiates expressions of collective teacher efficacy that exist within a single, well-functioning co-teaching pair from broader, school- or district-level collective efficacy that depends on leadership support, structures, and shared norms.
culture of belonging	Statements that describe a sense of inclusion, acceptance, or community among staff and students fostered through co-teaching.
daily formative notes as evidence	Captures informal, day-to-day written or verbal notes co-teachers exchange (jottings, quick check-ins) that function as formative data used to track progress and coordinate next instructional moves.
data interpretation gap	Specific instances where teachers interpret assessment or observational data differently, affecting instructional decisions.
data-validated academic growth	References to student achievement supported by measurable or documented assessment results.
data-validated instructional impact	Evidence indicating that instructional strategies or co-teaching practices are effective based on data or performance measures.
differentiated instruction through flexible grouping and pre-assessment	Descriptions of instructional strategies that adjust teaching approaches based on student readiness, often using pre-assessment and flexible grouping.
different perspectives	Descriptions of divergent viewpoints between co-teachers or across staff about instruction, data, or practice.
do your best/try	Expectation that students are willing to try, put forth effort, do their best.
effective co-teaching	Practices that embody collaborative planning, shared instruction, and intentional differentiation resulting in improved student access and progress.
elevate	Ways in which co-teaching elevates teachers' practice, visibility, or responsibilities beyond their prior roles.

engagement	Observations or claims about student attentiveness, participation, or motivation during co-taught instruction.
enhanced professional practice through collaborative instruction	Participant descriptions of improved teaching strategies, planning, or instructional decision-making resulting from co-teaching collaboration.
enjoy work	Expressions of job satisfaction, enjoyment of co-teaching, or positive emotional experiences in the role.
enrichment	Opportunities created within co-teaching to extend learning for advanced students beyond core requirements.
evolving co-teaching partnership	Process through which co-teaching relationships develop and strengthen over time.
expanded instructional access through two teachers	References to increased opportunities for individualized instruction and student support due to the presence of two educators in the classroom.
experiential and life-connected learning	Descriptions of instructional approaches that connect classroom learning to real-world experiences or students' personal contexts.
feedback/re-teaching	Cycles of immediate feedback and reteaching facilitated by two adults to address learning gaps.
flexible grouping	Small groups, switch which teacher works with each group, change based on data Intentional, data-driven regrouping practices where teachers alternate which adult works with each group.
flexible instructional approaches	References to adaptive teaching methods that respond to student needs during instruction.
hands-on Strategies	Kinesthetic, tactile, or manipulatives-based approaches used collaboratively to support learning.
high Caseload / Diverse Needs (Class Size & Complexity)	Specific references to large class sizes or highly heterogeneous student needs (e.g., multiple IEPs, behavior challenges) that complicate instruction and co-teaching coordination.
high expectations	Statements reflecting teachers' beliefs in students' potential and the maintenance of rigorous standards for learning.
improving access and reduced stigma	Descriptions of how inclusive co-teaching reduces stigma associated with special education and increases equitable access to learning.
increased instructional responsiveness and behavioral support	Instances where co-teachers are able to respond more quickly and effectively to student learning or behavioral needs.
increased student access to support	References to greater availability of academic or behavioral support due to collaborative teaching structures.
increased student confidence and independence	Descriptions of students demonstrating greater self-confidence, autonomy, or independence in learning tasks.
increasing engagement and retention	Participant descriptions of increased student attention, participation, persistence in learning activities; student recall of information over time
informal communication/habits	Everyday, often verbal practices (e.g., recess check-ins, end-of-lesson notes) that sustain coordination.
leader of the classroom	Descriptions emphasizing parity or joint leadership—both adults functioning as the teacher rather than one being subordinate. We both are the leader of the classroom; both are the teacher
leadership climate as an influence on collective teacher efficacy	Descriptions of how administrative support, leadership practices, or school climate influence teachers' collaborative confidence and effectiveness.
leadership Support	The presence, actions, and priorities of administrators that facilitate or hinder co-teaching success.

learner autonomy and engagement	References to students taking ownership of learning, demonstrating independence, and actively participating in classroom activities.
learn by doing	References to professional learning that occurs through practice and iterative classroom experience rather than solely through formal PD.
limited leadership visibility and support	Participant descriptions indicating insufficient administrative presence, understanding, or support for co-teaching practices.
meeting needs of all learners through flexible grouping and differentiated instruction	Descriptions of instructional strategies designed to address diverse learning needs within inclusive classrooms.
meet students where they are	Instructional moves that begin from students' current understandings and progress them through targeted supports.
parity (student-perceived, teacher-perceived, lack of)	Dimensions of role clarity that relate specifically to equitable status, authority, and recognition between co-teachers.
peer support	Evidence that co-teaching fosters peer interactions, inclusion, or social belonging among students.
peer observation	Leadership-facilitated opportunities to observe other co-teaching teams as a form of development.
planning	Practices and processes teachers use to design lessons, groupings, and instructional sequences collaboratively.
policy Level	Formal policies, scheduling, and resource allocations established by leadership that shape co-teaching possibilities.
professional development/learning	Descriptions of how co-teaching contributes to teachers' skills, knowledge, and career development; Formal or informal professional development activities aimed at improving co-teaching knowledge and practice. Formal: Structured, scheduled PD offerings (e.g., external trainings, district-led workshops) related to co-teaching.
problem solve	Instances where teachers describe troubleshooting logistics, instruction, or student challenges collaboratively and iteratively.
reflect	Moments when teachers evaluate, analyze, or reflect on practice, student progress, or partnership effectiveness.
relationships	The interpersonal dynamics, levels of trust, and working rapport between co-teachers.
right pair/choose co-teacher	Comments about the importance of pairing compatibility or having input in co-teacher assignments.
role clarity	Clarity (or lack thereof) about responsibilities, expectations, and boundaries between co-teachers.
role dynamics within the partnership	References to how responsibilities, authority, and instructional roles are negotiated between co-teaching partners.
routines developed over time	Descriptions of how long-standing pairs develop shorthand planning, predictable habits, and efficient coordination over time.
schedule instability	References to fluctuating schedules, last-minute changes, or inconsistent planning time that interfere with co-teaching.
shared moral purpose toward students	Participant expressions of a shared commitment to supporting student learning, equity, and success.
shared responsibility for all students/student success	Assertions that both adults share instructional leadership, planning, and accountability for all students.
short-hand planning over time	Efficient planning habits and brief communication methods pairs develop as they grow familiar with each other's rhythms and expectations.
soft skills, independence	Observations about students' development of non-academic competencies such as independence, self-regulation, or collaboration.

social-emotional development (confidence and participation)	Descriptions of student growth in confidence, participation, and emotional well-being within the classroom.
staff shortages/absences	Challenges specifically tied to insufficient staffing or frequent absences that disrupt planned co-teaching.
student-centered	Orientation toward tailoring instruction to students' needs, choices, and active participation.
student growth data as evidence of impact	References to student performance data used to demonstrate the effectiveness of instructional practices.
student growth reinforcing collective teacher efficacy	Instances where student success strengthens teachers' shared belief in their collaborative instructional effectiveness.
student impact	The effects of co-teaching on students' academic, social, or emotional development.
student improvement/growth	Direct references to observed academic gains or measurable learning progress attributed to co-teaching.
support new co-teachers	Mentions of mentoring, on-boarding, training, or practices intended to help novice co-teachers develop competence and routines.
system/structural challenge	Organizational constraints (e.g., substitute shortages, scheduling, policy gaps) that impede consistent, effective co-teaching.
tag team	Specific strategy where teachers alternate leading instruction or rotate roles to maintain engagement and continuity.
teaching style	Descriptions of individual instructional approaches or preferences that shape how co-teachers interact and divide responsibilities.
teacher voice	Mentions of teachers' perspectives, autonomy, or opportunities to contribute to decisions about instruction and co-teaching.
tension between classroom indicators of growth and standardized assessment measures	Participant descriptions of discrepancies between observed student learning in the classroom and results from standardized assessments.
time as a challenge	Time-related constraints affecting planning, observation, or coordination.
tolerance – behavior/management	References to tolerance thresholds, strategies, or accommodations for students with behavioral needs and how these affect co-teaching.
turnover/Onboarding gaps	Effects of staff turnover and insufficient onboarding that create discontinuities in co-teaching practice and institutional knowledge.
training gaps/limited professional learning	References to insufficiencies or uneven access to targeted co-teaching professional development.
trust	Mutual confidence in each other's professional competence, reliability, and instructional judgment.
use data	References to how teachers use formative or summative evidence to guide instruction, grouping, and pacing; Ways student outcomes are tracked and acted upon using assessment results or teacher observations.
valued/professional recognition	Moments where teachers feel professionally acknowledged, respected, or validated as a result of their work or role.
variety of strategies	Mentions of multiple instructional approaches used within co-teaching (e.g., small-group, team-teaching, stations).
workload	Descriptions of overall workload pressures created or exacerbated by co-teaching responsibilities.