

Socio-Historical Factors Mediating Collaborative Teaching and Learning:

*A Design-Based Investigation and Intervention*

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**Abstract**

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Collaborative (Co-) teaching is a complex instructional delivery model used to improve teaching practice in inclusive settings. The model involves multiple certified teachers – representing both special and general education – sharing the same space and presenting material to classrooms with a wide variance in learning needs. Co-teaching has become an increasingly popular form of instructional delivery in school districts attempting to improve Inclusive Education outcomes. It also creates a unique educational space that is often challenging for teachers to navigate and for several reasons, its affordances unfulfilled. This multiyear investigation and intervention uses a Design-Based Research (DBR) approach to understand the environment of a local co-teaching team, co-design supportive tools, and implement those tools to improve practice. This investigation addresses a lack of research attending to the implementation of – and learning involved in – co-teaching practice. Multiple co-teachers participated in this collaborative project over two years. Two novel co-teaching tools were co-constructed: (1) Co-teaching Lesson Guiding and Reflecting Form, *and* (2) Collaborative Teaching and Learning Map. Local implementation of the tools as well as implications to research and practice are discussed.

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## **Chapter 1:**

### **Introduction & Problem Statement**

#### **Historical Perspectives of Inclusive Education**

Both global and U.S. federal legislative education directives have increasingly promoted Inclusive Education; however the policies are vague concerning how inclusive education should be implemented (*see* IDEA, 2004 for domestic legislation; *see* UNICEF, 2013 for global mandates). Domestic special education legislation states that children with special needs are to be supported to participate in, and not merely access, the general education curriculum and inclusive education classroom. To this end, Smith (2010) has substantiated numerous “legal, moral, procedural, and philosophical” justifications researchers have forwarded as to why inclusion is both an appropriate educational practice and orientation (p. 40).

Although special education legislation promotes placing students with exceptional needs (SENs) in the general education classroom in order to address longstanding academic and social achievement inequities legislation stops short of mandating inclusion. This lack of an inclusive education mandate has been argued by some (Connor, 2008; Smith, 2010), as condoning segregation and permitting schools across the country to practice selective student removal. Historically, a majority of studies have foregrounded remediating individual students’ academic and behavioral deficits, while oftentimes neglecting the effects of segregation and exclusion on SENs’ group, class, or community membership (McDermott & Varenne, 1995).

Furthermore, the proportion of students with exceptional needs who have been educated in segregated classrooms is disproportionately skewed along racial and ethnic lines (Artiles, Kozleski, Trent, Osher, & Ortiz, 2010). Research has also indicated that SENs’ academic achievement does not significantly improve when educated in segregated settings rather than

inclusive settings (Vaughn, Moody & Schumm, 1998; Rea, McLaughlin & Walther-Thomas, 2002). Instead, many studies (Schulte, Osborne & McKinney, 1990; Haager, Klingner & Vaughn, 2007) have supported the use of specific instructional strategies for SENs' academic achievement or behavioral outcomes devoid of student setting or placement (Smith, 2010).

A disproportionate number of students receiving special education services—especially those with mild to moderate disabilities such as Learning Disabilities; Emotional/Behavioral Disorders; Attention Deficit Hyperactive Disorder; and high-functioning ASD, do not meet minimum state test standards and do not graduate high school with a regular diploma (NCES, 2011). For example, aggregated national reading achievement shows that in 2007, 2009, and 2011, fourth grade SENs scored between 30 and 34 points lower on the National Assessment of Education Progress (NAEP) than all fourth graders (NCES, 2011). In addition, 59% of students with disabilities graduated with their cohort as compared 79% of their peers (Stetser and Stillwell, 2014). These overwhelmingly unequal levels of SENs' achievement call for an even greater demand for effective instruction to meet their unique needs, particularly in the inclusive setting (Benedict, Park, Brownell, Lauterbach & Kiely, 2013).

Concerning inclusive education legislation, current federal legislation falls short of requiring inclusion. It does order that SENs' education occur along a placement continuum, termed *Least Restrictive Environment* (LRE). The LRE continuum spans from full general education classroom inclusion to completely segregated settings. To this end, the Individuals with Disabilities Education Act (IDEA) is the foremost federal special education legislation and stipulates that a professional interdisciplinary team—including a general education teacher—determines student Least Restrictive Environment (LRE) placement decisions (IDEA, 2004). IDEA specifies that these placement considerations begin with the general education classroom

and if a student is placed in a more restrictive segregated setting then a sound justification is warranted (IDEA, 2004). As a result, education of exceptional learners is increasingly occurring in the inclusive general education classroom.

Although a student's LRE placement is for the intended benefit of that student, it is important to consider that some inclusion advocates take a fundamentally different perspective (Smith, 2010; Connor, 2008). This broader socially-oriented perspective of some inclusion advocates foregrounds the idea that inclusive education practices actually benefit *all* students, including those who do not have exceptional needs (McDermott & Varenne, 1995; Connor, 2008; Erevelles, 2011). This focus on increased inclusive education requires meaningful research to support it (Scruggs, Mastropieri & McDuffie, 2007).

Thus, the concept of inclusive education is not only a set of teaching practices, but also a philosophy of education. Philosophically, inclusive education prepares citizens to live in an integrated world, which minimizes stigma related to human difference and views human variance as a common spectrum of diversity (Erevelles, 2011). In theory, a citizenry of children who view human variance as normal will be more inclusive into adulthood and in the community. In a similar vein, inclusion is also a natural extension to civil rights perspectives that promote integration of all students.

Besides ethical and civil rights perspectives, inclusive education is also viewed as an outcome of a set of broad teaching methods (Friend & Bursuck, 2011). For example, in order to achieve the outcome of inclusive education, Carol Ann Tomlinson (1999) has researched and theorized models of education in which instruction is differentiated to provide curricular access to all students irrespective of learning preferences and ability. Thus she and her colleagues are attempting to explore the role of instruction in inclusive education settings (Tomlinson &

Imbeau, 2010). In this instance, instructional practices are viewed as facilitating agents to achieve inclusive education, irrespective of moral or political motives.

Due to the complexity of inclusive education approach, a tremendous amount of teacher knowledge and preparation is necessary to achieve meaningful education outcomes. Given this resource demand, districts have sought ways to increase resources in inclusive settings. To this end, school districts are increasingly embracing a form of instructional delivery termed collaborative (co-) teaching to improve outcomes for all students, which also requires teacher knowledge and preparation. Given this increasingly popular teaching practice, research and theory development are needed to better understand what teacher knowledge and practices best facilitate student learning in inclusive settings.

### **Collaborative (Co-) Teaching: A Means to Serve All Learners in Inclusive Settings**

Inclusive education, due to varying student-learning needs, is often a strain on a teacher's limited curricular and instructional resources. An economic perspective views teaching as a practice in which a scarcity of curricular and personnel resources is distributed across students. As limited resources are allocated to one student those resources cannot then be given to other students. Instruction becomes a teacher decision-making balancing act attempting to deliver instruction and optimize learning for the greatest number of students (Cook, McDuffie-Landrum, Oshita & Cothren-Cook, 2011). A human resource zero-sum game such as this can push general education instructors to view students with exceptional needs as the responsibility of special education teachers due to their increased teacher demands. This perspective can become a serious barrier to meaningful inclusion (Cook et al., 2011).

An instructional approach attempting to disrupt the zero-sum equation—by increasing human capacity—is collaborative (co-) teaching. Simply stated, co-teaching involves the

addition of another instructor so that the same numbers of students are instructed in the same physical space, but now in a jointly negotiated manner between at least two certified teachers (Friend & Bursuck, 2011).

Co-teaching has been broadly promoted to increasingly educate SENs in the general education classroom by expanding the number of highly qualified teachers in that classroom (Cook & Friend, 1995; *see* Friend et al., 2010, for co-teaching historical origins). In this setting, both teaching professionals are responsible for all students regardless of ability (Friend & Bursuck, 2011). Commonly, the general education instructor is viewed as having expertise in the understanding, structuring, and pacing of the curriculum, while the special educator is viewed as having expertise in the identification of specific student learning needs—particularly at how meeting those needs are ensured through instruction including curricular modifications (Cook et al., 2011).

Although this common instructional delivery model does in fact increase classroom human resources and is regularly identified by administrators and teachers when pressed for effective methods to facilitate student learning in a meaningfully inclusive fashion (Ploessl & Rock, 2014), the empirical research of co-teaching's effectiveness on student and teacher outcomes is limited and highly variable. Limited evidence is due to numerous factors including inappropriate and unsatisfactory outcome measures (Murawski, 2006; Pancsofar, & Petroff, 2013) and inadequate research methodologies and theories of change (Norwich & Ylonen, 2013; Smith, Schmidt, Edelen-Smith, & Cook, 2013). Rigorous and perhaps nontraditional research is needed to understand and intervene upon the nuances of co-teaching. As Friend and Bursuck (2011) write, "this service delivery arrangement [co-teaching] is very popular in schools that attempt to provide inclusive education" (p. 76). Additionally, the Council for Exceptional

Children (CEC) – widely accepted as the foremost advocacy and lobbying organization for exceptional learners – encourages districts and administrators to use co-teaching to make their schools and classrooms more inclusive. CEC’s co-teaching endorsement is a strong testament to co-teaching’s pervasiveness, but current theory and empirical research does not necessarily support its growing popularity. A highly promising technique of investigating the co-teaching activity system is by utilizing Design-Based Research methodology.

Design-Based Research (DBR; Penuel, Fishman & Cheng, 2011) is a methodology that attempts to address deep contextual concerns in research. DBR also provides space to be innovative by using local practitioners’ expertise to meaningfully affect development of practice *and* simultaneously improve implementation. Due to its foundations, DBR is a research methodology that may deepen our understanding of co-teaching. Perhaps the most succinct social, research, and practical implications of DBR are written by Harrington and colleagues (2007):

*DBR is a socially responsible enterprise because it puts the concerns and problems of practitioners in the forefront of the research and development process. Various educational technologies have often been predicted as having the power to revolutionize teaching and learning, but virtually all have crashed on the hard rocks of the classroom. Some blame the lack of impact on teachers or the school or academic administrators, but design-based researchers do not seek to find blame in others. Instead, design-based researchers perceive that everyone involved in the project, researchers and practitioners alike have much to learn from one another (p. 4098).*

By identifying barriers to effective co-teaching implementation, one may develop and test organizational, institutional, and learning supports, which is at the core of DBR’s burgeoning

body of research (Penuel, Fishman, & Cheng, 2011). More than a research methodology, DBR is an orientation to research that focuses on relationships between academic and community or school partners, with principles of co-learning and mutual benefit. Additionally, DBR seeks to incorporate contextual concepts of organization, participation, practices, and learning into outcomes and theory development (Cobb et al., 2003; Wallerstein & Duran, 2006). This methodology allows for organizational structures to be responsive to human needs while maintaining an orientation that actively seeks to address historical inequities and barriers in education research. Traditional barriers include those between institutions of higher education, researchers, and practitioners. The methodological power of DBR to address historical barriers lies in foundational DBR principles, which are presented here adapted to co-teaching:

- Focus on persistent problems of practice from multiple stakeholders' perspectives (i.e. co-teaching's tendency to pit the special educator as merely the 'disciplinary enforcer' rather than equitable co-instructor)
- Commitment to iterative, collaborative design (i.e. developing appropriate tools for reflective practice so that co-teachers can address wide variance of student-needs)
- Concern with developing theory related to both classroom learning and implementation through systematic inquiry (i.e. absence of co-teaching theory or implementation support)
- Concern with developing capacity for sustaining change in systems (i.e. co-teaching activity system change)

Smith et al. (2013) underscore these beneficial DBR principles by stating, "due to its cyclical nature, design-based research actually *allows* for ongoing revisions to how the intervention is executed, the research design, and other factors related to the impact of the

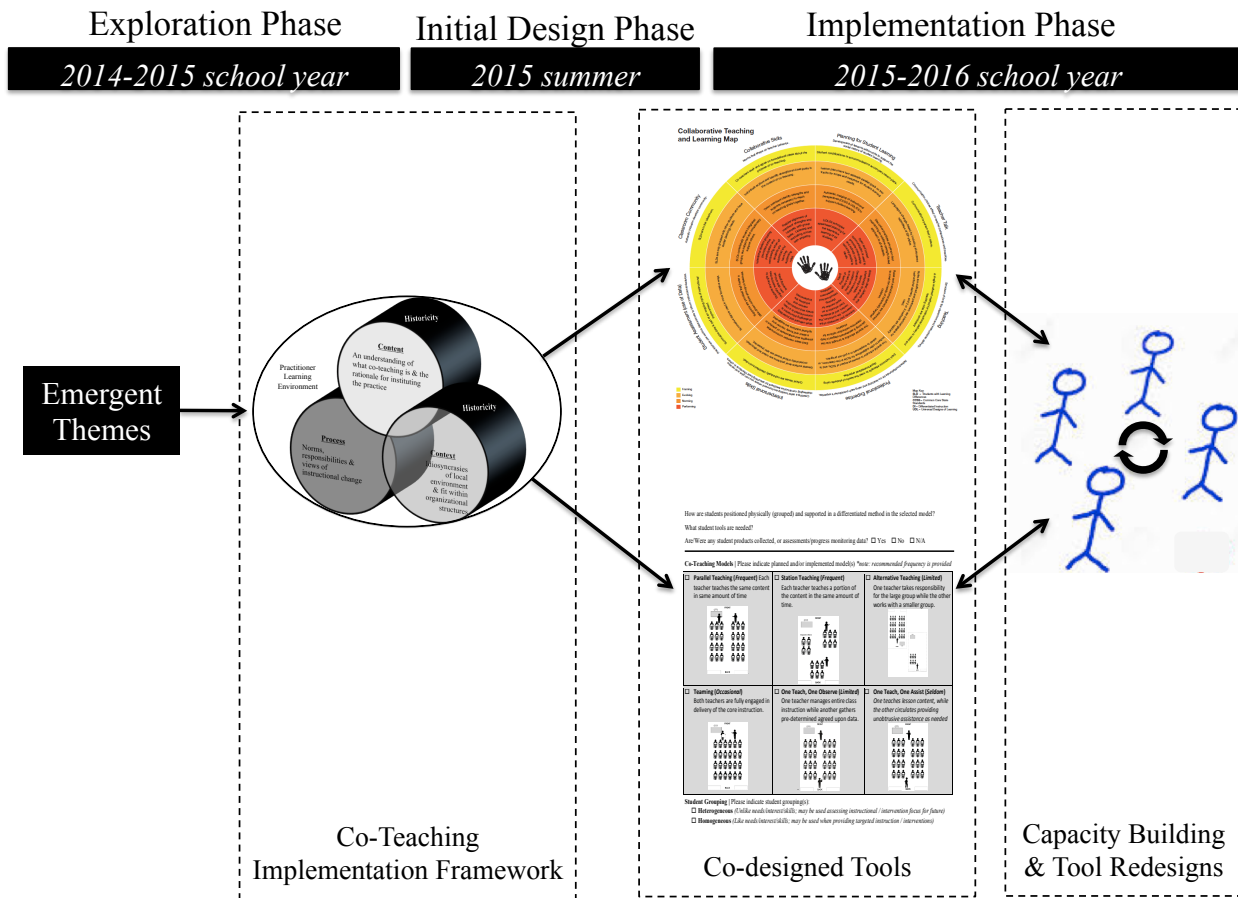
intervention within the given context,” (p. 154; emphasis added).

### **Summary**

A co-taught classroom could be an ideal setting for improving all students’ opportunities to learn through innovative practice and increased resources. Unfortunately, optimized creative co-teaching is most often not realized. Most co-teaching studies highlight a model of co-teaching that *maintains* rather than *transforms* the traditional classroom. Yet even the minor change of adding a second teacher to the classroom, has been shown to lead to: (a) social and academic gains for students (Murawski, 2006), and (b) teacher learning (Isherwood & Barger-Anderson, 2008). This work has also illuminated some of the challenges of co-teaching, including, but not limited to historical boundaries, teacher personalities, and professional competence. However, this work takes a deficit perspective toward teaching and offers few useful implications for practice.

To date, there is a lack of research on the sociocultural aspects of co-teaching arrangements that mediate teacher and student learning. Such studies in the field of co-teaching could contribute to our theoretical understanding of how socio-historical factors mediate co-teaching practices and, thus, the learning of teachers and students. This theoretical knowledge, in turn, might help us to better design tools, workplaces, and instructional delivery systems (e.g. student assessment-driven instruction) that support co-teachers to leverage each other’s knowledge and practices throughout the processes of planning, teaching, and reflecting. Co-teaching can be a powerful instructional delivery system implemented to improve inclusive education outcomes and will be examined in depth throughout this investigation. Figure 1.1 is presented to represent the scope of this investigation and intervention, which has spanned nearly 2 years. The study is broken down into phases and the outputs and outcomes are shown broadly

to demonstrate each phase's integration into the next. Outputs and outcomes include theoretical findings such as the novel co-teaching implementation framework as well as tangible outcomes such as the production of two novel co-teaching tools.



**Figure 1.1** Broad overview of this investigation's phases and outcomes.

## **Chapter 2:**

### **Literature Review, Guiding Theory, and Conceptual Framework**

Co-teaching literature, as well as literature focused on practitioner-negotiation and social service delivery is now reviewed in order to inform the development of the research design to investigate co-teaching practices. A review of this literature provides larger context of where this investigation falls, including current knowledge about co-teaching as well as the theoretical perspective and conceptual framework guiding this investigation.

#### **Co-Teaching Overview and Review of Co-Teaching Literature**

Historically, co-teaching has been promoted as taking one or more of the following forms: (1) one teach, one assist; (2) station teaching; (3) parallel teaching; (4) alternative teaching; (5) team teaching; and (6) one teach, one observe (Cook et al., 2011; Kloo & Zigmond, 2008). Each arrangement has nuanced affordances and constraints that affect instructional delivery, the curriculum, and spatial dimensions of the classroom. Since each model has a unique purpose, co-teachers must understand each model in relation to its implementation within the sequencing of broader lessons and units (Friend, 2008; Friend et al., 2010).

Co-teaching has been promoted even prior to the existence of co-teaching research (Cook et al., 2011). The promotion of co-teaching by policy-makers and administrators has largely been based on intuitive hypotheses that co-teaching will improve student outcomes in inclusive settings by:

- Reducing the student to teacher ratio and increasing responsiveness to students;
- Improving instructional delivery from the presence of two different experts collaborating;
- Providing a strong exemplar of teamwork, cooperation and collaboration for

students to experience;

- Eradicating social stigma associated with the systematic exclusion of students based on their learning differences (Cook et al., 2011).

These intuitive co-teaching rationales have not necessarily been comprehensively researched nor explicitly intervened upon, but they do highlight the complex nature of co-teaching, which includes teacher training, adult learning, professional visions and expertise, collaborative relationships, and historically uneven power dynamics between special and general education. Due to these multiple levels of policies, relationships, and learning, employing a restrictive research methodology or one method of data collection may constrain the ability to capture these complex co-teaching nuances.

**Co-teaching Evidence of Effectiveness.** To date, few empirical studies have had the capability and methodological innovation to test popular or intuitive co-teaching hypotheses. Existing results are inconclusive and vary widely either due to what some may consider as subjective outcomes or small sample size (Fontana, 2005), or no statistical significance was found in the experiment (Murawski, 2006). However, one co-teaching research team from St. Cloud State University utilized a mixed-methods approach to design and investigate co-teaching as part of their pre-service teacher education program (Bacharach, Heck, and Dahlberg, 2010). They have seen significant positive effects of co-teaching in both reading proficiency and math achievement of k-12 students throughout the four-year study. According to the authors, the co-teaching model of pre-service teacher training differs from most pre-service programs because all participants are taught to address issues of parity and power dynamics, and how to work as a team. The authors suggest that by transparently addressing classroom power differentials, pre-service teacher growth and student achievement gains were facilitated (Bacharach et al., 2010).

This research focuses on power relations in teacher practice between novice and expert teacher identities, and although recognized as a co-teaching barrier, the power dynamic between practicing co-teachers has not been directly addressed in existing in-service co-teaching intervention research.

In-service co-teaching intervention studies have neglected addressing power dynamics, which inevitably occur within a co-teaching activity system. Also absent are explicit attempts to intervene on co-teacher learning and implementation. Within co-teaching the general educator has traditionally ensured that classroom lessons are both content-driven and standards-based. The special educator typically ensures that explicit and direct instruction on foundational academic skills is threaded throughout lessons in order to address specific student needs (Friend & Bursuck, 2011; Murawski, 2006). Although these roles are promoted in policy and literature, it is unclear how practitioners negotiate those roles or learn from one another. Capturing the negotiation of roles and goals may offer an opportunity to understand and investigate the professional learning of co-teachers.

Current co-teaching literature does discuss the need for clarity and equality of co-teachers' roles as a significant facilitator to successful implementation (Scruggs, Mastropieri & McDuffie, 2007). Equal distribution of responsibility and clear roles may contribute to an environment in which the ultimate goal of co-teaching occurs, which Rice and Zigmond (2000) describe as co-teachers "sharing responsibility for planning and instruction, and *substantive* teaching by both [practitioners]," (p. 196, as quoted in Scruggs et al., 2007, emphasis added). Reinforcing this idea, Murawski (2006) and Isherwood and Barger-Anderson (2008) discuss the fact that maintaining equally clear roles is promoted in policy and literature and found that practitioners identified clear responsibilities as necessary to their co-teaching instruction. What

is unclear is *how* practitioners negotiate those roles and how interventions may support those inevitable negotiations.

Aside from negative findings such as professional incompatibility and lack of equal roles, perhaps the Scruggs et al. report's most disappointing revelation concerned the abundance of, and dependence on, only one model of co-teaching – the one teach and one assist format. The one teach and one assist model was the most pervasive model of co-teaching, observed in 72% of the synthesized studies in the meta-analysis (Scruggs et al., 2007). In the classroom, the one teach and one assist model involves a prominent instructor as one teacher-role while the other instructor moves throughout the class to give added attention to individual students as needed. Although this was the most frequently used form of co-teaching it is but one of several forms.

The Utah State Office of Education created co-teaching guidelines (Utah State Office of Education, 2011) and outlines recommended rates that specific models of co-teaching should be used. The handbook explicated advises the one-teach one-assist model be used “rarely” (p. 18). Additionally, in nearly every instance it was the general education teacher who assumed teaching responsibilities and the special education teacher who provided needed individual support (Scruggs et al., 2007). This finding reveals a lack of thoughtful co-teaching model selection by co-teachers, which should align with varying goals of their lessons. Reliance on the one-teach/one-assist model indicates an absence of dynamic co-teaching in a classroom that actually has even more student variance. According to the State of Utah, the one-teach/one assist model should be used sparingly.

The comprehensive review of qualitative co-teaching research by Scruggs and colleagues (2007) surfaced many important co-teaching insights including the “dominant” role of the general educator and the aforementioned lack of intentionally strategic implementation of

various co-teaching models (p. 412). However, despite these insights, it was clear that there are also missing elements. After examining the Scruggs et al. review, it is clear that the co-teaching literature is missing empirical investigations delving into: a) the development of effective co-teaching practices in classrooms that are struggling to implement co-teaching; b) studies that introduced co-teaching supports to change or improve outcomes; or c) the deconstruction of influences (organizational, political, social, historical and cultural) on ineffective co-teacher practice to support participant learning.

In contrast, an investigation by Isherwood and Barger-Anderson (2008) provides perhaps the most holistically descriptive view of co-teaching. The authors' report describes how co-teaching is delivered to a school as a policy initiative, negotiated by the school's staff, and subsequently used to deliver instruction to students. Specifically, the researchers explored a school's attempt to transform its practice in response to outside political forces. Transformation in this setting focused on a school and the change of their instructional delivery model from one of *mainstreaming* to *inclusion*. Although it may appear to be a simple change of semantics, *mainstreaming* was framed as placing students with special needs in general education classes (primarily elective classes) in a token or superficial manner, while *inclusion* was defined as the practice of meaningfully including students with special needs in content-rich courses within a full-continuum of school supports. The full continuum of supports included students with special needs receiving specially designed instruction in the general education class. In order to meet the resource demands of providing that continuum, the school adopted co-teaching. Over their yearlong qualitative investigation, Isherwood and Barger-Anderson identified three chief constructs as primarily affecting co-teaching policy adoption: *interpersonal relationships*; *clearly defined roles*; and *administrative support and validation*. Importantly, these findings

closely parallel the aforementioned Scruggs et al. (2007) report.

Although the researchers did not intend to intervene with the school's co-teaching implementation, the analysis reveals vital constructs to include in an intervention-oriented investigation. Most notably, the findings not only underscore the complexity of implementing co-teaching, but also the need to understand the local context if a meaningful intervention is ever to be accomplished.

### **Nuanced and Progressive Co-Teaching Lenses: From a Checklist to a Shared Activity**

As just discussed, researchers have found that co-teaching can quickly deteriorate, becoming a distortion of its originally intended design (Friend et al., 2010). In these cases, the role of the special educator as an instructor has been diminished to merely one of a disciplinarian, part-time instructor, or paraprofessional teacher aide (Cook et al., 2011; Ploessl & Rock, 2014). Researchers have also found that co-teaching is often closely tied to the general and special educators' confidence, interests, and attitudes, rather than student needs (Pancsofar & Petroff, 2013). Therefore, general and special education co-teachers need sufficient knowledge and pedagogical skills as well as structured opportunities to collaborate if meaningful inclusive education is going to occur, particularly with students in which their placement is the general education classroom (Benedict et al., 2013).

Leading co-teaching researchers Friend and Bursuck (2011) have provided a list of vital co-teaching elements including:

- Flexibility;
- Commitment to the concept of co-teaching;
- Strong interpersonal and communication skills (*other sources emphasized constant, open communication*);

- Strong clinical judgment;
- Voluntariness;
- Collaborative skills & attitudes (*including teamwork; respect; sharing knowledge, ideas, materials, and space*);
- Trust.

This list comprises critical co-teaching elements that can be distributed to co-teachers, administrators, and district supervisors, but it is obvious that many of these elements cannot merely be checked off, compartmentalized or become a management directive. It is in this vein that co-teaching views must shift from a compliance or procedure-oriented practice to one that views co-teaching as an activity system that orients to the participant. If the traditional vantage of co-teaching perpetuates, then creative and innovative perspectives will not emerge, and the ultimate goal of inclusive education will continue to evade co-teachers. Historically-driven barriers to co-teaching practices are repeatedly discussed in the literature along with rationales as for their existence, but few attempts to intervene exist. Friend et al. (2010) underscore this notion by pointing out that, “far more literature exists describing co-teaching and offering advice about it than carefully studying it,” (p. 9).

Researchers also point out that co-teaching typically occurs in the general education instructor’s classroom leading to his/her ownership of the classroom, the curriculum, the content, and most of the students. Thus, this ownership commonly leads to replicating teacher-led, whole-class instruction, and likely relegates the special education practitioner to a subordinate role. Class size reduction literature has also documented that simply reducing class sizes does not lead to dynamic instruction or improved outcomes without changes in teacher behavior (Hattie, 2005). According to Scruggs et al. (2007), the only instances of altering that scenario

described a special education teacher equipped with similar levels of content expertise and thus “resembling” the general educator (p. 412). A clear challenge is to disrupt the general educator’s professional vision to potentially align with a co-teacher who may have less content-specific knowledge, but can stand on an equal footing in the unique collaborative space of co-teaching if other expertise is leveraged. Contextualized problems of practice, and building co-teacher capacity are critical in future co-teaching intervention research. Underscoring this point, Scruggs et al. write that within “general [co-teaching] practice, the ideal of true collaboration between two equal partners—focused on curriculum needs, innovative practice, and appropriate individualization—has largely *not* been met,” (p. 412, emphasis added).

Marilyn Friend and colleagues’ literature review on co-teaching (Friend, Cook, Hurley-Chamberlain & Shamberger, 2010) includes barriers to co-teaching research, as well as recommendations on future co-teaching directions. They write that, “the future of co-teaching may be dependent on increasing quality of research...placing co-teaching in the larger context of school improvement...and situating co-teaching in a supportive, collaborative school culture,” (p. 10). This is perhaps the emergence of a multilevel model of a co-teaching in the literature. A model that holistically investigates co-teaching as an activity system from a socio-cultural perspective that includes the participants, their setting, their tools and their instruction in the analysis.

Cook et al. (2011) raised similar ideas of innovation and change. In their co-teaching meta-analysis, the authors argued for a “paradigmatic shift” that must emerge in co-teachers. The authors write that effective co-teaching, “requires teachers to step out of traditional teaching roles and re-conceptualize their responsibilities, and therefore require significant training, preparation, and on-going support,” (p. 155). Re-conceptualization is particularly relevant to

improving the increasing integration between special and general education and encourages a more intentional stance on co-teaching complexities. A re-conceptualized perspective is one also reflecting the “contemporary stance” Cook et al. (2011) suggest as “special education evolves to [be] more deliberately and effectively integrated with general education,” (p. 11).

This contemporary view applies the logic that inclusive education is necessary on moral, political and instructional grounds, and co-teaching is a potentially effective way to achieve integration. To this end, an innovative investigation and intervention with current co-teachers may help those specific co-teachers, as well as other co-teachers working to provide inclusive education. Next, a framework adapted from public health literature is now proposed to push co-teaching conversations forward.

### **Guiding Theory**

Meaning is always contextualized (Mishler, 1979), and therefore problems of practice must be investigated in their local context for a meaningful solution to emerge. In this study, practitioners are intentionally portrayed in a strength-based rather than deficit-based manner. This portrayal is intended to refrain from adding to an implementation ‘gap’ narrative, which often positions practitioners as lacking knowledge or ability. A deficit-based narrative has traditionally dominated implementation literature and co-teaching intervention research (Friend et al., 2010; Murawski & Swanson, 2001). A capacity-building stance assists in surfacing socio-historical barriers to co-teaching practices, but also positions practitioners as sources of knowledge in their local context, thus creating a departure from a deficit-based perspective.

Sociocultural theory is a helpful broad learning theory when investigating co-teaching. Due to the complexities of co-teaching and the invariably natural activity system that occurs during co-teaching implementation, sociocultural principles shed light on co-teacher practice and

learning. This learning, as in previous sociocultural literature, can occur as people negotiate through conflicts and/or problems of practice. In the context of co-teaching, conflicts can emerge when uniquely trained teachers are brought together in unique settings and are guided by several policies. Strength-based approaches view this navigation of conflict as practitioner learning.

A sociocultural orientation, as alluded to previously, suggests that co-teaching for inclusive education is a complex practice and problem of, among other things, teacher learning. Broadly, learning is presumed to exist in activity, which is socially and culturally situated (Lave, 1996; Lee & Roth, 2007; Roth & Lee, 2007; Vygotsky, Rieber, & Carton, 1987). A sociocultural orientation draws attention to individual learning while simultaneously considering contextual factors and influences on co-teacher practice. According to the National Research Council (2000), “All learning takes place in settings that have particular sets of cultural and social norms and expectations and that these settings influence learning and transfer in powerful ways,” (p. 4, as quoted in Ogawa, Crain, Loomis, & Ball, 2008). The fact that co-teachers must work together and negotiate practice—in order to accomplish service delivery—is at the heart of the uniqueness of co-teaching when compared to traditional forms of teaching.

A relatively holistic vantage of co-teaching is consequently the object of this investigation. This is a deliberate attempt to understand this unique activity system in which learning occurs across and between multiple social worlds and is not relegated to a single domain and/or practice (Akkerman & Bakker, 2011).

An analogy for a socio-cultural activity system approach to flight would include in the unit of analysis say, the entire cockpit. Here, ‘the cockpit’ would not simply be each pilot’s thoughts in isolation, or each of the instruments in isolation, or the pilot’s and co-pilots’ isolated behaviors, but rather the unit of analysis in the cockpit is a combination of these elements: pilot

cognition, instrument (tool) use, and pilot behavior (which is also historically situated in response to the other's behavior). Paralleling this analogy, co-teaching is viewed as an activity system that includes available tools, co-teachers' thoughts, and instructional behavior (Hutchins, 1995).

To this point, diSessa and Cobb (2004) write, “the meat of much design typically requires detailed specification *within* such a [grand] perspective [such as sociocultural theory or CHAT],” (p. 81; emphasis added). Learning in the unique ecology of co-teaching differs from traditional classrooms, and understanding the whole co-teaching activity system is vital to understand practitioner learning.

### **Practice and Learning in Activity Systems: Sociocultural Guiding Principles**

Multiple levels of theory are included in this research design to aid in “seeing” the broad co-teaching learning ecology (Cobb et al., 2003). Some learning theories, such as sociocultural theory or Cultural-Historical Activity Theory (Cole & Engeström, 1993; Engeström, 1987; 2014), may be considered guiding, or *grand-* (diSessa & Cobb, 2004), *high-level* (Sandoval, 2014), or *macro-* theories, used to guide an investigation. As a grand theory, sociocultural theory addresses numerous aspects of situated learning, organization, practice, and collaboration. By assuming sociocultural principles, a multileveled investigation can have a strong theoretical stance attending to the social nature of learning and practice (Ogawa et al., 2008). For example, people and organizations are historically situated. This notion directly affects learning processes, which are situated in participants' activity and often reflect dominant cultural values. Adding to complexity, these dominant cultural values may or may not align with individuals included in the system.

To this end, a sociocultural-oriented theory supports an ability to examine influences on

organizational and individual learning and practice. By combining these highly influential components in an investigation, teacher practice and learning is more comprehensively understood. These varying components make up what is commonly referred to as an activity system (Engeström, 1987). Activity systems are complex and inclusion of these components attempts to present a holistic vantage of co-teaching. These components are now broadly defined.

Specifically, goals or object of activity in this co-teaching system is revealed in lesson objectives, goals, and pedagogies, or models of co-teaching instruction co-teachers discuss, plan and implement. These items reveal co-teachers' motives, collective action, and integration of student learning. Understanding activity objects is integral to the coherence of co-teachers' unit and lesson planning. This is the process of negotiation that co-teachers must continuously grapple with. Co-teachers' motivations and understandings are also revealed in their co-teaching practice, and specifically the model of co-teaching instructional delivery they employ. Informed and sound decision-making between co-teachers may help to illuminate the intentionality, or lack thereof, between these objects. Therefore, the intentionality of lesson and unit planning is a vital window of investigation that must be included in this investigation to understand co-teachers and their context. Beyond the object of activity, specific participants are also vital components of this investigation into the co-teacher activity system.

Co-teachers maintain their own history, but they also co-construct a collective history. This relationship is deeply affected by their communication with one another. Constructive communication among professionals in a shared workspace is influential and guidance in this area may be gleaned from non-education literature bases. Literature in other disciplines document workplace communication norms and how mediating differences in opinion occurs.

This literature has described and investigated what is termed as *face-threatening* communication and *psychological safety*. Business administrative and organizational theory literature (Tynan, 2005; Edmondson, 1999; Bradley, Postlethwaite, Klotz, Hamdani, & Brown, 2012) describes face-threatening communication as communication between supervisors and peers that may jeopardize one's positive social appearance or the perceived collective esteem of a working group. Face-threatening communication has the appearance of eliciting destructive partnerships due to the conflict that it may conjure up, but is actually what Tynan (2005) calls "the most important [communication] for individual and organizational learning," (p. 224). If this communication is indeed the most important for organizational learning, then co-teachers operating in their historically and politically charged environment must be given the space to discuss conflicts in practice, perspectives, and identities in the classroom. Psychological safety is described in detail in Chapter 3, which is related to developing the distinctly unique *collaborative space* for co-teachers. In addition to psychological safety and the ability to deliver face-threatening information, another area of co-teacher investigation is the tools and mediating objects that affect and support co-teaching instructional practice.

Mediating objects function by supporting the negotiation and collective understanding of perspectives across any professional boundaries or job duties. A nuanced view of boundary objects is one that supports this knowledge development. As a researcher, taking a stance on boundary objects as being supportive to practice is in direct opposition to existing co-teaching checklists that merely act as accountability or compliance mechanisms for co-teachers. This is a very different stance to teacher and co-teacher practice and is the core of this investigation; this is the intentional move from co-teacher compliance research to co-teacher capacity building research.

A tool that integrates co-teaching discursive and instructional practices provides a common language for co-teachers to accurately identify the current standing of their practice and imagine future goals for their partnership and collaborative space. Common language also reduces ambiguity of feedback and supports participating co-teachers to identify and label problems of practice. Activity systems additionally include the setting, or community in which co-teachers are situated.

The setting and organization where co-teaching practice occurs is influential. Organizations have political directives and co-teachers may or may not have similar goals that are espoused by their school and district leaders. The misalignment between co-teachers' goals of practice and their organizational leaders' views is frequently misinterpreted as noncompliance without adequately investigating the rationales for such goals and perspectives (Katz & Khan, 1966). Goals, visions, and perspectives on practice are also viewed as windows to glimpse participant learning over time and within an organization. These policies and beliefs espoused within an organization are needed for a more accurate analysis of practitioner assumptions, visions, and goals. This activity systems approach can account for an organization's internal workings and can help "see" sociocultural dynamics of organizations by emphasizing human relations and weaving individual and organizational goals, visions and perspectives on practice (Lipsky, 1980; McDonald, Watcher, & Owens, 2004).

Co-teaching learning and knowledge construction is considered within the process of actively choosing and evaluating strategies and rules, considering resources, and receiving feedback on those decisions (Norwich & Ylonen, 2013). Specifically at Northern Hills, the activity system (which is expanded in greater detail in the exploration results chapter of this report) includes the special and general educators' dialogue and tools used to co-plan and create

goals, as well as deliver instruction.

Anne Edwards (2012) emphasizes this notion by writing that learning is not a neutral process and that “it involves a dialectical engagement in activities where what matters for people as individuals is highlighted by them as they interpret and respond to the tasks they encounter,” (p. 23). Therefore, participant interpretations and perspectives in this respect are central to this investigation as well as the observation of their practice. As previously mentioned, power differentials exist in co-teaching activity systems. The division of labor often relegates a special education teacher as an unequal partner in the co-teaching dyad and the unequal power differential can have clear effects on how each co-teacher views his/her role. Negotiation of these roles is integral to co-teaching learning, implementation and research.

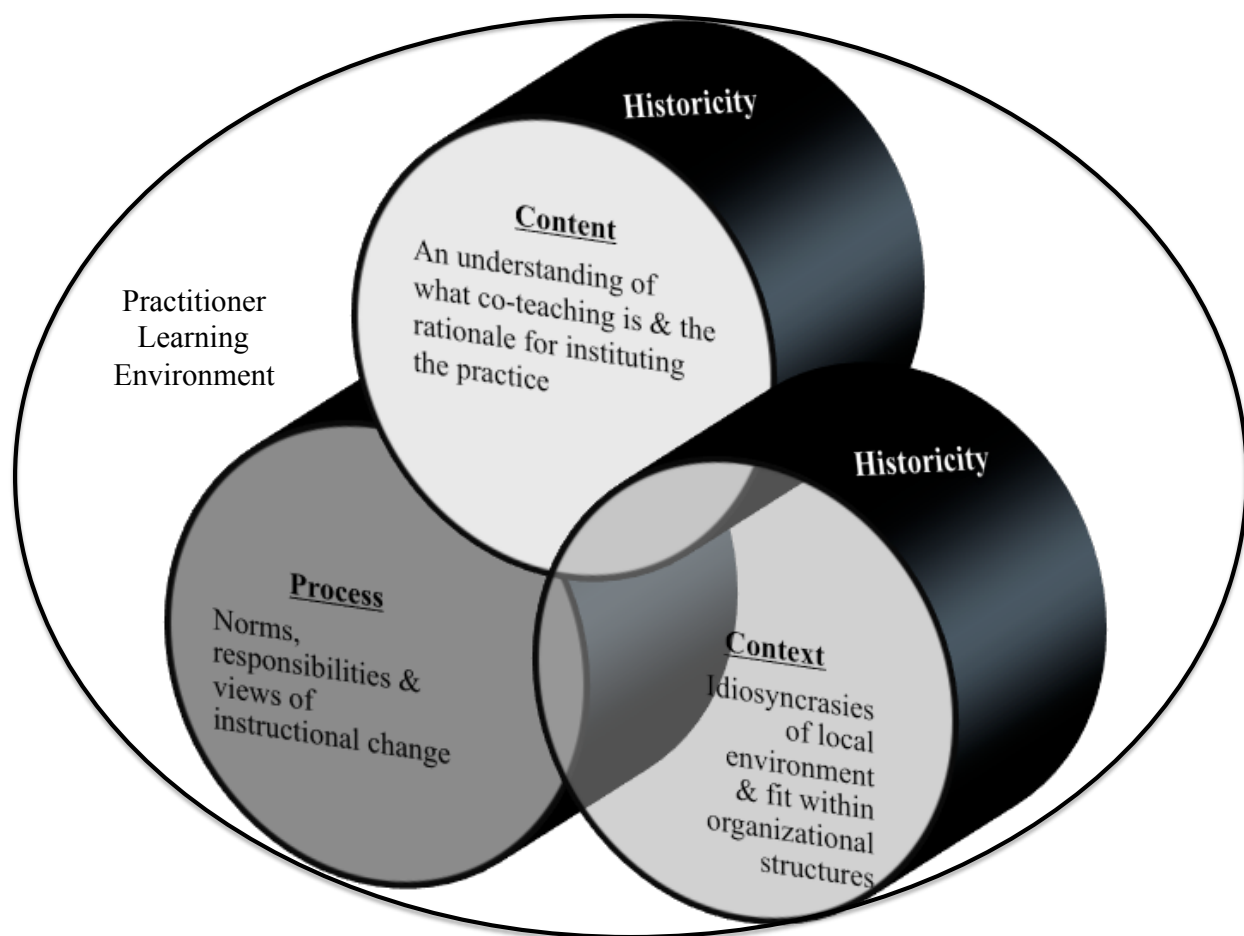
### **Conceptual Framework**

#### **Content, Context, Process, and History**

The conceptual framework I developed for this investigation is adapted from that proposed by Powell, Davies, Bannister, and Macrae (2009) and fundamentally aligns to sociocultural principles (Engeström, 1987; Ogawa et al. 2008). I adapted to the co-teaching activity system. The newly titled, *Co-Teaching Implementation Framework*, integrates the concept of activity systems and the inclusion of context when learning and educational practice is investigated. After all, learning for co-teachers occurs in a setting or activity system that has particular sets of cultural and social norms and expectations that combined with the settings influence learning and transfer in influential ways (National Research Council, 2000).

This framework is a response to Cook et al.’s (2011) call for a paradigm shift in the conceptualization of co-teaching practice and is based on a framework of practitioner-negotiation and service-delivery change. The original conceptual framework was developed by Powell et al.

(2009) who investigated co-workers' sense-making within a health care setting. Due to the nature of a co-teaching activity system, professionals are essentially learning and addressing professional change in what Powell and colleagues framed as *content*, *context*, and *process*. While Powell et al. developed their framework in health care, it provides an important lens to view educational practice and change as well. Figure 2.1 is my visual interpretation of the constructs that Powell et al. have outlined, and explains how I think the elements interact with each other. I will now explain each element of the Co-Teaching Implementation Framework.



**Figure 2.1** Co-Teaching Implementation Framework with addition of historicity (*adapted from Powell et al., 2009*)

*Content* includes the mutual understanding of *what* co-teaching is and *why* it is utilized,

as well as forming an agreement on instructional improvement and teaching goals. Content-related ideas include tools that facilitate the alignment and understanding of co-teacher instruction goals, as well as the rationale for needing to understand and align practice and goals between co-teachers. A disagreement between co-teachers as to its purpose may undermine all efforts to implement. For example, Isherwood and Barger-Anderson (2008) described their interpersonal relationship construct, which parallels the content of co-teaching implementation.

*Context* includes agreement on *how* change in co-teaching fits within existing practices, organizational or school priorities and idiosyncrasies of the local environment. Organizations, including classrooms and schools, are historically situated and influenced by politically charged power relations. Teacher power relations tend to be influenced by historic segregation of children with learning differences and the special educators who served them. Isherwood and Barger-Anderson (2008) may have integrated the context construct within their administrative support and *validation* construct.

Lastly, the *process* of instructional change will “challenge” professional identities and boundaries including perspectives on responsibilities and classroom norms. Co-teaching roles and ways of learning are particularly challenged (Powell et al., 2009). Of particular importance in the process space is co-teacher learning that transpires as instruction changes and develops within the activity system. Instruction is always a political act (Banks, 1996) and co-teaching instruction is no exception; it may even be more political as the act is designed specifically to improve the inclusive education outcomes of a historically marginalized population. Due to the political nature of inclusive education and co-teaching, the *process* construct permits explication of co-teaching norms and responsibilities that deliberately disrupt uncreative traditional methods of instruction. Constructing co-teaching in this manner provides a language and framework for

the completely unique co-teaching space to be navigated and built. Isherwood and Barger-Anderson (2008) may have incorporated the *process* construct within their clearly defined roles and responsibilities construct.

**History** is an aspect not included in the original Powell et al. framework, but is necessary to consider in this context. Historicity creates a third dimension and is used to demonstrate that all three of the constructs that social service providers encounter during service delivery (context, content, and process) are historically situated and are affected in the present day by norms, language, and policy that have been developed over time (Vygotsky, 1978; Engeström, 1987). There have been strong historical barriers to co-teaching implementation that need to be considered when researching this activity system. In addition, site-specific barriers will be surfaced throughout the investigation, but especially during the exploration stage of inquiry and are integral to the development of the local learning theory, co-design, and implementation of tools (McKenney & Reeves, 2012).

### **Summary of the Guiding Theoretical Orientation and Framework**

Co-teachers are not too dissimilar from other service delivery professionals who must implement a change in their practice. Because of this similarity, it may be beneficial to turn to other disciplines to understand the complexities of institutional change. It is in this vein that a framework from health care service delivery research (Powell et al., 2009) has been adapted to better see the implementation of co-teaching. Co-teachers negotiate change in their practice within interconnected constructs: the *content*, *context*, and *process*, which are also historically situated meaning that special education is a discipline that is directly affected by education and must address historical trends of marginalization and unequal power relations for both practitioners and students alike. The Co-Teaching Implementation Framework, which is not

intended to be prescriptive in nature, may rather surface the tensions and/or sources of conflict for co-teachers to negotiate which attempting to institute a change in the their practice, with the particular goal of inclusive education and improved student outcomes. The sociocultural nature of learning between co-teachers also occurs during the change in practice and may be supported in ways that do not currently exist in the literature, which is a goal of this investigation and intervention. Now, a design-oriented research methodology is introduced to argue for its utility to both investigate, but also support co-teaching implementation.

### **Purpose of the Study**

The purpose of this study is build practitioner capacity, develop co-teaching tools for practice, and contribute to the existing co-teaching literature by understanding, investigating and altering the local implementation of co-teaching. These purposeful goals are accomplished by utilizing a progressive methodology (Design-Based Research) to examine a co-teacher activity system.

See Table 2.1 for what McKenney and Reeves (2012) outline as an investigation's design *requirements* and design *propositions*. McKenney and Reeves have described a design requirement as the project goals and the "what" that is addressed. Additionally, the authors describe the design position as how each requirement is achieved. Requirements and propositions of this investigation are established from the review of co-teaching literature as well as the exploratory inquiry of the local co-teaching practice. Each design requirement and proposition, as well as the conjecture map for this investigation, are expanded in greater detail in chapter 3 of this dissertation while the results from the exploratory inquiry are presented with depth in chapter 4.

**Table 2.1***Design requirements and design propositions distinguished*

<b>Design Requirements</b> <i>(Project goals and what is addressed)</i>	<b>Design Proposition</b> <i>(How to achieve design requirements)</i>
<ul style="list-style-type: none"> <li>• Historical inequities in <i>participation</i> and <i>achievement</i> of students with special needs in the general education classroom.</li> <li>• Historical inequities in meaningful <i>access</i> and <i>participation</i> of special educators in the co-taught classroom.</li> <li>• Generation of creative co-teaching instructional delivery that intentionally disrupts regressive and restrictive traditional classroom instruction.</li> </ul>	<ul style="list-style-type: none"> <li>• Co-construct a ‘psychologically safe’ collaborative space that redefines the general education classroom with good-intentioned discourse.</li> <li>• Co-design and implement a set of guiding questions that attend to critical features of a co-taught lesson enabling optimal participation as well as creative and effective instruction.</li> <li>• Co-design and implement a touchstone map of co-teaching development, thus mediating co-teaching practice.</li> <li>• Using co-teaching fidelity measures to evaluate co-teaching instruction.</li> </ul>

While it is important to have open-ended questions, the following research questions provide a beginning point for this project:

1. *How do co-teachers make sense of co-teaching?*
2. *What areas of practice and organization [socio-historical] factors do co-teachers negotiate during their change in practice?*

## Chapter 3:

### Design-Based Research Methodology & Research Phaseline

In this chapter, I will (a) explain the background and purposes of design-based research and (b) provide specific conjectures related to a DBR investigation of co-teaching. Design-based research may permit a richer investigation of co-teaching and the complexities of its implementation. Therefore, a rationale is presented to synthesize previous co-teaching research along with other disciplines that provide social service delivery, particularly research examining change in those systems of delivery. The history and methodology of Design-Based Research is now presented.

#### Research Methodology: Design-Based Research

The research methodology proposed for this project is Design-Based Research. Design experiments involve researchers and practitioners working together to investigate and maximize the effects of interventions on learning and instruction. Cobb et al. (2003) state that design experiments “result in greater understanding of a *learning ecology*—a complex, interacting system involving multiple elements of different types and levels” (p. 9). Ecologies are complex. Components of ecologies may include challenging tasks professionals are asked to solve, professional and discourse practices used by participant-researchers, norms of participation, as well as tools and materials used and developed while completing these tasks (Anderson, & Shattuck, 2012; Cobb et al., 2003). A DBR approach is intended to facilitate the development of tools co-designed with practitioners to support both their current practice and potentially other co-teachers.

DBR methodology has been critiqued and debated from the outside community as well as from those researchers who regularly use the methodology for investigation (Anderson &

Shattuck, 2012; Sandoval, 2014). Interestingly, debates have at times more closely echoed historical philosophy of science and positivism debates (Phillips & Burbules, 2000; Shadish, 1995). At the core of this debate are seemingly timeless questions of epistemological rigor and the ability of particular research methods to adequately and satisfactorily produce knowledge claims. Issues of generalization, objectivity, permissible evidence, and credibility have historically propelled these broad philosophical debates about education research design. For example, post-positivist critiques of traditional researcher designs usually take a reductionist position that causal explanations can only be confirmed through experimental designs. This traditional stance is contrary to the points recently brought up by Institute of Education Sciences (IES) director John Q. Easton (Easton, 2014) who stated that “restrictive research methods obscure naturally occurring variation across schools and communities.” Easton continued by posing a series of research challenges and asking: “Can we learn not only if it works but why, where and how? Can we participate more closely in school and system improvement and demonstrate that we can be rigorous, relevant, and useful all at the same time?”

Aligning these questions with broad movements in other research fields (e.g. mental health service implementation), IES has refined its calls for education research proposals to include ‘continuous improvement goals’ which foreground iterative development, refinement, and testing. Additionally, IES explicitly states research should be conducted to be useful, to improve practice, and as a collaborative process with practitioners. Collaboration is intended to disrupt traditional research methods in which practitioner capacity building was often not considered (IES, 2014).

While discussing limitations of conventional reductionist perspectives, Bruner (1990) thoughtfully posed the question, “Are not plausible interpretations preferable to causal

explanations, particularly when the achievement of a causal explanation forces us to artificialize [sic] what we are studying to a point almost beyond recognition as representative of life?" (as quoted in Shavelson, Phillips, Towne & Feuer, 2003, p. 27). Human learning in natural settings is complex and in order for the complexity of behavior and thinking to be accounted for, methods must take a narrative form (Shavelson et al., 2003). These descriptions parallel John Q. Easton's (2014) ideas and support DBR commitments to investigating natural settings and iteratively developing knowledge.

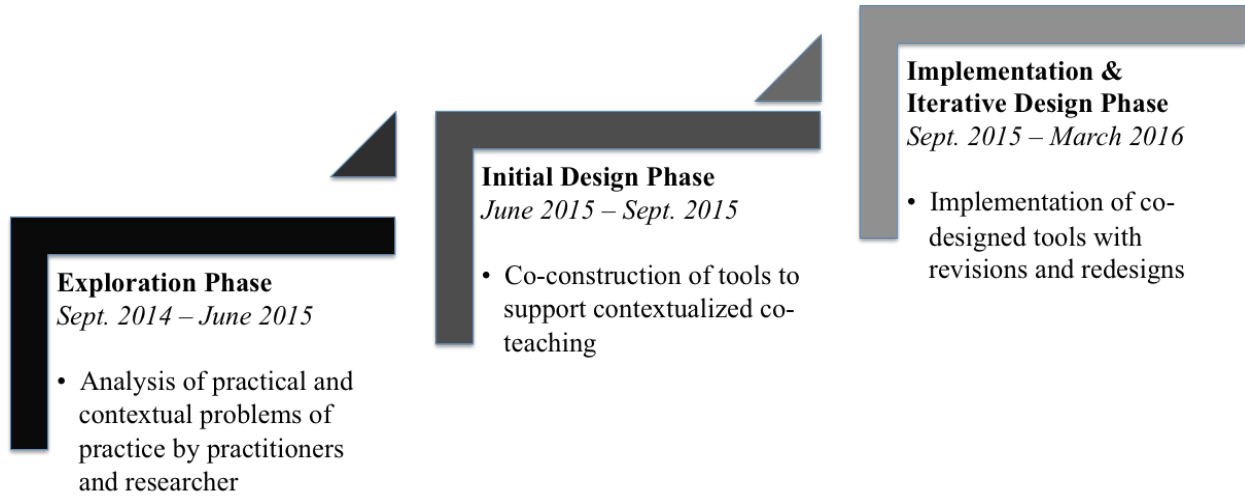
Design-based research is different from other research methodologies because of DBR's focus on understanding a theory of learning while also advancing practice (Collins, 1992). DBR investigations accomplish these simultaneous goals by discovering, dissecting, and verifying relationships and adjusting theories of learning ecologies in the research process (Anderson & Shattuck, 2012; Borko & Klingner, 2013; Collins, Joseph, & Bielaczyc, 2004). At the core of DBR is a commitment to improve practice, which inherently leads to a need to merge traditional research goals of discovery with progressive research goals focused on developing a theory of learning (Penuel et al., 2011). Traditionally, many investigators apply a priori theory to both pre- and post- intervention implementation stages, which may not permit the space for iterative design to occur between practitioners and researchers. This is a vital feature of design-based research and is the core strength of this investigation because the capacity building and well-being of the participating co-teachers is of utmost concern.

diSessa and Cobb (2004) have attempted to capture the "synergistic" nature of theory and practice development. These researchers propose the construct of *ontological innovation* as "hypothesizing and developing explanatory constructs, and new categories of things in the world that help explain how it works" (p. 77). The authors admit that this is an extensively exhausting

process, but is very beneficial to both specific learning ecologies as well as the DBR methodology. The ability to progress theory in methodically rigorous ways is how elements of the real-world learning ecology—the intentional setting of design research—are understood as central rather than peripheral to learning (diSessa & Cobb, 2004). Ontological innovation, which is constructed by *conjecture mapping* (Sandoval, 2004; 2014), can provide the framework and vocabulary to accomplish the ‘tedious’ task of developing theory while simultaneously investigating and improving practice (diSessa & Cobb, 2004).

### **Research Phaseline and Timeline of Activities**

Phases of research implementation are constructed and divided into three phases: *exploration*; *initial design*; and *implementation and iterative design* (Figure 3.1). The exploration phase of investigation includes exploratory data collection primarily focused on participant interviews that delved into individual co-teaching philosophies and visions. It was completed during the 2014-2015 academic school year. The initial design phase of investigation includes many of the preliminary observations of co-planning and co-teaching to begin the construction of local norms as well as the culture of the partnering site. Much of this phase was also completed during the summer of 2015, and continued into early September of the 2015-2016 school year. The implementation and iterative design phase is the phase that potentially provides the most impact on co-teaching practice as this is when design begins to occur between the lead researcher and the participant practitioners; it took place from September 2015 to March 2016. Design was relevant to co-teaching practice. This occurred by both planning and implementing the tools. Design is also inherently an iterative process and takes the longest time to achieve.



**Figure 3.1** Research phaseline including the *Exploration*, *Initial Design*, and *Implementation & Iterative Design* phases (McKenney & Reeves, 2012).

## **Chapter 4:**

### **Exploration Phase Methods and Findings**

In this chapter the case study methodology of the investigation is explicated and rationalized. The setting and participants are presented and described broadly including their role in this DBR investigation. This chapter's focus is describing the specific details of this investigation's context and how it informs the research questions and learning conjectures. However, first the purpose of this investigation is provided.

#### **Case Study Research Design**

While the overall research methodology used in this study is Design-Based Research, the proposed design uses a case study to investigate the co-teaching context. Merriam (2009) describes a case study as “an in-depth description and analysis of a bounded system” (p. 40). The choice of what is to be studied lies at the heart of a case study, rather than the methodology of case study. In other words, the social phenomena of co-teaching are bounded by the partnership of a co-teaching team and therefore it is decided that one team is necessary for the in-depth analysis (Creswell, 2013; Merriam, 2009; Stake, 2005). According to Yin (1989), “the case study approach allows for a holistic understanding of a phenomenon within real-life contexts from the perspective of those involved,” (p. 14). The objects of analysis among various case study perspectives seem to create the most discrepancy, but Merriam (2009) is very clear that the unit of analysis is what characterizes a case study and “*not* the topic of interest,” (p. 41).

#### **Exploration Stage Research Questions**

While it is important to have open-ended questions, the following research questions guide the exploration stage of this project:

1. *How do co-teachers make sense of co-teaching?*

2. *What areas of practice and organization [socio-historical] factors do co-teachers negotiate during their change in practice?*

### **Setting**

**Community and school leadership.** Northern Hills is an elementary school that serves the Skyline school district and has a large transitional bilingual population, which predominantly identifies as Latino with the majority coming from Mexico and Honduras. The transitional bilingual population is not proportionately distributed throughout the district; rather it is concentrated in specific neighborhoods. This study occurs in one of those neighborhoods. The community is just south of a large urban center in the Pacific Northwest and has been the site of recent urban renewal initiatives such as the Greenbridge mixed-income housing development center. Greenbridge is described as “an ambitious effort to revitalize the Skyline neighborhood...A pair of vibrant, mixed-income communities is the result. The new, modern, brightly colored apartments and townhomes of Greenbridge stand in stark contrast to the run-down, outdated buildings that low-income residents called home.” (King County Housing Authority, 2015). This housing renewal initiative is used as an example of the local community socioeconomic status.

**School characteristics.** Northern Hills Elementary School has a total student enrollment of 328 students and 19 classroom teachers. Average teacher experience at the school is 7 years as compared to the district average of 11 years. The student population racially and culturally comprises 25% Asian or Pacific Islander, 8% Black, 45% Latino, 8% White, and 14% of students who identify as Multiracial. Additionally, 81% of the student population is eligible for free or reduced priced lunch in comparison to the statewide average of 45%. Noteworthy is the fact that for the 2014-2015 school year 21% of the student population at Northern Hills is

identified as eligible for special education resources and 37% of the population are reported to be transitional bilingual. School demographic figures such as these are disproportionate when compared to the district figures: Northern Hills has a special education eligibility rate that is 7 percentage points above the district-wide figures, a population that identifies as Latino that is 8 percentage points above the district average, a population that is eligible for free or reduced price lunch that is 12 percentage points above the district average, and a transitional bilingual population that is 16 percentage points above the district average.

Disproportionately high special education eligibility figures at Northern Hills combined with higher than average percentages of transitional bilingual students as well as higher figures of students eligible for free or reduced priced lunch make Northern Hills a politically charged setting. Historical inequities for both bilingual students identified as having disabilities (McDermott & Varenne, 1995; Artiles et al., 2011) as well as the educational debt affecting achievement outcomes of students from high-poverty communities (Ladson-Billings, 2006) frame the political nature of Northern Hills. These student demographics also highlight the political nature of inclusive education and underscore the urgency to support creative instructional methods of teachers in settings such as Northern Hills, such as co-teaching as an approach to improving inclusive education outcomes.

Northern Hills consists of three main buildings that are connected with outdoor walkways (Figure 4.1). Most general education classrooms are in two buildings with the third containing the administrative offices and the gym. Not connected to these buildings is the resource room, which is in a portable that is connected with an outdoor walkway. The placement of the resource room in an outdoor trailer contributes to a longer commute for those students who receive instruction there.



**Figure 4.1.** Aerial map of Northern Hills Elementary School consisting of three main buildings and three large portable trailers.

Through preliminary site visits of the selected co-teaching dyad, it has become clear that co-planning sessions are scheduled for Thursday mornings and last for roughly forty-five minutes. These sessions occur in Carol’s classroom. Co-planning sessions that will focus on the subsequent co-teaching lesson are of particular interest rather than broad collaborative meetings in which other problems of concern are discussed.

### **Participants**

The co-teaching team of interest in this study is an information-rich case (Table 4.1). These co-teachers are of interest because of their school demographics and teaching experience, which is discussed later. The sample selection process follows criteria in which the teaching team represents the “typical” co-teaching team as much as possible meaning that they are not privy to any more outside resources that another team would not be privy to. In addition, the selected team must actually be attempting to implement co-teaching practice. A convenience sample of

co-teachers was used due to their willingness to participate in a lengthy investigation of their work, as well as their ability to co-design tools of practical significance for co-teaching support.

**Amy.** Amy is the sole Learning Resource Center (LRC) special educator at Northern Hills Elementary School. Amy holds a master's degree from a four-year university that is highly regarded for a high quality teacher preparation program. She has been teaching for 10 years and is white. Amy remarked that her traditional teacher preparation focused on teacher practice and she was satisfied with her preparedness to enter the public school setting. Amy has a relatively high and demanding caseload of students who receive a wide range of special education services. These services span from instructional and testing accommodations to providing direct literacy and math instruction in her resource room. The caseload also spans kindergarten to sixth grade and disabilities primarily consist of learning disabilities and emotional behavior disorders. Amy designs specific instruction for many students on her caseload as well as consulting with grade level general education teachers to ensure they provide appropriate instructional accommodations for students who have IEPs. Amy is also an active and prominent figure on the student support team at the school-level, as well the school-wide positive behavior intervention support team. Like many special education teachers, Amy has many responsibilities.

**Carol.** Carol is a veteran fifth grade teacher at Northern Hills. She has been at the school for 15 years and is also white. Carol is a self-described introvert who cares deeply about the quality of instruction she provides. Carol is certified in elementary education and has a master's degree through a traditional institute of higher education teacher preparation program. Carol is genuinely committed to improving her practice and places her students' wellbeing very high. Carol is highly respected among her fellow staff members both because of her seniority as well as the quality of instruction she has provided over her career at Northern Hills.

**Heather.** Heather is a first year classroom teacher, but has extensive experience in formal tutoring settings as well as home schooling her own children. She is the other fifth grade general education teacher at Northern Hills. Heather was an emergency hire due to the original teacher, Maggie, taking maternity leave. Heather has an emergency certification meaning that the state has determined she can be the teacher of record for up to one calendar year while the applicant pursues a formal teaching certification. Heather also identifies as white.

**Kelly.** Several teachers have praised the Northern Hills Elementary School principal, Kelly, for her progressive or forward thinking and supportive approach to school leadership. Kelly, who is fluent in Spanish, is deeply committed to serving the transitional bilingual demographics of her school, and this was obvious as she was seen welcoming and reassuring a frightened new student and his mother in Spanish while I waited for my first meeting at Northern Hills. This act is indicative of Kelly's commitment to serving vulnerable student populations in her school's community.

**Jake.** I am a former special educator for a very large urban school district, Atlanta Public Schools. Atlanta is a district that experiences many of the aforementioned educational inequalities that pertain to both students of color as well as student who receive special education services. I am also a former co-teacher who paired with language arts general educators in an attempt to improve inclusive education outcomes for all students. I received my teaching certificate from a traditional teacher education program. Currently, I teach in a teacher education program specifically attempting to develop skills in pre-service general educators to vary their instruction and improve student achievement for all students including those with learning differences. Due to personal experiences with classroom removal and being placed in segregated

settings, I have a goal of improving teacher practice to create an environment that supports inclusive education.

**Table 4.1**

*Exploration Phase Participants*

<b>Name</b> <i>(pseudonym)</i>	<b>Primary role</b>	<b>Experience</b>	<b>Racial identity</b>	<b>Notes</b>
Amy	Special Educator	10 years	White	Resource room instructor; primarily serve student with Specific Learning Disabilities / Emotional Behavioral Disorders
Carol	General Educator	15 years	White	5 <sup>th</sup> grade instructor
Heather	General Educator	1 year	White	Emergency teaching certificate; Long-term substitute

### **Exploratory Phase Measures**

Data collection aimed at understanding this particular case of co-teaching spans interviews of both co-teacher practitioners and school and district administrators, observations of planning sessions and instructional delivery as well as analysis of co-teaching lesson plans (Figure 4.2).

#### **Semi-structured individual interviews**

There were several interviews with teachers in the case study (Appendix A). As part of the exploratory phase, initial private interviews were held with both the general educators and the special educator separately. The purpose of the interviews was to elicit an introspective understanding of these particular practitioners' visions, goals, and identities of co-teaching. Practitioner identities and goals have been shown to impact co-teaching practice (Pancsofar, &

Petroff, 2013), and also influence, and perhaps lie in conflict with, institutional goals. These interviews occurred once at the beginning of the investigation.

***Individual “interview guide” interviews.*** Individual “interview-guide” interviews were conducted following strategic planning and instructional delivery sessions (Appendix B). Patton (2002) describes interview-guide interviews as those that consist of pre-determined questions that consistently guide the probing of decisions that were made during the phenomena of investigation. Specific to this case, regular “interview-guided” interviews were conducted following lesson plan completion. The interview-guided questions delve into the lesson planning that was developed in the co-planning session. These guided interviews elicited specific thinking and reasoning behind decisions on lesson plan development. These interviews occurred five times and were conducted with the lesson plan present to generate participant thinking.

I pressed practitioners to reveal their planning motives and intention behind decisions including how decisions will be implemented during instruction. By investigating co-teachers’ understandings of co-teaching planning and decision-making, one may sharpen historical understandings of the content and context constructs in Powell et al.’s (2009) framework.

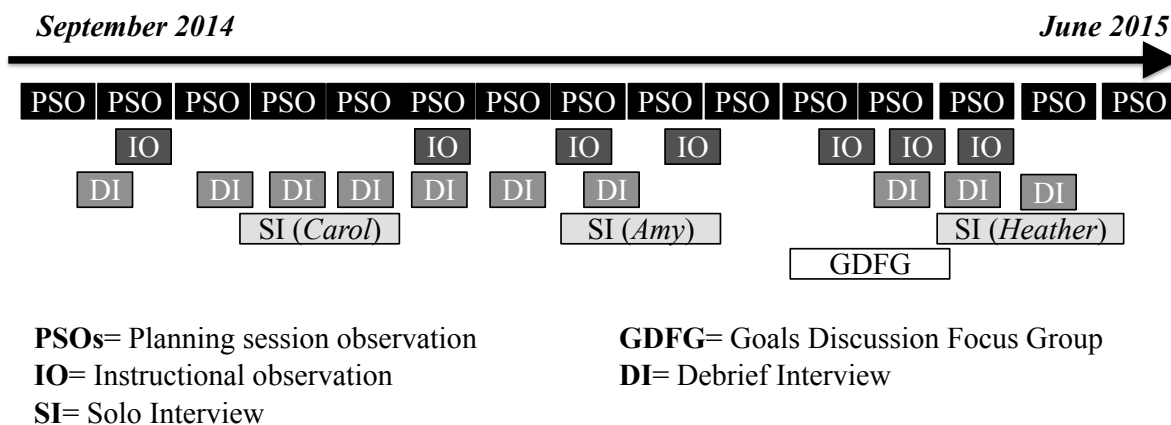
**Observations of co-planning sessions.** Observations are critical to the understanding of the context in which co-teachers are operating, learning and co-constructing practice (Appendix C). This provides a “firsthand encounter with the phenomena of interest,” (p. 117, Merriam, 2009). The most critical aspect is in my ability as the observer to pay particular attention to the things in this co-planning session that others would, as Merriam writes, “ordinarily give passing attention,” (p. 118). In order to pay this particular attention it was vital to adhere as closely as possible to the observation protocol for these co-planning sessions. Facets of the co-planning sessions were projected to fall within the following categories: Participants; Role of instructors;

Participation of Instructors; Identified recipients; Interaction Patterns; Planned delivery; Student Interaction; Discourse Patterns.

**Observations of teaching.** In the same vein that co-planning sessions are critical to observe to gather a firsthand account of context and phenomena, co-taught classroom instruction is critical to observe (Appendix D). The observation of co-taught classroom instruction is vital to understanding the transference of co-planning instruction to actual instruction. Oftentimes instructors are forced to deviate from planning decisions or there is confusion on the part of one co-teacher and those deviations or confusions may be only seen during instruction. The observation of ten sessions that correspond to the co-planning sessions provided an accurate view of typical co-taught instruction in this case. Observations were guided by pre-determined protocols that raise awareness of the following constructs: Use of space; Instructional delivery; Role of instructors; Participation of Instructors; Interaction Patterns; Planned delivery; Student Interaction; and Discourse Patterns.

**Lesson plans and other materials created by teachers.** Lesson plans developed in the planning sessions were collected and analyzed according to the research questions at hand. If planning went beyond the space of co-planning session, then any other correspondences were collected to also analyze for instructional decisions and delivery needs.

**Materials created by school district.** Artifacts generated by the school district suggesting schools to implement co-teaching practices were collected and analyzed to understand the broader political context under which this specific co-teaching dyad is operating. These artifacts were also collected to triangulate the responses by the district administrator in their interview focusing on district visions and goals of co-teaching implementation.

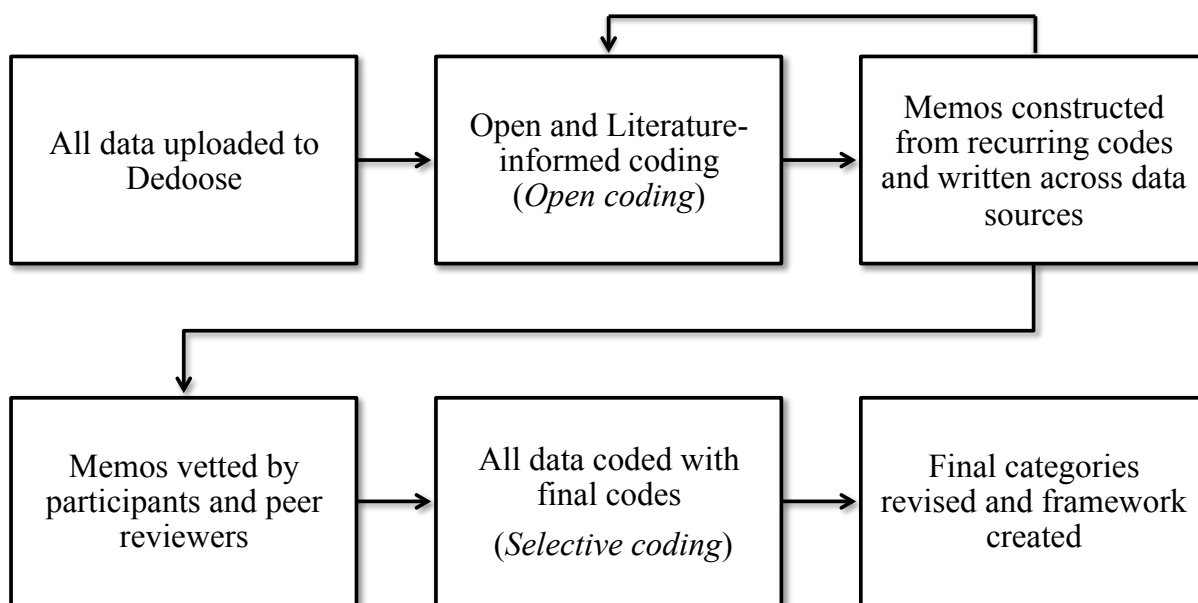


**Figure 4.2** Exploration Phase (Year 1) Data Sources

### Data Analysis

The following description is an overview of the qualitative analytic process (Figure 4.3; Appendix E). Throughout the exploration phase of this investigation, all interviews were transcribed from audio files, and documents were uploaded to Dedoose, a secure online platform for qualitative analysis. Each document was thoroughly read to generate a preliminary round of base content codes, or low inference descriptors (Miles & Huberman, 1994; Merriam, 2009). Next, using coding, interpretation, and reflection, base content codes were crossed with interpretive analytic memos. As a qualitative criterion, I wrote memos across more than one interview, field note, group dialogue, or other piece of data. To this end, I made claims to triangulate with observation field notes, as well as artifacts, for further refinement of findings.

Interpretive categories and themes that cut across data sources were then presented to experienced qualitative researchers who provided critical analysis that led to revision of the themes and codes that strengthened connections between data and the emerging theoretical framework. The team also provided critical questions addressing the biases of the lead researcher's position (Merriam, 2009), which were then examined by the researcher and adjusted as necessary.

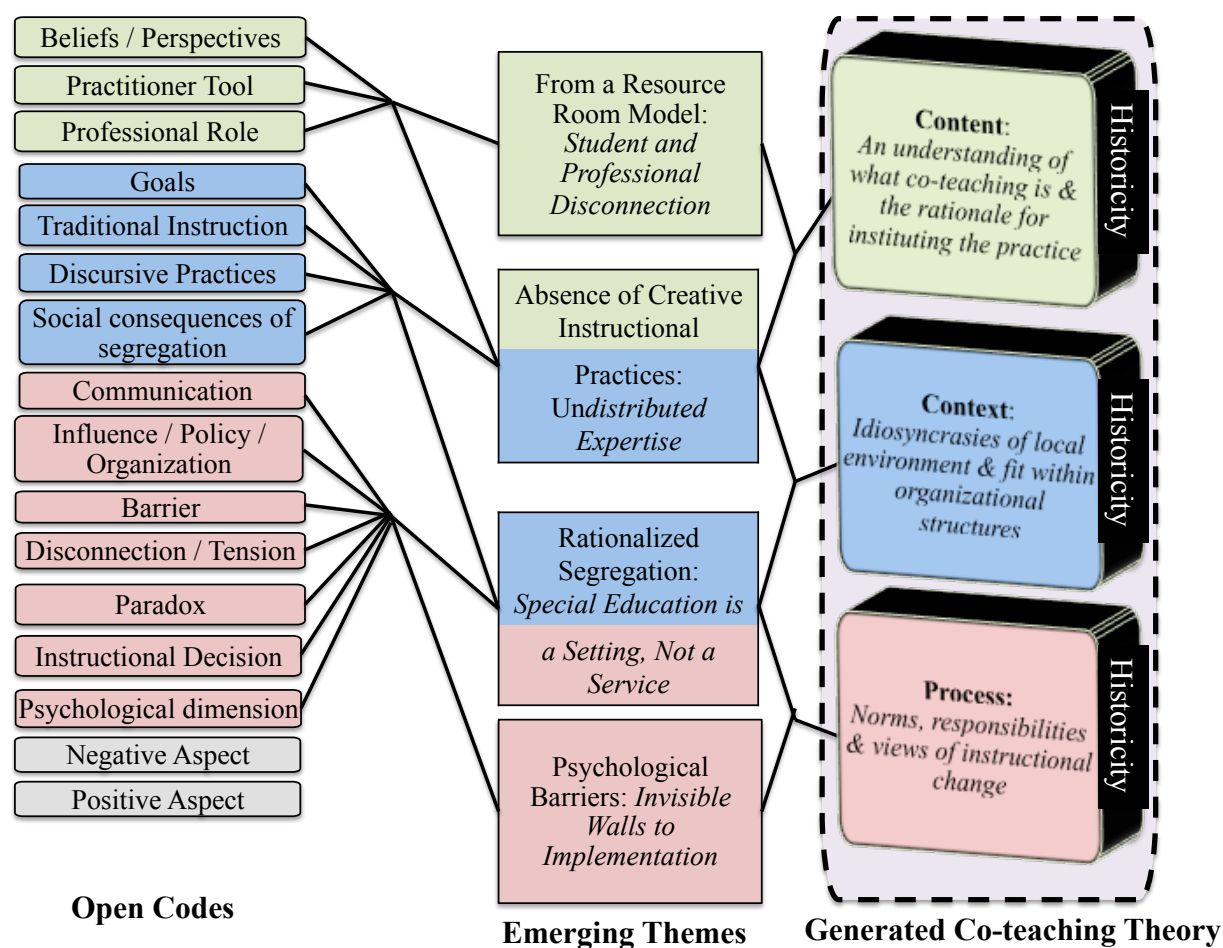


**Figure 4.3.** Exploration phase data analysis process (Merriam, 2009)

As a former special educator and co-teacher I needed to have my biases surfaced and discussed publicly, which occurred on multiple occasions with fellow researchers. I was forced to make the familiar strange again, because of my own experiences, so as to really understand the local context of Northern Hills and the nuances of their organization and perspectives. Often I was reminded of my position as an outsider and the privilege I possess. One bias I possess is the initial position I take that aligns with a special educator as well as my inclusive education values. A stance such as this affects my observations and fellow researchers raised the political nature of the stance. I adjusted this bias by talking with the participants and being clear what my experiences were and what my stances are and reassured them of the collaborative nature of this DBR endeavor.

Generated themes attempted to be as “responsive, sensitive, exhaustive, mutually exclusive, and conceptually congruent,” as possible (Merriam, 2009, p. 186). Figure 4.4 is a coding tree, which represents the progression from primary codes to emerging themes and the

generated theory. An overview of the themes from the exploratory stage of inquiry is presented next.



**Figure 4.4** Exploration Phase (Year 1) Qualitative Coding Tree (Merriam, 2009)

**Understanding the context of the inquiry.** As previously described, the exploration phase of this study took place in Northern Hills Elementary School and co-teaching activity system over a several-month period, from September 2014 to June 2015. Participating co-teachers included three veteran teachers with over thirty-five years of combined teaching experience, but who are all new to the co-teaching practice. In fact, these participating co-teachers, Amy, Carol and Heather (pseudonyms) were the first in the district to meaningfully attempt this practice. Important to note is implementing co-teaching is not a formal initiative by

district administrators as of the end of the exploration phase, but rather a school-level initiative. Throughout this exploration phase, the entire co-teaching activity system was investigated and is now discussed. The broad contextual constructs from the previous chapter are expanded with more detail as well as implications of how this exploration stage will begin to inform the ongoing and design phases into the future.

The co-teaching activity system occurs across multiple settings, which primarily include co-planning session meetings and the classroom where delivery of co-taught instruction transpires. A total of 15 planning sessions and 8 co-taught lessons were attended. Field notes from all sessions were analyzed (see appendices for field note guidelines). Probing questions were also posed during and following planning sessions and co-taught lessons to understand practitioner decision-making. In order to gain a deeper understanding of participant perspectives and goals of co-teaching, each co-teacher was interviewed privately (see appendix for protocols). Additionally, a group interview was conducted with all participating co-teachers to surface group ideas related to co-teaching implementation as well as future direction for practice and what tools could be designed to assist with professional co-teaching growth.

**Activity system.** Northern Hills' co-teaching activity system, like other co-teaching activity systems is complex. The activity system has facilitated productive co-teaching and inclusion on some occasions, and created barriers in other instances. Fifth grade language arts was targeted by Kelly, the Northern Hills principal, as the initial co-teaching site. Individual interviews with co-teachers as well as group interviews about lesson plan development and instructional delivery were able to inform all of the research questions.

Observations of teacher practice addressed the questions of how Northern Hills co-teachers co-construct instruction to address individual and communal student learning goals and

how co-teachers' instruction constrains or supports their own learning. In contrast, observations of planning sessions, interviews, and goal-sharing sessions were able to address the question of how co-teachers navigate the socio-historical factors that shape their practice.

### **Exploratory Phase (Year 1) Findings**

#### **A Disjointed System: *Reliance on Resource Room***

Northern Hills is a school in transition. The school has chosen to move from a system reliant on often-disjointed resource room instruction for struggling students to a co-teaching model that foregrounds the general education curriculum. With respect to the co-teaching staff at Northern Hills, including Carol, Amy, and Heather, this transition is welcomed and understood. This sentiment has been repeatedly referenced by all of the teachers in both interviews and planning sessions. For example, Amy often referenced how a system of “separate programs”, the resource room and the general education classroom curriculum, was tremendously unproductive for both instructors and students alike. Amy underscored this position by stating: “I mean the kids, they would learn something here and then they would go back to class, and they are like “I don’t get it”, because it [the curriculum and lesson goals] is *so* different and there was no transferring of skills, and that was really hard for them.”

In a disjointed system, curricula in the resource room and general education classroom do not complement one another, and the burden of learning by aligning these multiple criteria is on the children. The transition to a co-teaching model was therefore framed as a response to this disjointed system. Mending the disjointed curricula was also the rationale for more inclusion and co-teaching as a system to optimize creative coherent inclusive education. Carol also referenced the damage that a fragmented educational experience has on all children and not just those attending the resource room. Carol expressed this awareness when she stated: “I can see

there's so much wasted time in that [segregation model], because the kids would walk down there and then someone wouldn't be there, then they would come back to class, and they disrupted the class, then they get down there and they've forgotten their notebook.”

These sentiments reveal that participants were aware of the system's history, the shortcomings of that system, and perceived that co-teaching was a response to the previous system's inadequacies. An implication is that practitioners can thus use that awareness to assert the need to transition to a system that is more closely coherent and beneficial to students. In fact, the absence of this historically situated knowledge, and awareness, may lead teachers to be resistant or confused as to why co-teaching should be implemented in the first place. Co-teachers who lack the awareness of the impact and shortcomings of a disjointed educational experience on students with special needs may struggle to implement optimized co-teaching. This awareness and knowledge aligns with the *content* to which Powell et al. (2009; Figure 2.1) refer, which is the agreement of what co-teaching is and the rationale for instituting the practice. In other words, understanding the historicity of reliance on disjointed educational experiences fosters an anchor for participating co-teachers to attach their co-teaching implementation. Another aspect that affects their co-teaching implementation is the idea that special education is a service rather than a setting.

### **Rationalized Segregation: *Special Education is a Setting, Not a Service***

Segregation of students with learning differences to the resource room was the common policy for many years at Northern Hills. Current participants were aware of this segregation, an approach that was commonly justified under the guise of student needs. For example, teacher's rationalizations of removing particular students from the classroom was presented by Carol, a

general educator, when probed about barriers to more inclusion of students with special needs in the general education classroom through co-teaching:

I can also imagine [other] teachers being like, that [teaching all students] is not my responsibility; you crafted this IEP for a reason, so take them and teach to that IEP. And I know, I think in the past, at least at our school often a lot of the IEP kids have some behavior issues, and so there would also be that element of the teacher thinking, ‘If I could just get Johnny or Susie out of here for 45 minutes I could teach my class this concept’.

This quote provides not only the contextual history reliant on the resource room that exists at Northern Hills, even prior to Amy joining the staff, but also teachers’ perspectives that justify the removal of students from the classroom.

Though Carol says she does not hold this perspective, she does offer insight to a common barrier to co-teaching and meaningful inclusion: a specialist should be the one who serves students with IEPs, and it should be done separately in the resource room. This perspective can also remove responsibility of instruction from many teachers and have lasting effects on the way they approach students with special needs and their educational responsibility.

Carol went further to say that, in her opinion, if many general educators are presented with the option of participating in co-teaching, they may respond “no, they [students with IEPs] have these certain needs, and they can go down to her [special educator] and really master common denominators and then come back.” In this example, a particular discrete skill—mathematical fractions—is viewed as needing to be learned in a separate setting in a unique way for a student with special needs.

In addition to the lack of general education classroom participation that students with special needs experience in a system reliant on special education occurring in a separate location, there can be other unforeseen consequences that are highly impactful and counterproductive for them. For example, improving academic skills may be the motivation behind sending students to a resource room, but an unintended consequence is the elimination of positive peer modeling for socially acceptable behavior. At times, students may lash out for either being removed from the general education setting and being stigmatized, or students may mimic negative peer behavior. The unintentional promotion of unwanted student behavior—particularly from students who may not exhibit the behavior in a more diverse setting—is documented in prior research (Rea, McLaughlin & Walther-Thomas, 2002) and was described by Carol. When asked about behavioral consequences of placing all students with IEPs in a separate setting, Carol described the situation at Northern Hills in the past, “I remember one year, all the 6th graders IEP kids came to her [Amy] for math and as it happened they were all terrible behavior problems and they just fed off each other and actually got worse that year.”

Reliance on segregated education is a manifestation of interpreting special education as a setting, rather than a service. Co-teaching is a change in practice away from a dependence on resource room instruction. By critically analyzing this shift, co-teachers must navigate the *context*, or idiosyncrasies of local environment and fit within their organizational structures, and the *process*, or views of instructional change within norms and responsibilities that have been shaped over time (Powell et al., 2009; Figure 2.1).

### **Psychological Barriers: *Invisible Walls* to Implementation**

Historical barriers to co-teaching implementation have been discussed in the literature and parallel local barriers at Northern Hills. As seen in the Co-Teaching Implementation

Framework in Figure 2.1, the *process* of service delivery change is deeply affected by practitioners' beliefs and their ability to express their beliefs. Invariably, co-teaching involves the presence of a special educator in the room of a general educator and his/her presence deeply affects the classroom space as well as each co-teacher's professional psyche. Traditionally, special education has been viewed as occurring in a setting outside of the classroom and relocating it back in the general education classroom can affect co-teachers in unforeseen ways. Historically, the general educator's private and isolated practice was in her or his own classroom, and co-teaching dramatically disrupts that isolation, as well as the special educator's practice, which is now relocated into someone else's space. Both of these abrupt disruptions affect practitioners' psychological wellbeing in unforeseen ways.

In the past, classroom distance between general and special educators contributed to historical power dynamics. With this abrupt policy change to those distances, the aforementioned construct of psychological safety is therefore a concern. For example, with respect to co-teaching, historically the special educator is the co-teacher who enters the general educator's classroom. This can lead to viewing the special educator as a tourist, even if the general educator does not intentionally or consciously create that environment. Amy underscored this feeling of being the outsider. Often, Amy felt that she might ruin the classroom flow or objectives her partnering general educator may have for the lesson. This was revealed on multiple occasions including when the topic was brought up in a group goal-sharing session, as Amy shared:

As the person, being 'the one' coming in, that's something that I'm always thinking about, I don't want to step on your toes, I don't want to supersede what you're doing, I don't want to interrupt your plan, I don't want the kids to see me as more of an authority

than you just because I said something in a different way, there's all those thoughts for me of, like, this is your domain, these are your classrooms and I'm the one coming in... You and I have worked together for years, but I still feel that kind of hesitation.

Hesitation to engage with all students and their fellow co-teacher in constructive or critical ways may contribute to feelings of a lack of confidence in one's professional expertise, willingness to take instructional risks, and/or readiness to provide face threatening critical feedback to a co-teaching partner. All of these consequences undermine high quality co-teaching, and align with what previous co-teaching researchers have documented (Scruggs et al., 2007).

Similarly, the teacher whose space is being entered can also feel uncomfortable, which creates a barrier to the welcoming of a special educator to the co-taught classroom environment. Carol provides evidence of this as she said, "as much as I love Amy, and I think I'm pretty good at my job, that was my first reaction, was 'ahhh, some teacher is going to be watching me all day.'" Carol continued,

but it's so anxiety causing, I know it's not just me, because I've talked to the other teachers... [they feel] the same way as I do. I think its because, you come in with your clipboard and you're taking notes and talking to the kids and you're looking at my classroom and you're watching me, and the minute you walk out that door you're gonna say I didn't see her purpose, I didn't see her kids engage in genuine conversation, I mean that's where my mind goes.

A disposition that the partnering co-teacher is judging your every instructional move will destabilize and restrain co-teaching's full potential. Carol has always reiterated her pleasure of partnering with Amy, but was clear that participating in co-teaching caused her apprehension due

to the presence of another adult. This adult was strongly perceived as an evaluator of instruction, rather than an asset to rely on to co-construct learning environments and improve delivery of creative and differentiated instruction. Although the general educator in the co-teaching dyad can say that they have welcomed the special educator into the co-taught classroom, these feelings are often not echoed by the special educator.

An analogy that may illuminate the two perceptions of a shared reality may be one of a visitor and their perceptions of experiences in someone else's home. Oftentimes a guest can be told by the host that they should feel free to do as they please in the home, but the disposition or projected energy of the host actually conveys a different message. On the other hand, a sense of judgment as to the upkeep of the home may also be inadvertently projected from the guest. The different messages, whether intentional or not, can create apprehension in the guest and host alike. These apprehensive feelings may be internalized and prevent the guest or host from feeling comfortable, regardless of what was actually verbalized. Accounts of shared experiences between the host and guest can be radically different for many reasons including communication barriers, cultural norms or feelings of being the outsider. Both the hesitant visitor and anxious host mentalities undermine co-teachers' relationships and subsequently, the activity system. The lack of recognition of the others' intentions is further demonstrated by the following sentiments: "For some reason there is always this worry of over stepping my bounds. I don't know if they [general ed teachers] feel that way, because they're obviously saying 'jump in', there is some sort of kind of invisible wall there that their classroom is *their* space," (Amy, special educator).

These two perceptions of the shared space are also mirrored in observations I made in multiple classroom and planning sessions. As I write in a January 29<sup>th</sup> field note, Amy was frequently positioned at the rear table in the classroom with her usual group of students to engage

with and instruct rather than at the front of the room instructing the entire class or other grouping. Perhaps the implicit notion is that Amy's expertise may lie in the small group instruction of struggling students and not distributed throughout the classroom for all students. If this classroom design is the same every day, it can be instructionally restrictive, as well as promoting similar unintended consequences that the aforementioned reliance on resource room instruction promotes, for example assigning certain students (i.e. students with IEPs) with certain instructors.

The co-teaching literature is very clear that there are several micro-models of instruction delivery under the umbrella of co-teaching (Cook et al., 2011). Reliance at Northern Hills on just one design restricts potentially creative contributions from each instructor and may undermine the potential for either instructor to suggest different designs as Amy's position becomes routinized. This may be contributing to the apprehensions of both instructors and their reluctance to suggest more demanding and dynamic roles, which is the goal of co-teaching. A critical question to navigate during co-teaching implementation is whether the co-teacher is a visitor or a mainstay, a centerpiece and a cornerstone to the classroom community. One critical way to overcoming and navigating these psychological barriers to co-teaching may have been suggested by Heather when she suggested that everyone's "ego should be checked at the door." In addition to psychological barriers to implementation, classroom instructional practices were found to be influential on co-teaching implementation.

### **Absence of Creative Instructional Practices: *Undistributed Expertise***

Co-teaching at Northern Hills was truly in its infancy with respect to implementation during my time in the exploration phase. Over the course of the first year, numerous unanticipated demands caused scheduling restrictions and inconsistent execution. Participants

were not necessarily discouraged by its potential, however much confusion abounded concerning what it can and may actually look like in practice. As observational field notes and interviews revealed, oftentimes there was practitioner confusion over which instructional decisions had priority at any given moment. In other words, both at the co-planning sessions and during instructional delivery, there were differences with respect to instructional goals, sequencing of those goals, and the pedagogical methods to accomplish those goals in the classroom. It is vitally important to note that this confusion is natural and inevitable, and it is the resolution of such confusion that either inhibits or enhances co-teaching.

The pre-service training of special and general educators varies with respect to aspects that are emphasized and/or approaches to accomplish such aspects. In very broad terms, general educators in pre-service training programs have traditionally focused on broad group and curricular needs (i.e. grade standards) and special educators have emphasized specific student needs and pedagogical instructional methods to engage students with multiple opportunities to respond. Many special educators are trained in instructional frameworks that ensure many different access points for lessons, thus allowing for varying learning needs to be simultaneously supported. This notion was presented by Carol when probed about the potential instructional benefits of having a special educator present, “It [co-teaching] is absolutely brilliant, my whole class of 28 kids, Amy, she knows how to differentiate the instruction.” In this quote Carol specifically identifies differentiation or differentiated instruction as the expertise that Amy has and can contribute to the classroom. Carol continued, “I know Amy can deal with these six kids and meet them where they need to be and she knows intimately their IEP’s, and she can differentiate on the fly, and that means I can put my energy into these other 22 kids I have.”

Although Carol assigned Amy's responsibilities solely on the six students with documented IEPs, she is still recognizing Amy's ability to differentiate instruction well.

Carol is underscoring the value in differentiating instruction to provide academic support to students by incorporating multiple learning preferences and foregrounding a universal design for learning. By universally designing instruction, pedagogy or instructional delivery (including student products) is most important. An analogy to capture what Carol is describing may be that she [general educator] knows *where* a ship is headed, and Amy [special educator] knows *how* to get there. Perhaps a strength-based approach to optimize co-teaching is by leveraging these fundamentally, yet equally vital, perspectives on student learning and classroom engagement.

As participating practitioners make sense of co-teaching policy and implementation, the continued reiteration of what merging these two perspectives can provide the classroom is important. As Carol affirmed, "[Co-teaching] allows for multiple experts and also a distribution of the workload, I think those are the two things." Amy is adamant that she can enhance a collaborative space because of the extensive training she has received on instructional design. Access to instruction for all students including those with learning differences is foregrounded in her approach to instruction. For example, Amy stated:

Well, when you're trained in special ed, that's your world! You know, that's what you do! That [Differentiated Instruction] is totally it! It's like, there's training, here's how you're asked to do things and unless you naturally kind of have that 'oh, I can change this up, or I can change that up'. Unless you naturally tend to do that kind of thing, most people don't. You know, it's like here is my lesson, here is my assignment, go to it"... and it just doesn't really come in to play that you could change something up or that you

could modify or that you could ask for a different product, that you could give a different way of answering a question, it just doesn't really come up.

Amy spent a significant amount of time in planning sessions and interviews providing examples of augmenting instructional delivery and interjecting instructional supports, such as graphic organizers, in the curriculum to complement the vision of both Carol and Heather and ensure access to a wide spectrum of student learning needs. As seen in Figure 2.1, negotiation of these two complementary perspectives in instructional delivery change at Northern Hills is the *content*, or agreement of what co-teaching is and purpose for instituting it, and the *context*, or habits and fit within the collaborative co-taught classroom.

### **Summary of Exploratory Phase Findings**

Themes surrounding participating co-teachers' sense-making, problems of practice, and professional roles, parallel much of the current reviewed co-teaching literature as well as the conceptual framework guiding this work (Figure 2.1). That framework has proved valuable to understanding the local context at Northern Hills as several professionals attempt to change practice in order to deliver services to a heterogeneous group of learners. Co-teachers at Northern Hills, and perhaps at other locations, are navigating the *content* (agreement of what co-teaching is and the rationale for instituting the practice), the *context* (idiosyncrasies of local environment and fit within organizational structures), and the process (views of instructional change within historical norms and responsibilities) of co-teaching implementation. As was revealed in the interviews, planning sessions, and observations, there is also the revelation that these constructs are historically situated and clearly shaped over time among these specific participants, as well as within the profession. Therefore, it is pertinent for participants and

researchers alike to acknowledge the historicity of the practice under investigation to optimize the fit and the expertise of each practitioner, and maintain a strength-based approach.

Researchers have also found that when teachers are confused over goals, purposes, or instructional delivery, they tend to resort back to traditional forms of instruction (Cook et al., 2011) as well as punishment-focused classroom discipline (Horner, Sugai, Todd & Lewis-Palmer, 2005). Traditional forms of classroom instruction (i.e. didactic, mono-modal) and inquiry and punishment-focused classroom discipline are precisely the classroom structures that historically position students with learning differences or are from marginalized groups (i.e. males of color) to underachieve.

## Chapter 5:

### Co-teaching Specific Learning Conjectures

In this chapter presents co-teaching learning conjectures, which are directly informed by both the exploration stage findings and the co-teaching implementation framework found in Figure 2.1. First, an overview of conjecture maps is discussed, followed by the presentation of a co-teaching high-level conjecture, and then followed by three specific conjectures: two participant activity conjectures and one task conjecture.

#### DBR Conjecture Mapping

DBR critiques have targeted initial instructional frameworks (see review in diSessa and Cobb, 2004) and argue that DBR has not satisfactorily addressed claims that theory and practice can develop simultaneously. The critique stems from initial frameworks which admittedly did not “cleanly separate their scientific claims and validation, from their suggested action,” (diSessa and Cobb, 2004; p.82) or provide an “argumentative grammar” as more traditional research methods have (Sandoval, 2014). Current DBR methodologists have presented modes of investigating hypotheses and discoveries in learning contexts. These modes include the aforementioned DBR construct of ontological innovation, as well as the avenue to arrive at ontological innovation – *conjecture mapping* (Sandoval, 2014).

Conjecture mapping is an important element of a DBR investigation. Sandoval (2014) recently wrote that conjecture mapping is an argumentative grammar that can “explain how function produces intended outcomes,” (p. 18; *see* Kelly, 2004 for argumentative grammar rationale). The argumentative grammar that a conjecture map provides is vital to strengthening a DBR investigation along with the development of a deep contextual understanding of a local ecology, which arises from rigorous preliminary ethnographic investigation (diSessa and Cobb,

2004). A rationale for conjecture maps is now presented followed by a hypothesized conjecture map of co-teaching.

Conjecture mapping is a planned medium in which design researchers can weave embodied conjectures. They write specific predictive conjecture claims about learning environment designs and project impact with anticipated outcomes (Sandoval, 2014). According to Sandoval (2004), embodied conjectures are:

- Reified in tools, materials, and activity structures in ways that embody their hypothesized role in supporting learning;
- Predictive of outcomes at two levels: *Intermediate outcomes*, which are “observable patterns of behavior predicated by a model of how an embodied conjecture functions to support learning,” and; *Intervention outcomes*, which are “typical psychologically-driven learning outcomes,” (p. 215); and
- Predictive of interactions within their contexts of use.

Conjecture mapping includes projected claims about design as well as theory and can be housed under four foundational areas: *tools and materials*, *task structures*, *participant structures*, and *discursive practice*.

### **High-level Co-Teaching Conjecture**

A high-level conjecture about how to support learning in a co-teaching team is first presented to frame the holistic conjecture map. High-level conjectures shape subsequent design and theoretical conjectures focused on tool use, task completion, participant activities, and discursive practices in the learning ecology (Sandoval, 2014). The following high-level co-teaching conjecture results from careful review of the literature, specific knowledge of the

Northern Hills co-teaching environment, historical special education policies, and educational discourses:

*Creative and effective co-teacher learning is enriched through a collaborative vision including tasks and participant activities that support teacher and student instructional and learning goals.*

Most notably, co-teaching in this conjecture is viewed as more of a person-oriented practice rather than a traditional procedure-oriented practice. The entire conjecture map, which moves from the high-level conjecture to more precise levels, with increasing specificity, is presented in Figure 5.1. Each conjecture of Figure 5.1 will be explained in further detail and additional conjecture maps will be provided to illustrate each one. First, I will describe the *initial participant activity* of co-teaching, then explain and develop a full conjecture map of the hypothesized mediating processes, intervention outcomes and the measures that capture those outcomes. The same will be done for *task* and the *secondary participant activity*.

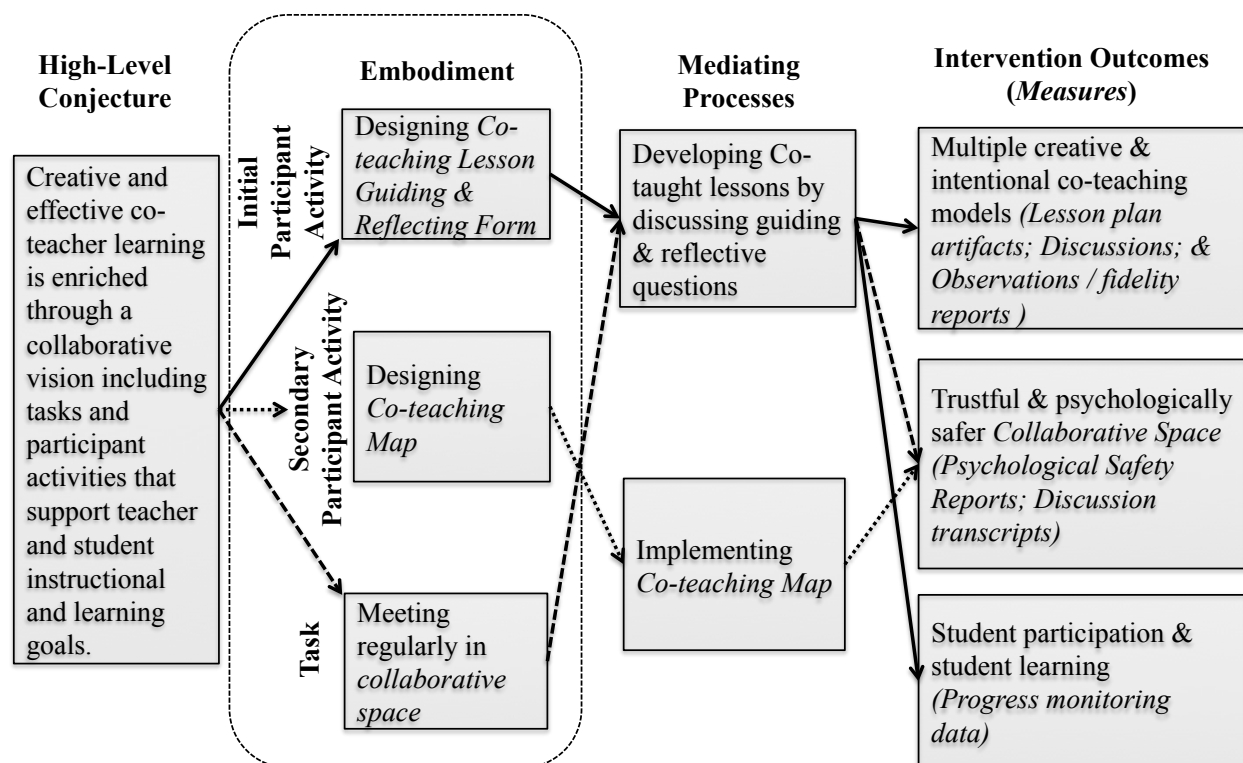


Figure 5.1 Complete Co-Teaching Conjecture Map (Sandoval, 2004; 2014)

### Initial Participant Activity Conjecture: Development and Implementation of Co-teaching Lesson Guiding and Reflecting Form

The conjecture map for the Initial Participant Activity is represented in Figure 5.2. The proposed activity conjecture is: The implementation of intentionally creative co-teaching practice and student participation will increase as co-teachers develop and implement the Co-teaching Lesson Planning and Reflecting Form.

**Initial participant activity.** The unique co-teaching setting provides an opportunity to investigate a conjecture focused on participant activities. Continuing Sandoval's (2014) description of conjecture mapping, a participant activity conjecture refers "to how participants (e.g., students and teachers) are expected to participate in tasks and the roles and responsibilities participants take on" (p. 22). In this setting, participant roles are collectively defined by one's professional vision, and also by a structured activity system involving planning and reflective

questions. These questions are co-designed between the lead researcher and the participating co-teachers and then used by those very designers. Guiding questions probe co-teaching decisions and reflect the local theory of practice, which exploration stage developed.

Guiding questions are designed to disrupt traditional co-teaching practices and diversify teachers' selection of different instructional co-teaching models. According to the literature review and as elaborated in previous chapters, an inability to vary co-teaching model selection is a significant barrier to effective co-teaching implementation. The conjecture infers that if there is an increase in intentionally creative models of instruction, then more student learning needs are addressed, thus improving student learning and achievement (Friend, 2011). Generating a local theory of the participant activity system and investigating the co-teachers' practice inform the guiding questions. Designing the guiding questions occurs through many collaborative meetings with the co-teaching team, which are compared alongside current co-teaching literature.

**Initial participant activity: Mediating processes.** Design, development, and implementation of the Co-teaching Lesson Guiding and Reflecting Form questions mediate the creative co-teaching. Guiding questions are generated through the initial qualitative exploratory investigation of the Northern Hills co-teaching practice (Merriam, 2009), current co-teaching literature (Cook et al., 2011), and relevant social service delivery literature (Powell et al., 2009; Ogawa et al., 2008). Merging habitual problems of practice with locally identified problems of practice attempts to build capacity between practitioners and researchers as well as generate new co-teaching theory – ideals documented throughout DBR literature. Most importantly, the guiding questions are both closely reliant upon, and designed to building, local teachers' knowledge, commitment, community, and learning resources.

By co-designing and implementing this lesson development tool, the intention is to shift co-teachers' attention and learning to instructional delivery that is responsive to student-learning needs. Furthermore, Benedict and colleagues (2013) have written about the lack of deep practitioner learning in the inclusive classroom setting. The researcher goes so far as stating, "few methods to support deep coordination between general and special education instruction have been developed" (p. 30). In order to fill this need for deep coordination, guiding questions are introduced to co-teachers with a much stronger foregrounded emphasis on student grouping and membership, instructional delivery, and leveraging both practitioners' expertise. Guiding questions are directed to disrupt restrictive traditional teaching arrangements and facilitate student-centered instructional approaches. Another vital concern is considering how instructional delivery can be altered.

At the heart of creative co-teaching arrangements is a need to differentiate instruction. Differentiated instruction (DI) integrates effective structures and instructional delivery methods to ease transition from traditionally restrictive teaching styles. Framing DI methods specific to literacy may lead to an increase in students returning to tier 1 instruction from intensive tier 2 and 3 literacy instruction and subsequently reduce student referrals for special education services. Instruction must be differentiated in order to achieve an inclusive classroom that addresses the wide student variance with respect to instructional needs including students with Reading Disability, English language learners, and tiered literacy supports.

Differentiating instruction is critical for students of various linguistic, intellectual, and learning abilities to access curriculum in a classroom and to meaningfully participate in that inclusive classroom (Friend & Bursuck, 2011). Common techniques to differentiate instruction categorizes instructional moves in four ways: 1) teaching *content* (i.e. knowledge and skills

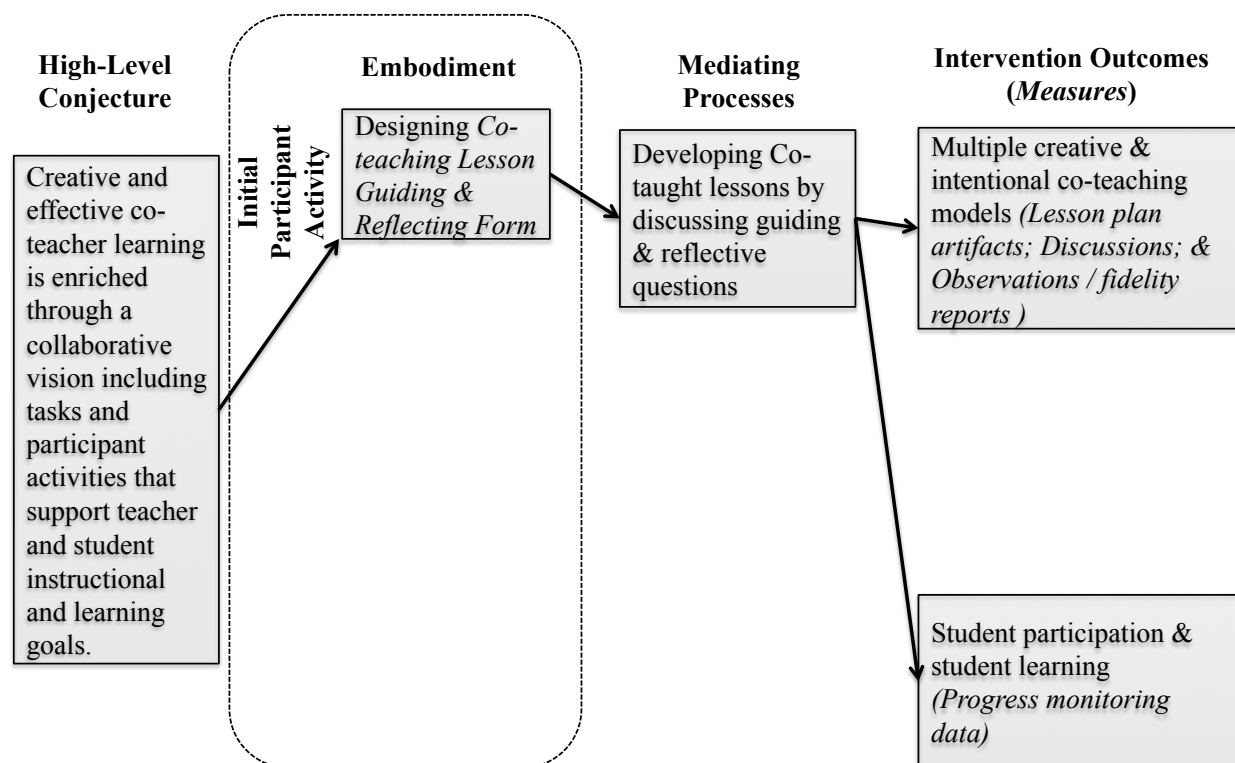
students need to master); 2) *process* (i.e. activities students use to master the content); 3) *product* (i.e. method students use to demonstrate learning); and 4) *environment* (i.e. physical arrangement of learning centers) (Tomlinson, 1999; Tomlinson & Imbeau, 2010). Framing instruction in these differentiated constructs provides participating co-teachers with a common instructional language to negotiate goals, develop lesson plans, and negotiate instructional delivery. Differentiating instruction thus becomes a critical conduit or mediating process to the conjecture outcome of observing more intentionally creative co-teaching instruction. An increase in creative and intentionally differentiated instructional practice is theoretically conjectured to result in improved student achievement, membership, and participation.

**Initial participant activity: Intervention outcomes and measures.** The initial participant activity conjecture is measured multiple sources of data. The use of multiple sources strengthens the conjecture and understanding of the co-teaching activity system. Sources of data include co-taught lesson plans, transcripts from co-planning sessions, observational field notes of co-taught lessons, and lastly, a completed Co-teaching Guiding and Reflecting forms (see appendix).

Lessons plans and co-planning session transcripts are vital to understanding the intentions generating co-teaching instructional decisions. In our activity system, lesson plan discussions will address the co-designed guiding questions. Through qualitative data analysis, themes appear regarding co-teacher decision-making intentions and rationales. As provided in the previous section, the guiding questions have been designed to direct co-teachers to answer questions concerning lingering traditional barriers to co-teaching: reliance on only one co-teaching model, the lack of meaningful special educator involvement in lesson delivery, and student grouping and differentiation of instruction. Co-teaching measures will also include classroom observations to

ensure the execution of co-planned lessons. The intention is to triangulate what the co-teachers are saying with what actual instruction is provided.

Another data source for this conjecture is long-term and short-term student data in the forms of district-required literacy benchmark scores as well as student-specific progress monitoring data. The intention of collecting this data is to understand the impact of creative co-teaching on student learning and achievement. Student assessment data is historically neglected from co-taught classrooms, but is routinely used in high performing classrooms (Kerr, Marsh, Ikemoto, Darilek, & Barney, 2006). Current district benchmark assessments align with federal Common Core State Standards and are obtained three times per school year. Thus, student data is used as formative assessments that influence co-teaching decision-making. Student progress monitoring data includes both class-wide student literacy data as well as individualized education program data from student with special needs. A departure from standardized district-mandated data, the student progress monitoring data provides a more curriculum-specific growth model for this investigation.



**Figure 5.2** Initial Participant Activity Conjecture (Sandoval, 2004; 2014)

### **Second Participant Activity Conjecture: Co-designing and Implementing *Collaborative Teaching & Learning Map***

The conjecture map for the second participant activity is presented in Figure 5.3. The proposed conjecture in this learning environment is: The co-design and implementation of a co-teaching specific support tool termed, *Collaborative Teaching & Learning Map*, will develop a trusting and psychologically safe *collaborative space*.

**Second participant activity.** The second participant activity involves design and implementation of a second, more long-term co-teaching support tool. The tool will represent a map or compass since it assists co-teachers to navigate their co-teaching contexts. The co-design of this tool aims to provide a common co-teaching language to assist with navigating the tricky and sensitive co-teaching topics such as peer performance. Co-teachers are given a chance to be anchored to co-teaching practice with this tool, rather than talking in a nebulous manner, which

is often the case (Friend, 2010). The *Collaborative Teaching & Learning Map* (see appendix) will serve as both a joint enterprise (Wenger, 1998) to understand local contextual factors pertaining to our participant's practice, as well as another boundary object (Akkerman and Bakker, 2011) to guide practitioners toward more ideal co-teaching practices.

This participant activity is a direct attempt to address what Akkerman and Bakker (2011) describe in their literature review of boundary-crossing laboratories in which, "people from different systems of activity are invited to meet to discuss and work on shared problems at the boundary, with the researcher acting as a mirror confronting people with the problem they share," (p. 149). This is precisely the strength of using a DBR approach to investigating co-teaching. Problems of practice are identified through local learning theory and integrated with the aforementioned review of co-teaching literature. An intended outcome of this mediating tool is a form of transformative agency for the special educator and general educator by encouraging more precise discourse between co-teachers as they talk about the status of their current practice and where they need to improve. In other words, this tool mediates each practitioner's individual understanding of his or her co-teaching practice and enables him or her to discuss that perception with the other co-teacher.

**Second participant activity: Mediating processes.** Essentially, this tool is both a metacognitive and reification activity. Participants in this study actively co-design general co-teaching tools and then implement those very tools to improve their own contextualized practice. The map provides a succinct way for a co-teaching team to reflect, and *act*, on their practice in meaningful ways. Co-teachers are also held accountable for their understanding of fundamental co-teaching practices and their specific role in improving those practices. The map's

accountability measures and common language support both co-teachers in navigating the often unclear or nebulous co-teaching activity system.

Operating in the unique co-teaching setting calls for participant reflection and motives attempting to capture a clear understanding of co-teacher action. Semi-structured interviews will be conducted to probe thoughts on individual identity (Edwards, 2012) and professional vision (Goodwin, 1994). The intention is to conceptualize a collaborative space, which is a hybrid space not owned by a single professional discipline, but a unique space reserved specifically for practicing co-teachers. In addition, written artifacts will be analyzed for discursive practices that reveal distinctly unique co-teaching collaborative space features.

Discussion of tools will inherently be a metacognitive activity for participants that will mediate the co-teaching collaborative space. Initial discourse analysis occurs at the beginning of the collaboration as professional visions and personal identities are captured in interviews along with several other strategic interviews throughout the year. One's professional vision and goals may often be a window to motives of practice and professional purpose. Professional vision has been defined by Goodwin (1994) as, "a way to describe the ability that members of a professional group share for interpreting phenomena central to their work," and it involves ways of, "seeing actions that are answerable to the distinctive interests of a particular social group," (p. 606). Professional vision is therefore important to understand, particularly since our co-teaching social group is a distinct learning ecology that is significantly under-researched and theorized. Adding to the complexity of co-teaching is the fact that the collaborative space includes both discursive practices, as well as the literal classroom that we are attempting to physically redesign to address unique co-teaching features. The collaborative space is complex, but necessary to

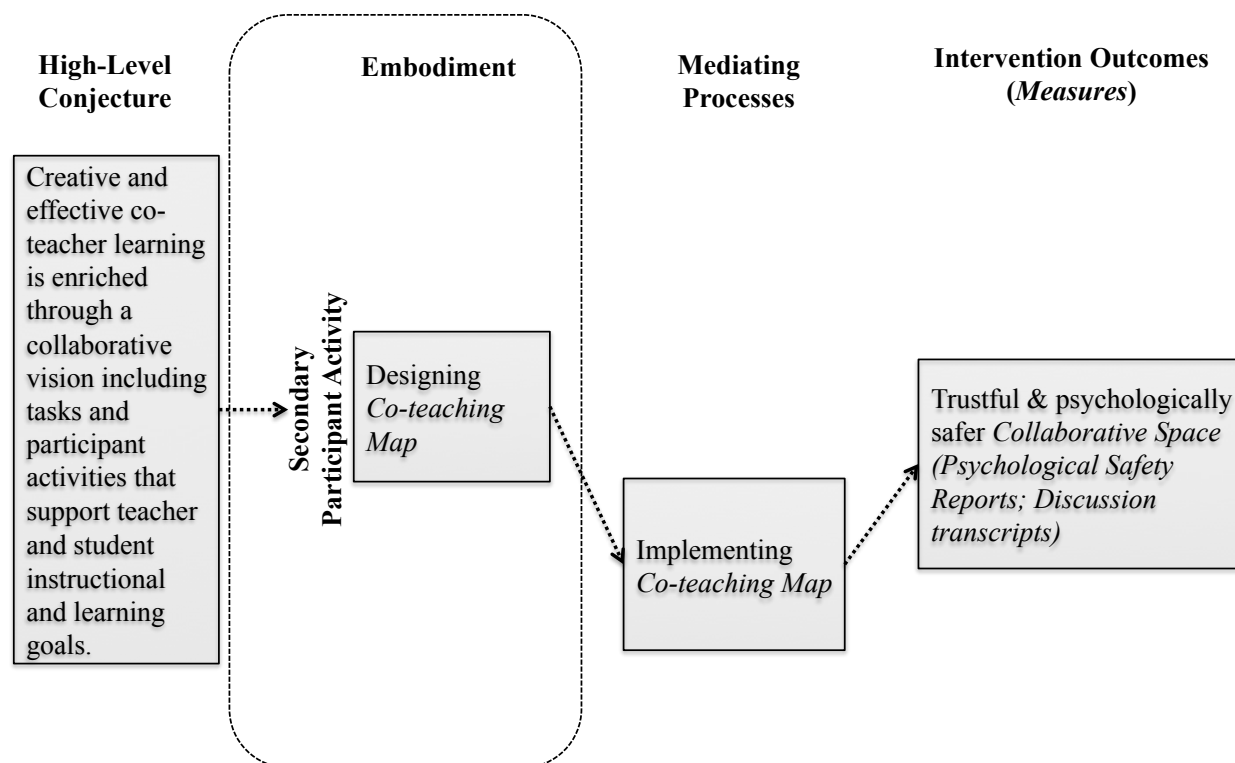
mediate since it is foundational to the co-teaching activity system. The collaborative teaching & learning map is designed to directly consider, and intervene on, the collaborative space.

Due to the importance of discursive practices on the development of the collaborative space, outcomes hinge on the use of inclusive language. Observing more inclusive language and language that denotes equality of all co-teachers contributes to workplace psychological safety and will be an indicator of the collaborative space. Language of equality will appear in interviews and co-planning sessions. Discourse will also be analyzed for language that denotes equality during classroom observations and language used in written documents from our participants. For example, co-teachers are discouraged from corresponding with other teachers, parents, or outsiders using terms that designate ownership of students to particular teachers. That language is not inclusive and does not create an equitable environment.

As investigation and implementation progresses, participating co-teachers will be asked to provide reflections of teaching practices and critiques of both their practice as well as their partner's practice. Reflection is a powerful mediating process that encourages practitioners to attend to instructional delivery, arrangements, and goals, as outlined in the co-teaching trajectory map. All of these components are integral to achieving the other discursive practice conjecture outcome of making a true paradigmatic shift of co-teaching. The resulting shift moves from a traditional procedural orientation to a person-oriented practice focusing on practitioner capacity-building (Cook et al., 2011). A DBR co-teaching investigation facilitates the very paradigm shift in co-teaching that was presented in chapter 1, while simultaneously addressing IES concerns of sustainability and practitioner empowerment. Measures of mediating processes are vital to outline in order to understand the influence of, and relationships between, co-teaching features.

**Second participant activity: Intervention outcomes and measures.** Designing and using the collaborative teaching & learning map is conjectured to create a psychologically safe collaborative space. As previously mentioned, this space is literal and metaphorical in nature. The literal space is one where the general education classroom, the location where co-teaching occurs, is transformed into the collaborative classroom to avoid the aforementioned ownership tendencies from the general educator. The transition to a collaborative space intends to also provide a metaphorical space for the equality of the special educator to fully occur. If the mentality of one educator owning the classroom, and the other educator visiting the classroom as a tourist persists, then equality is undermined. Discussions between the general and special educator will be transcribed and qualitatively analyzed in order to understand perceptions of their treatment in the co-taught classroom. This analysis will also include perceptions of their expertise in a classroom and whether that expertise is being leveraged, thus moving towards professional equality and a collaborative space.

Mutual design of mediating tools (lesson guiding & reflecting form; map) and co-teacher's participation in joint activity (tool implementation) is conjectured to disrupt traditional classroom instruction. This disruption is also conjectured to increase constructive and critical instructor analysis of participant performance as well as their performance.



**Figure 5.3** Secondary Participant Activity Conjecture (Sandoval, 2004; 2014)

### **Task conjecture: Creating trustful and psychologically safe collaborative space**

A task-specific conjecture map is presented in Figure 5.4. The proposed task conjecture in this learning environment is: A trustful and psychologically safe *collaborative space* will be developed by identifying and acting on historical problems of co-teaching practice through reflecting on instructional practice, discussing guiding questions while developing co-teaching lesson plans, and implementing the collaborative teaching & learning map.

**Task.** As previously mentioned, the co-teaching activity system is complex. Its complexity, however, must not deter a holistic investigation of it. This investigation, and specifically this task conjecture, is intended to support the development of a collaborative space and improve the psychological safety of each co-teacher. Psychological safety is central to a worker's willingness and ability to constructively critique co-workers' practice in the workplace.

A promising avenue to combat the resistance to these face-threatening conversations is the presentation of psychological safety language and constructs.

Professional working groups may be able to navigate workplace needs and conflict by acknowledging both *self* psychological safety, as well as *other* psychological safety. *Self* psychological safety is one's feelings of safety in relation to a specific other person, whereas *other* psychological safety is the term capturing how psychologically safe one perceives another person to feel in relation to them. Tynan (2005) found sensitivities of *self* and *other* psychological safety actually mediate the likelihood someone "will directly, unambiguously, and in a timely manner communicate a task-relevant, face threatening piece of information" (p. 224). Important and potentially disagreeable information is frequently needed to be discussed as co-teachers plan and instruct, therefore constructs focusing on psychological safety and individual behavior in organizations help frame co-teachers' communication patterns and this language is strategically used in the Collaborative Teaching & Learning Map.

Another facilitating factor to divulging face-threatening information for various professional team members is an explicit mutual respect and trust. Trust in this instance is the willingness to engage in interpersonal risk-taking with the self-assurance that other members of the team will not ignore, humiliate, or chastise them for bringing up critical information (Edmondson, 1999). This nuanced framing of trust is more explicit than the aforementioned 'checklist' representation of trust that was presented in the previous co-teaching literature (*see* chapter 2), and may be more supportive. Self and other psychological safety has been shown to be positively correlated with team camaraderie and performance, which includes behaviors such as: seeking information, speaking up to test teammates' assumptions, reflecting on work processes, paying attention to feedback, and asking for help (Edmondson, 1999). Tynan (2005)

suggests a key to promoting this very critical face-threatening information by stating, “if individuals perceive their supervisor as being likely to uphold their face and to take care of their feelings, they may be more likely to feel emotionally safe in the relationship” (p. 231). Co-teachers should therefore be given language around types of psychological safety and a reflective space to gauge its presence in their workplace. They may need language that describes the need for divulging and receiving face-threatening information so that aforementioned co-teaching barriers can be navigated in meaningful ways.

Tynan (2005) noted that critical news in work places was regularly shown to be received/delivered late, unrecognizably, or not at all, even if it would have been helpful for the recipient to have the information. Within a co-teaching partnership it is important to explicitly describe the need for psychologically-safe criticism and praise. In addition, co-teachers should be able to admit and challenge errors in a psychologically safe manner. Ideally, a team may be formed of members who enthusiastically question each other’s errors, participate in fruitful error correcting, and readily share mistakes (Kruzich & Timms, 2009). Along this logic, self and other psychological safety will improve as co-teaching teams intentionally traverse a path of developing the *collaborative space*. Psychological safety is integral to develop co-teaching relationships.

A *collaborative space* is an embodiment of historical and contextual problems of co-teaching practice to be addressed in this project. The literature is clear that if a *collaborative space* is not developed and nurtured, power and identity differentials and imbalances will undermine the potential instructional impact of co-teaching (Friend et al., 2010).

**Task: Mediating processes.** Fundamentally, this task is intending to address many of the historical barriers that the co-teaching literature has outlined. A collaborative space is vital to

co-teaching implementation, but few tools exist to directly intervene and support its creation. Benedict and colleagues (2013) describe the need for supportive frameworks between social service delivery professionals when they write, “consistency of group membership supports teams in establishing a trusting, collaborative community conducive to risk taking and critical discourse” (p. 24). Co-teachers’ risk-taking and critical discourse must be navigated thoughtfully so that both self and other psychologically safer spaces develop. For example, in the case of teachers, critical news is often delayed, distorted, or not communicated at all, even if it would be beneficial for the hearer to have the information. Additionally, professional colleagues often do not admit or challenge mistakes, thus maintaining distance in the relationship and undermining a safer psychological space (Edmonson, 1999). Safety is also dependent on specific contexts in which co-teachers work.

In response to contextual factors, practitioners will identify targets that their practice is intended to address. Co-teachers then construct goals and lesson plans in response to those targeted practices or behaviors. Meeting regularly for self and peer reflection is essentially a monitoring system increasing practitioners’ intentionality due to their ownership of lesson development and implementation. Both co-teachers’ individual and mutual reflection on instruction will inform future lesson plans as well as shape instructional goals. The transcriptions of planning sessions will reveal problems of practice.

Of particular interest will be the mediating objects and processes that co-teachers employ. These are interesting because often they force a co-teaching team to identify a practice, set a goal for that practice, and following its implementation, they must assess their progress. This is an instructional cycle. Goal-setting sessions are also transcribed and analyzed qualitatively to understand reflective nature of co-teachers and detect any indicators of whether a

collaborative space is indeed developing. This will also reveal teacher motivations for adaptation, providing ‘glimpses’ into co-teacher motives. By discussing the barriers and facilitators (mediating processes) of co-teaching, building a *collaborative space* and leveraging both practitioners’ expertise, may be achieved.

**Task: Intervention outcomes and measures.** Development of the unique co-teaching *collaborative space*, which shifts co-teaching from a procedural orientation practice to a person-centered orientation and one of equality, is central to this conjecture. Additionally, another outcome is an increase in co-teaching capacity produced through leveraging both teachers’ strengths and expertise. This specific task conjecture is outlined in Figure 5.4. Specific elements in a collaborative co-teaching space include language of equality, which was outlined in the previous conjecture, but also includes instruction elements. For example, literacy is the subject of investigation and teacher language discussing how student data and scaffolds will guide instruction to be differentiated.

Also, student achievement outcomes will include scores and individual percentage growth found across curriculum-based measurements (CBM) or district-mandated benchmark assessments, and will be aggregated across the classroom to develop a common quantitative metric of analysis. This score aggregates students’ literacy benchmarks (e.g. CBMs, Smarter Balanced Tests, DIBELS, Aimsweb, IEP benchmarks, etc.) and provides yet another perspective on classroom performance. Analyses of this nature will help to triangulate the other investigative methods to test this conjecture demonstrating complexity that shapes DBR.

Lastly, outcome measures will also include qualitative discursive transcript analyses as well as a quantitative psychological safety questionnaire. The questionnaire will be analyzed to inform whether the safety of each co-teacher is in fact being nurtured in the collaborative space.

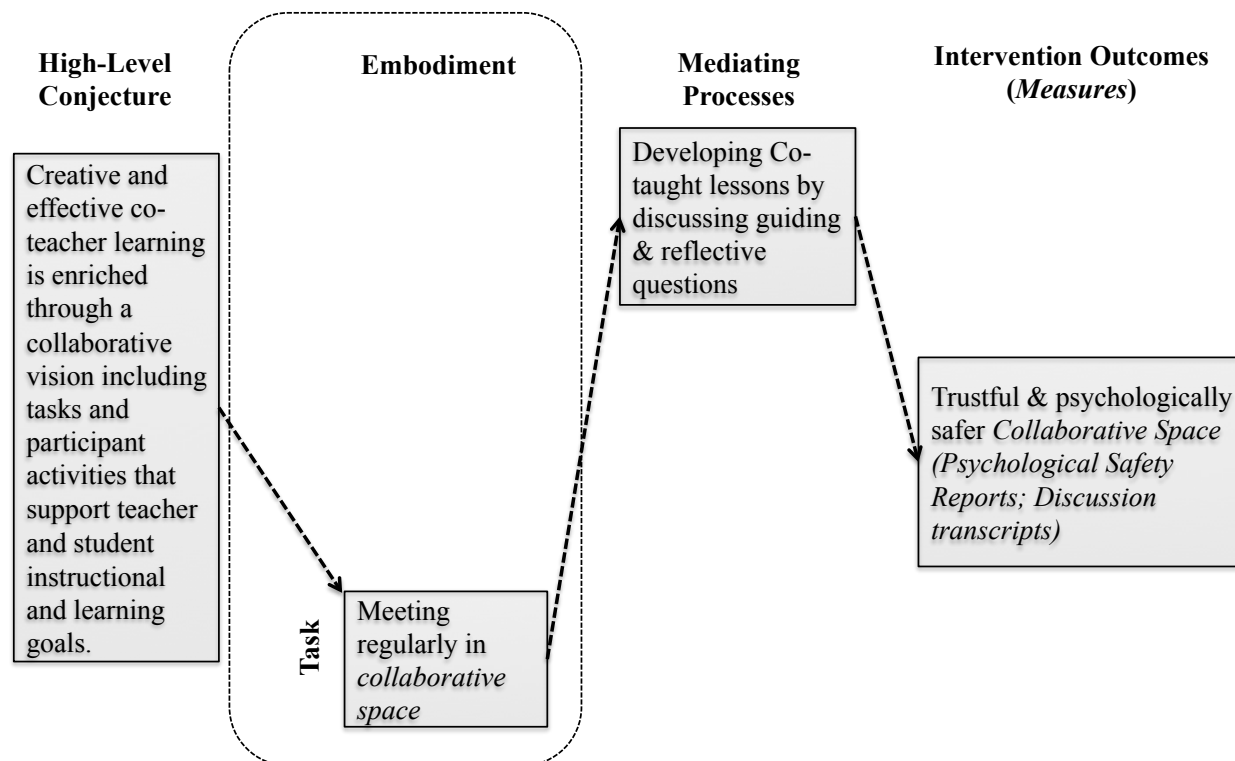
As previously mentioned, co-teacher equality is dependent on the psychological safety of both educators. Analysis of psychological safety is adapted from previously cited research by Edmonson (1999) in which an empirically tested psychological safety questionnaire was developed.

The questionnaire is highly relevant to the co-teaching activity system in which multiple professional team members attempt to deliver and receive face-threatening criticism. The anonymous questionnaire has responses on a 7-point Likert scale with the following selection options: 7 = *Very true of what I believe*; 6 = *True of what I believe*; 5 = *Somewhat true of what I believe*; 4 = *Neutral*; 3 = *Somewhat untrue of what I believe*; 2 = *Untrue of what I believe*; 1 = *Very untrue of what I believe*. The adapted questionnaire includes the following prompts, which collectively generate a safety scale (Appendix J):

1. *If you make a mistake on this team, it is often held against you.*
2. *Members of this team are able to bring up problems and tough issues.*
3. *People on this team sometimes reject others for being different.*
4. *It is safe to take a risk on this team.*
5. *It is difficult to ask other members of this team for help.*
6. *No one on this team would deliberately act in a way that undermines my efforts.*
7. *Working with members of this team, my unique skills and talents are valued and utilized.*
8. *This team frequently seeks new information that leads us to make important changes.*
9. *People in this team often speak up to test assumptions about issues under discussion.*

Co-teachers will be asked to answer the adapted psychological safety scale three times during the school year to monitor the development of a safer space for co-teachers. The scale will reveal to co-teachers another perspective of their collaborative space and the conditions

necessary to constructively provide and receive critical peer feedback. Co-teachers' psychological safety is a major hurdle to effective co-teaching, as was discussed in previous chapters, and this specific conjecture is attempting to disrupt that barrier. These data sources provide a holistic picture of co-teaching and inform the rigorous theory development of co-teaching practice and learning.



**Figure 5.4** Task Conjecture (Sandoval, 2004; 2014)

### **Design-Based Research:**

#### **Conclusion, Impact, and Transition from Exploration to Initial Design Phases**

DBR investigations intentionally privilege practitioners' expertise in their context and this investigation is no exception. There is no prescribed practice for these co-teachers, but rather, broad frames of instruction and support tools that get adapted to their environment. Our investigation is addressing the challenging task of aligning multiple pieces of appropriate evidence with the complexities of contextualized teaching practice (Collins, 1992). Various

tools in this investigation (lesson guiding questions and a co-teaching developmental trajectory map) mediate power relations by leveraging each co-teachers' expertise, mediate language barriers by providing a common language, and mediate student marginalization by ensuring student data and instruction is the focus of co-teachers' planning sessions. Co-teaching is a vital, yet under-researched and under-theorized method of instructional delivery to improve Inclusive Education outcomes. At the heart of co-teaching is human learning at both the student and teacher level, and therefore our socio-cultural perspective can pierce through the activity system and reveal authentically supportive tools designed to mediate co-teacher growth and this investigation aims at doing that very piercing.

Following the exploration phase of a DBR investigation is the transition to the initial design phase. As was revealed during the exploration phase through public discussion of goals and several thoughtful discussions of interview responses, initial designs have begun to take shape. It has been agreed that two tools will be iteratively co-designed and implemented to support co-teaching at Northern Hills. Co-designed as a research team, the first tool is a set of lesson plan guiding questions and the second is a co-teaching developmental trajectory map (see appendices). Lesson plan guiding questions are to be designed to succinctly, yet directly interrupt the observed and discussed traditional forms of instruction in the co-taught classroom.

These questions cannot be a burden on practitioners to ensure that they are not discarded or scoffed at, but rather intentionally addressed to generate creative and intentional co-taught lessons. These are unique questions that do not exist in the co-teaching literature. Existing questions in co-teaching literature tools (Murawski & Dieker, 2004) are beneficial to co-teaching; however, intentions of our co-designed questions are to generate creative instruction and *guide* co-teaching. This is fundamentally different than only providing questions after

instruction in a reflective manner. The design decision to move from *reflective* questions to *guiding* questions was Amy's suggestion, which underscores the collaborative agenda of this research. Initial questions included:

- How is the selected co-teaching instructional delivery model appropriate for the lesson activity/goals?
- How is the arrangement creating an equal professional approach to instruction?
- How is/are student needs/performances informing instructional goals?

Following several planning sessions with the co-teaching team—both in person and through email exchanges—the initial questions have been iteratively improved to optimize their disruptive intentions as well as usability. The influence of the co-teaching team is integral to the co-design. The current iteration of guiding questions includes:

- What is/are your selected model(s) of co-teaching? Why (is it/are they) appropriate for the lesson?
- What are the roles of each practitioner in the selected model, and why?
- How are students positioned physically (grouped) and supported in a differentiated method in the selected model?
- What student tools are needed?
- Are any student products collected, or assessments/progress monitoring data?

An additional outcome to assist with this, as well as other, co-teaching teams is an all-encompassing tool that supports navigating the co-teaching process. As was revealed throughout the months of observations and interviews, the team has explicitly stated the ambiguity of responsibility and absence of communication delving into specific co-teaching roles and conflicts creates a situation that does not optimize the potential of co-teaching. Co-teachers at

Northern Hills have expressed their desire to co-design for creative co-teaching, which has surfaced innumerable times throughout this exploration stage of inquiry. For example, when posed with a direct question about supportive co-teaching tools, Amy said:

The first tool would be encouraging communication skills, especially when you're working with the gen ed teacher... It's having whatever skill that is to put yourself out there to, say, 'yes, I am going to be an equal member of this classroom, I want to be on an equal playing field'... 'I'll teach lessons, you teach lessons, or you teach lessons, and I'll do this over here, you know whatever it is, whatever model, but it's *equal*'... I mean, but not being so pushy that the [gen ed] teacher is defensive, so knowing how to work that fine line, because I can't just walk in the door and expect that it's going to be equal, that doesn't happen, so I need to somehow find ways to make sure that that's happening without offending them, it's that fine balance.

In this representative quote, Amy expresses a need for tools that progress the co-teachers' professional partnership in a psychologically safe manner. Therefore, one function of the tool is to encourage conversations between co-teachers that promote a collaborative space and the acknowledgement of each co-teacher's professional expertise. To this end, the team is using findings from the exploration year to co-design a tool specifically targeting barriers to the local implementation of co-teaching. Early prototypes of the navigation tool (see appendix) appear as a rubric and define the stages of development a co-teaching pair navigates as they move through their practice together. All constructs of the tool come from exploratory stage results, and the language used in the tool is co-designed and co-written with the participants. The tool also contains strength-based language, which aims to ensure each practitioner navigates his or her practice with a mediating instrument leveraging his or her expertise in meaningful ways.

## Chapter 6:

### Initial Design Phase (*summer 2015*): Decisions and Tool Prototypes

#### Initial Design Phase Decisions

In this chapter the initial design phase of the research project is described. According to DBR principles, a project's initial design phase follows the exploratory investigation and integrates those findings with learning principles to intervene on participants' practice (Brown, 1992; Gravemeijer, & Cobb, 2006). Preliminary design ideas were discussed at the goals session during the 2014-2015 school year and this chapter focuses on the development of tool prototypes, which occurred during the summer of 2015. The chapter starts with a description of participating co-designers, their motivations for participation, followed by design elements and principles of our two novel co-teaching tools.

#### Participants

**Amy.** As described previously, Amy is the special education resource room teacher at Northern Hills. She has taught for twelve years, and as a resource room teacher in her district, Amy's primary responsibilities typically include providing specially designed instruction to those students who have been determined by a multidisciplinary team to have a learning difference or behavioral disorder. Amy is a very effective instructor – as determined by student IEP goal improvement, district psychometric evaluations, and anecdotal accounts from colleagues – and is very comfortable providing specially designed instruction. Over time however, Amy has found that even with the best support her team can provide in the resource room, there is still what she has termed as a “disconnect” between resource room instruction and the general education curriculum. Amy has thus become an advocate for supporting students with learning differences in their general education setting. So along with urging from the

district office, Amy attempted to employ co-teaching, as an instructional model to support student learning needs in the inclusive environment.

Amy had been motivated to alter the special education model at Northern Hills that relied on a separate resource room for student supports, so she actively sought a co-teaching partnership, which was described in detail in previous chapters. Although not ideal, her experience was one that provided many learning opportunities and pushed Amy to become more strategic with relational, instructional, planning, and classroom co-teaching decisions. Those experiences laid the foundation for Amy's perspectives on the design of the co-teaching tools, as well as her motivation to approach the 2015-2016 school year differently.

The exploration stage of my study really focused on Amy's experience with Carol and Heather, however, it was discovered in June 2015 that neither Carol nor Heather would return to Northern Hills for the 2015-2016 school year due to different personal and political reasons. Therefore, Amy was partnered with a different general education co-teacher – Maggie. This fresh new partnership afforded different professional possibilities based on Amy's reflection of her first attempt at co-teaching and the ability to meet with Maggie before the start of the new school year.

**Maggie.** Although Maggie had taught at Northern Hills in the past, she did not teach there during the 2014-2015 school year because she was on maternity leave. By looking at student enrolment and special education eligibility data for the next year, Amy determined that Maggie would be a general education teacher who would have a high amount of students with learning differences in her room and decided to reach out to her for the professional partnership. Maggie agreed to be a co-teacher with Amy and an active member of our research team.

### **Motivations to Participate**

Maggie, who is from Okinawa, is a veteran teacher of over a decade and became a general educator after several years as an English Language Learner (ELL) instructor. Maggie's experience as an ELL instructor laid the foundation to her teaching philosophy, and has had a very significant impact on her approach to general education instructional design and delivery. It also swayed Maggie to strongly support the integration of all learners into the general education classroom.

As an ELL instructor, Maggie's primary responsibility was to accomplish the challenging task of developing language skills in students of varying abilities and English fluency while simultaneously attempting to reinforce the general education curriculum and instruction. ELL instructors are tasked with these goals, which are very similar to Amy and many other resource room special educators' tasks. It was clear that the similar shared experiences of Maggie and Amy closely aligned their professional philosophies and approaches. For example, as an ELL instructor, Maggie had been positioned professionally as an outsider to the staff and profession on multiple occasions. Struggles Maggie faced by supporting students in multiple environments as an ELL instructor increased her empathy to Amy's struggle while trying to implement co-teaching. She expressed particular empathy towards Amy's feelings of inequality and perception that she's, as Amy phrased it, "constantly stepping on someone's toes." Empathizing with Amy's feelings is important since they were a contributing factor in her confusion of how to collaborate meaningfully and her marginalization in the classroom.

Maggie's empathy for Amy and her experience both as an outsider visiting someone else's classroom and instructor attempting to support the student learning across multiple environments motivated Maggie to participate in our initial planning and tool design sessions. Those shared experiences also drive Maggie's expectation for a co-teacher to take strong

initiative and be very active in the collaborative space. For example, when asked about how she may view her co-teacher, Maggie responded with an anecdote from her experience:

And so when- When I had a teacher that I was working with, she was gen ed I was ELL, I'm like, "okay and now we're going to do an activity, and now we're going to take the paper and rip it up and all the kid- each team is going to make a sentence and then we're going to put it all together," she's like, "I don't have time for that, I am not singing in front of my class!" Later on she became the mistress of tunes and she really excelled.

Maggie used this story to highlight her experience collaborating the assertiveness that she had and subsequent assertiveness she expects out of a co-teacher. Maggie added, "I don't expect them [co-teacher] to take a backseat. I expect them to jump in when they feel that there's something that they have to add or that there's something that I missed. Both academically and behaviorally."

When asked privately for her motivation to volunteer and be a co-teacher, Maggie responded "the more the merrier...the more influences that the children have and brains that the children have to draw from the better. Because every teacher has their holes, has their strengths, has their weaknesses." Maggie's enthusiasm even led to her participation to co-design the initial tool prototypes before the start of the school year, during the 2015 summer. As a general educator, Maggie's voluntary participation with designing and integrating her diverse perspective, voice, and position significantly strengthens the quality of our tools.

With a lack of effective co-teacher communication during the 2014-2015 school year, Amy, Carol and Heather all felt unprepared and confused in a misunderstood space. As was reported in previous chapters, a space to support the co-teachers to take instructional risks or raise concerns about classroom access and student participation was not fully developed. In

response to these experiences and feelings of unpreparedness, Amy was clearly motivated to begin early preparations for the 2015 – 2016 school year. This work included clear communication and collaboration during the summer to design and develop co-teaching tools to support their practice for the school year.

During exploration phase discussions and interviews, Amy described the desire to fundamentally change her environment and the learning outcomes for students. Amy wanted to use her previous experience to think about equality and distribution of professional responsibilities to motivate her to be as prepared as possible for her next attempt at co-teaching. Even though she would not be teaching with her, Amy was committed to following Carol's advice when Carol described how valuable open communication with the students on the first week of school would be to reinforce co-teacher equality in the classroom both among the students, but also among the co-teachers. Carol really underscored this point as she described the value of establishing equality early when she asserted:

It seems like you would want to set that [tone] up from the get go. Say, 'hey everyone, welcome to the first week of school, and I know you guys know Ms. Amy, and I'm so lucky because she's gonna be in here teaching with me this year, which is really great for you guys because now you have two teachers.'" Instead of, "oh Ms. Amy's with us today, so Ms. Amy go back to your table," I think it's that delivery for the kids too."

Carol underscored the need for preparation and communication for co-teacher equality, perhaps by telling the students that they have two equal teachers she would confirm the partnership publically and internally. Regardless, Amy took this advice and knew it would be imperative to establish norms with her new partner and have that preparation anchored in artifacts intended to transform their practice all year.

Early preparations also ensure that both special education and general education perspectives are leveraged in the design of the co-teaching tools, thus representing the diversity of professional viewpoints, histories and cultures. The integration and equal contributions were intended to give agency to both practitioners and strengthen communication pathways, particularly so that they could negotiate the rationale for instituting co-teaching. By surfacing and discussing motivations to participate, Amy and Maggie were able to gain more clarity for their role as well as each other's role.

### **Research Team Meetings**

Maggie and Amy agreed to meet at a community-based location in their school district to design and write the content for the tools. Additionally, co-designing intervention tools supports implementers' perception that the intervention is internally developed thus increasing the likelihood of effective implementation during the school year (Damschroder et al., 2009).

The research team met during five in-person design sessions that lasted roughly 2.5 hours each. Conversations started broad by covering the rationale and fundamentals of Design-Based Research, including my role and motives as an outside researcher and argument for practitioner participation in research (i.e. positioning community practitioners as knowledge sources; Wallerstein, & Duran, 2006). We also covered co-teaching policy and its literature base and the co-teaching implementation framework. Then discussions became more specific to how co-teaching was attempted at Northern Hills while Maggie was on maternity leave, and how Maggie and Amy could conceptualize their practice during the upcoming school year. Naturally, discussions regularly wove general co-teaching comments with comments specific to the context, structure, and history of Northern Hills. We then advanced into deeper discussions about the content and design of the co-teaching tools including the design elements and design principles

of the tools: (1) *Co-Teaching Lesson Guiding and Reflecting Form*; and (2) *Collaborative Teaching & Learning Map*.

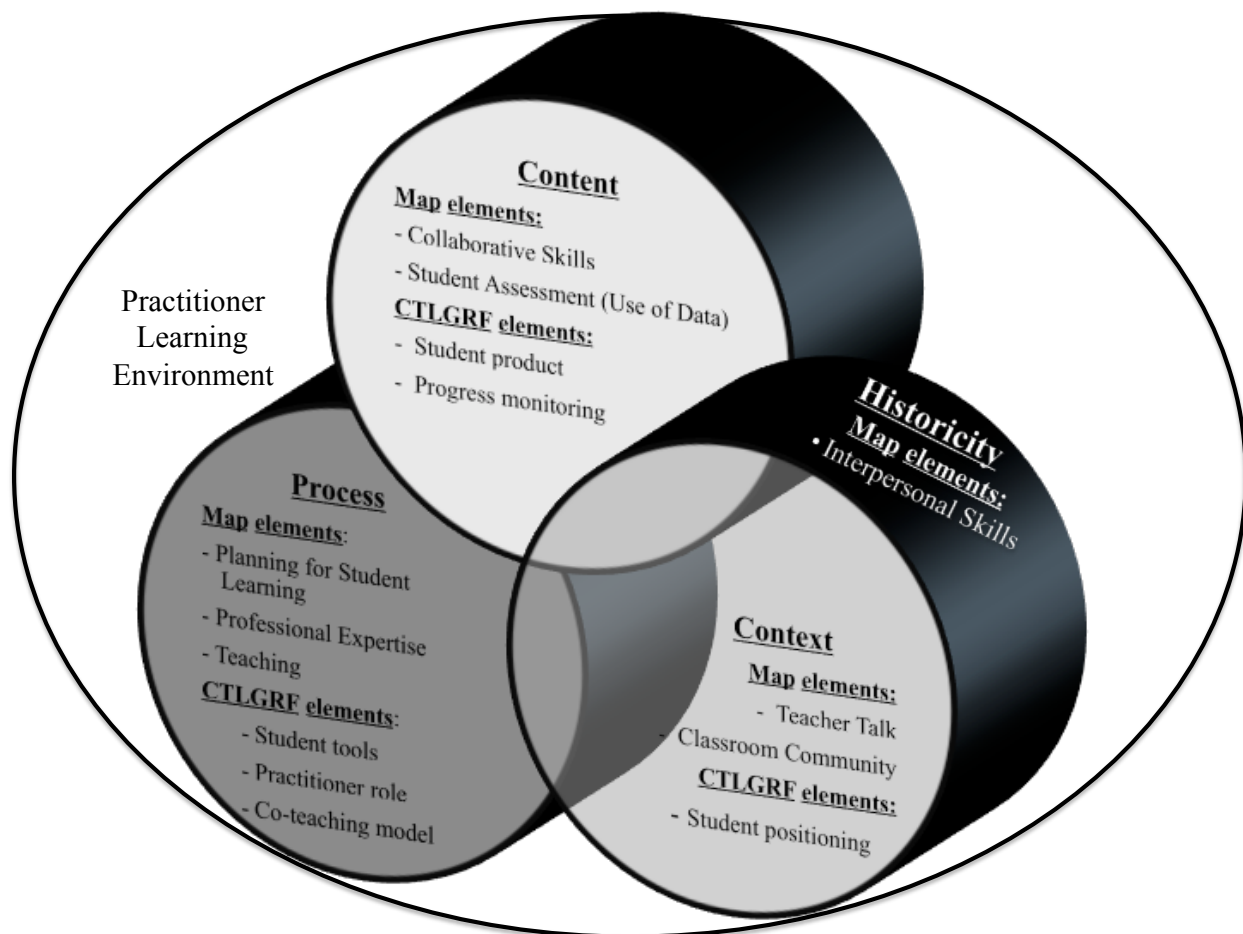
### **Integration of Exploratory Findings Into Development of Tools**

#### **Connections to Co-Teaching Implementation Framework**

Co-teaching is fundamentally a relational practice. The relational nature of co-teaching means that professional roles and identities shift and directly affect one another and this must be considered when being implemented. Due to its complexities, these relations may not be supported by an administration that solely focuses on student needs. There could be several motives for implementing co-teaching, but the primary intention is to support inclusion and disrupt historical marginalization of students with learning differences to segregated settings. If the relational nature of co-teaching is not supported then intentionally or unintentionally, the practice can reinforce unequal power relations and contributions between co-teachers, as was previously the case at Northern Hills. In order to improve outcomes for students and carefully navigate its implementation, co-teachers should understand and be supported to negotiate those relational activities so that learning can occur.

The co-teacher implementation framework (i.e. content, context, process, *and* historicity) discussed in chapter 2 (Figure 2.1) was used both to analyze the exploration stage findings and to design the co-teaching tools. The specific ways that the implementation framework informs elements of the first tool, the Collaborative Teaching & Learning Map, are represented in figure 6.1 below. Figure 6.1 is a visual representation of the constructs that co-teachers navigate during implementation of co-teaching and those elements are plotted on the Implementation Framework. These elements were derived from the exploration stage findings (chapter 4) as well as previously described co-teaching literature (Friend et al., 2010; Isherwood & Barger-

Anderson, 2008; Murawski & Dieker, 2004; Naraian, 2010; Scruggs et al., 2007). Identifying these 8 elements is invaluable to the development of the Co-Teaching Lesson Guiding & Reflecting Form as well as the Collaborative Teaching & Learning Map.



**Figure 6.1** Collaborative Teaching & Learning Map & CTLGRF elements plotted on the Co-teaching Implementation Framework

Initial prototype design work on the tools that were developed with Amy and Maggie integrated the findings from the exploration phase to safely develop their collaborative space. During the exploration phase, I answered research questions that focused primarily on 'how' co-teachers navigated complexities of co-teaching practice. During the design and implementation

phase, my questions shifted to *'how can'* co-teachers be active participants to design and co-construct instructional tools and then use them to improve their practice and student learning as well as to develop their collaborative space. Specifically, research questions during the next phases are:

1. *How can practitioners use co-designed tools to transform their own co-teaching practice?*
2. *How can previously identified socio-historical factors, including content, process & contextual factors shape co-teaching implementation?*

### **Tool Design Elements & Principles**

As previously described, this phase includes the co-design of two tools by Amy, a special educator; Maggie, a general educator; and the lead researcher. The map supports that navigation by providing precise language and a guiding document to facilitate the co-teacher's acknowledgement of their current practice and articulate where their practice could evolve. It was well documented in the exploration stage that as co-teaching was being implemented, the reflection, planning, and actual instruction were often disjointed and was undermined by the lack of common equitable language used among co-teachers. The collaborative teaching & learning map uses precise and carefully crafted language to assist co-teachers traverse those implementation barriers.

These tools were designed to facilitate conversation and implementation of co-teaching in meaningful ways that would help all the teachers on the team feel safe and improve the learning of their students. Throughout this phase, the following two tools were developed: (1) *Collaborative Teaching & Learning Map*; and (2) *Co-Teaching Lesson Guiding & Reflecting Form*. The Collaborative Teaching & Learning Map is described first.

## **Collaborative Teaching & Learning Map Design Principles**

Education policy and co-teaching scholars note that there is a tremendous amount of negotiation that occurs between receiving most educational policy (i.e. a district initiative to implement co-teaching) and its actual instruction (Honig, 2006). The first tool, the collaborative teaching & learning map, supports and facilitates that negotiation and is founded on two design principles:

- *Equality of co-teaching practice creatively transforms a collaborative space for co-teachers by honoring and leveraging both teachers' expertise.*
- *Inclusive environments and meaningful student participation increases when intentional and creative forms of co-teaching are implemented.*

Nearly every element of the map addresses the equity of the co-teaching environment as well as co-teacher equality throughout the instructional cycle including: planning, lesson delivery, and reflection. The precision of the language in the map supports the meaningful transformation of a space of inequality to one of shared responsibility, knowledge, local expertise, and membership.

Co-teaching is after all intended to support inclusive education, and that ultimate goal should not be obscured. The second map design principle demonstrates the connection between creative co-teaching methods and the meaningful participation of students with learning differences. Student participation presents a clearer way of thinking about not only the right *to* an education, which can narrowly focus on access for all learners, but to the right *in* an education, which seeks to address inequities in the quality of education. Meaningful participation also addresses restrictive assumptions of learning that neglect its social nature. This neglect can lead

to reliance on a resource model of special education may perpetuate the inequalities that co-teaching attempts to disrupt.

### **Collaborative Teaching & Learning Map Design Elements & Process**

Initial discussions of co-teaching implementation tools stemmed from recommendations that surfaced while thinking and examining what would need to be in place if co-teaching could really benefit co-teachers. In other words, I suggested that perhaps would be helpful if one tool could be used throughout the school year to aid the co-teachers to identify where they felt their partnership is, and areas they need to address for improvement. I also suggested that the tool should be concise, succinct, and on one page to easily refer to throughout implementation. When I made this suggestion, I also referred to the goals focus group session with Carol and Heather in April 2015, where very crude drawings of tools were first conceptualized. The layout of the map was determined to initially resemble a grid (Figure 6.2).

The map is broken down into eight elements – an integration of exploration phase results as well as leading co-teacher literature – of co-teaching practice including: (1) Collaborative Skills; (2) Planning; (3) Teacher Talk; (4) Classroom Community; (5) Student Assessment; (6) Interpersonal Skills; (7) Professional Expertise; and (8) Teaching. These elements were derived from the exploration phase emergent themes and constructs from the co-teaching implementation framework (Figure 6.1). Although all support co-teaching, the eight elements are disparate enough to envelop co-teaching from an ecological manner. Similar to ecological frameworks, the elements describe co-teaching at the individual level (professional expertise, interpersonal skills), moves to an interactive dyad level (planning; collaborative skills, teacher talk), then the dyad's collaborative practice (teaching), and to students and the environment (student assessment, classroom community). The content of the map design is now discussed.

**Multiple iterations.** Designs and content of the map went through multiple iterations that began in the summer of 2015. Although the map would have more design changes, as it would be implemented during the school year, Maggie, Amy, and I wrote the content during the aforementioned 5 summer design sessions, which took place in the community. As described earlier, both teachers were self-motivated to take an active role in the development of these tools not only to support their practice with the possibility of supporting other co-teachers' practice as well. Figure 6.2 shows the original iteration of the map as represented by a grid (Appendix H), which I first suggested to capture stages that would allow for co-teachers to imagine the future of where optimized practice could go. The grid was also inspired by organizational change literature for business to navigate supportive group work in the work place (Chermack, 2011).

After two sessions it was suggested by Amy that the rubric grid shape would not support the team's goal of creating a mediating tool for co-teachers to discuss, envision and plan their practice, but rather it may be used as an evaluative instrument that undermines co-teacher growth. Amy suggested that the shape would in fact cause less safety that actually support it, so we all agreed that a wheel shape is much more inviting and supportive to, as Amy said, "foster growth and authentic partnership" (7.15.2015).

Co-Teaching Implementation Outcomes and Descriptions		Co-Teaching Equity MAP			
		<i>Framing</i>	<i>Evolving</i>	<i>Norming</i>	<i>Performing</i>
Classroom Community	Community development through student inclusion. <i>(Content &amp; Context)</i>	Students with exceptional needs (SENs) are kept in the classroom.	SENs are grouped with other students with similar (exceptional) needs.	SENs occasionally access integrated groups, are supported and occasionally supporting others.	Intentional student grouping promotes active participation and membership when all students have key supported and supporting roles.
Collaborative Intelligence	Norms and standards of co-teacher behavior <i>(Process)</i>	Co-teachers seek and derive a foundational agreement on the purpose of co-teaching.	Individuals explore and identify strengths and set goals in the context of co-teaching.	Team members identify strengths and supports necessary to reach co-teaching goals together.	Regular alignment of members' strengths and interests with group tasks. Listening and evaluating is occurring with empathy.
Planning	Development of lesson and unit <i>(Content)</i>	Modifications or accommodations accompany lesson plans.	Lesson plans have 2 parallel goals on two separate tracks for scope and <u>sequence</u> and those of student delivery needs.	Authentic merging of instructional perspectives (Common Core & DI)	Lesson development is based on / held up by Universal Designs of Learning or Differentiated Instruction (spearheads lesson development)
Discourse	Communication <i>(Process)</i>	<u>Communication is</u> person-first in nature.	Language is strength-based by including all students regardless of IEP status.	Discursive practice are person first and strength based within an additive approach to all students	Open and honest communication that promotes membership and actively combats reducing people to labels.

**Figure 6.2** Preliminary Design of Collaborative Teaching & Learning Map as a Grid (July 2015)

Figure 6.3 shows the first map design as a wheel-shape with Maggie's edits in the content and layout as well. Content was written in a collaborative manner where, Amy, Maggie and I all represented different perspective: special educator (Amy); general educator (Maggie); and co-teaching literature reviewer and researcher (Jake). Content of the map including words and phrases were drafted, dissected, and discussed for hours to try and capture the best wording for our agreed intentions and values: 1) be additive and/or strength-based; 2) explicitly address inequality; and 3) be supportive to local adaptation. These themes assisted to guide our language and discussions, and vetted the tool content. A great example of how these values were the



follow our value system and did not explicitly address inequity. Her edit to remove that word is an example of shifting map content through our discussions and debates. Another decision actually occurred during the implementation phase and concerned the ‘norming’ zone of the psychological safety/Interpersonal skills element as it read: *Personal flaws and practices in each team member needing support are communicated in a direct and timely manner, optional solutions are suggested and implemented.* Again, based on our values, Maggie suggested reformatting it to reword ‘personal flaws’ to read: *Each team member communicates strengths and weaknesses of practice in a direct and timely manner and optional solutions are suggested.* The discussion of this suggestion is presented in chapter 7.

Figure 6.4 shows the most recent version of the Collaborative Teaching & Learning Map after further edits were made and language was further refined. In a wheel shape, the map’s constructs are defined and laid out across four color-coded zones of development from the most fundamental to optimal: Framing, Evolving, Norming, and Performing. Terms that label the zones are loosely borrowed from business-based literature that describes group workplace dynamics and growth (Tuckman & Jensen, 1977). Participant co-teachers provided the most accurate language to complete the map, which in turn they used to identify their own co-teaching practice during implementation. Both the special educator’s and general educator’s perspectives were vital to include in this tool. The language of the tool is additive in nature, meaning that each phase of practice builds on the previous phase and each is necessary for optimal practice to be achieved. Also, the map is written from a positive, strength-based perspective, including constructive language to support co-teachers in imagining how practice could evolve as opposed to discouragingly telling them what is wrong with their practice.



Sannino, 2010). The map is intended to not be a form of co-teacher evaluation, which could undermine a psychologically safe space, but rather is an object to focus co-teaching conversations on their current and future practice. Critical co-teaching elements are integrated to assist co-teachers in describing what their practice may become and prompt them to build their practice together. I will now describe the final version of the map that was used in this study. Each map construct is now presented with its most recent definition and four periods of co-teaching learning and practice.

**Collaborative skills.** The element, Collaborative skills, is considered to be the norms that shape co-teacher behavior (Scruggs et al., 2007). This construct begins in the forming period as ‘Co-teachers seek and agree on foundational ideas about the purpose of co-teaching’. The evolving period reads as, ‘Individuals explore and identify strengths and set goals in the context of co-teaching’. The norming period states ‘Team members identify strengths and supports necessary to reach co-teaching goals together’. Finally, the performing period says, ‘Regular alignment of members’ strengths and interests with group tasks. Listening and evaluating occurs with empathy.’

**Planning for student learning.** The element, Planning for student learning, is defined as the development of lessons within units to support the social nature of student learning (Murawski & Dieker, 2004). In addition to the map, this co-teaching element is supported further by the second tool and is described in the following section. The planning for student learning construct starts in the forming period as ‘Student modifications or accommodations accompany lesson plans.’ The evolving period states that ‘Lesson plans have two parallel goals on two tracks for scope and sequence for student learning needs.’ The norming period says ‘Authentic merging of instructional perspectives (Common Core State Standards &

Differentiated Instruction) to support student learning. Finally, the performing period says ‘Universal Design for Learning and/or Differentiate Instruction principles spearhead planning for the interactive learning of all students.’

**Teacher talk.** Teacher talk is the communication choices affecting co-teacher perspectives and practices. Language is very powerful and directly affects the perception or co-teachers (Naraian, 2010). This element starts in the forming period with ‘Communication is person-first in nature.’ The evolving period states ‘Language is strength-based by including all students regardless of IEP status.’ Within the norming period talk is described, as ‘Discursive practices are person-first maintaining an additive strength-based approach to all students.’ Finally, the performing period says that ‘Open and honest communication is used to promote membership and actively combat reducing people to labels.’

**Classroom community.** Classroom Community is the development of community through active student inclusion. Classroom membership is so integral to meaningful inclusion, which this element focuses on (Isherwood & Barger-Anderson, 2008). The classroom community element starts with the forming period which says ‘Students with learning differences (SLDs) are in the classroom.’ The evolving period states ‘SLDs are only grouped with other students with similar (learning) needs.’ The norming period states ‘SLDs occasionally access integrated groups, are supported and occasionally support others.’ Finally, the performing period says ‘Intentional student grouping promotes active participation and membership when all students are supported and have key supporting roles.’

**Student assessment (use of data).** The Student assessment element of the map hones in on co-teachers’ use of student data and in particular practitioners’ use of various data sources to inform their instructional decisions (Murawski & Dieker, 2004). This element begins in the

forming zone by stating ‘Summative data is part of an ongoing cycle of instructional improvement.’ The evolving period writes that ‘Summative data is used in more formative ways.’ Within the norming period, this element describes that ‘Supports are provided that foster a data-driven culture among co-teachers.’ Lastly, in the performing zone, ‘Students are taught to regularly examine their own data and set learning goals.’

**Interpersonal skills.** The interpersonal skills (formerly ‘psychological safety’) element is defined as creating a safer trusting environment where you can give or receive challenging constructive feedback by assuming best intentions in others (Bradley et al., 2012; Edmondson, 1999; Edwards, 2012; Naraian, 2010; Tynan, 2005). This construct is described in the forming zone as ‘Critical issues are individually identified and noted.’ The evolving period states ‘General surface-level problems are noted and discussed, occasionally critical issues are also presented.’ The norming zone states ‘Each team member communicates strengths and weaknesses of practice in a direct and timely manner and optional solutions are suggested.’ Lastly, the performing period states ‘Work-relevant and potentially challenging information is communicated in a clear, timely and constructive manner and solutions are implemented.’

**Professional expertise.** Professional expertise is the reflection and rationale for co-teaching and using each practitioner’s expertise (Friend et al., 2010). This element begins in the forming zone with ‘Each instructor attempts to meet the needs of students using departmentalized expertise.’ In the evolving period the construct states ‘The special educator is viewed as expert of SLDs, and is invited to offer suggestions for SLDs in the classroom, or asked to supplement in a pull-out program.’ The norming period says ‘the special educator is brought into the planning & assessment stages to help determine instruction options for students.’ Finally, the performing period says ‘Authentic joint ownership of the classroom, the curriculum,

the content, and all students. Each educator is an equal member for planning, instructional and assessment decisions.’

**Teaching.** Teaching, the final element is considered the structure of both the classroom and instructional delivery (Friend et al., 2010). This element starts with the forming zone as writing that ‘A single unaltered method for instructional delivery is used and teaching roles are consistent.’ The evolving period writes ‘Roles are defined and performers are interchangeable for instructional delivery. 2 or 3 methods are regularly used.’ The norming period states ‘Roles and instructional delivery are planned to meet the needs of historically targeted children.’ Lastly, the performing period says ‘Roles are clear, defined, and intentionally fit all student-learning needs. Creative co-teaching models are used to meet a range of learning goals.’

### **Co-teaching Lesson Guiding and Reflecting Form (CTLGRF) Design Principles**

Considered to be what the team has called a “short-term” tool in contrast to the map, which supports co-teaching over the “long-term”, the Co-teaching Lesson Guiding & Reflecting Form drives immediate instruction. This tool directly tackles barriers to implementing individual co-teaching lessons. The document is supportive in nature from providing definitions and suggested frequencies, but it is also an accountability measure for co-teachers to maintain a common understanding of what a lesson consists of, how it will be delivered, and who is performing what role. Design principles of the Co-teaching Lesson Guiding and Reflecting Form include:

- *Disruption of traditional restrictive forms of co-teaching supports co-teacher learning and transformative practice.*
- *Assumptions of student learning must be addressed for co-teachers to contribute to a productive practice and improve student-learning opportunities.*

As previously mentioned, overreliance on traditional didactic methods of instruction can perpetuate the marginalization of students with learning differences or those learning English as a second language. Therefore, it is intended that teachers will discuss the disruption of that form of instruction through negotiating all sections of the Co-teaching Lesson Guiding & Reflecting Form. This transformative practice positions student and co-teachers in more equitable places and intends to support the learning process for co-teachers as they intentionally design instruction.

All teachers maintain assumptions on how student learning occurs, whether conscious or unconscious. These assumptions really drive instruction and can be enhanced with the integration of two oftentimes different professional positions, that of a special educator and that of a general educator. By addressing and facilitating the integration of these assumptions, instruction may be diverge from individualistic conceptions that have become normalized and shift to include social and cultural aspects. The Co-teaching Lesson Guiding & Reflecting Form intends to support that shift by compelling co-teachers to group students differently, deliver instruction differently, and allow students to demonstrate learning differently.

### **Co-teaching Lesson Guiding & Reflecting Form Design Elements**

Co-teaching may be viewed at a macro level as a shift in school or classroom structure, and at the micro level as a shift in instructional delivery. If dynamic co-teaching models are used then no longer can traditional didactic methods of instruction exist. At the heart of creative co-teaching arrangements is a need to differentiate that instructional delivery. Differentiated Instruction (DI) integrates effective structures and instructional delivery methods to ease transition from traditionally restrictive teaching styles (Tomlinson & Imbeau, 2010). Employing DI methods, which special educators tend to learn in their pre-service teacher training, may lead

to an increase in students receiving tiered instruction and subsequently reduce student referrals for special education services.

Differentiating instruction is critical for students of various linguistic, intellectual, and learning differences to access curriculum in a classroom and to meaningfully participate in that inclusive classroom (Friend & Bursuck, 2011). An increase in creative and intentionally differentiated instruction that aligns with potential co-teaching arrangements is the core of the second co-teaching tool, the *Co-Teaching Lesson Guiding & Reflecting Form (CTLGRF)*. This tool consists of two sections, the planning and instructional section and the reflection section. This form is also one page to ease with use and reduce burdensome paperwork for co-teachers. Wording throughout the sections in the form was written over multiple sessions and content was carefully chosen to succinctly and directly address regular barriers to implementing individual lessons. Visual representations of co-teaching models accompany their definition and recommended frequency of use to easily remind co-teachers of available designs and suggested rates of use. Full versions of the first iteration of the form and the final version are found in the Appendices.

The planning and instruction section includes initial guiding questions designed to get the team started and directly disrupt problems of practice. These questions were surfaced in practitioner interviews as well as the co-teaching literature. I drafted the original topics and the questions that would be included in the tool were initially drafted from direct talks with Amy based on these topics. Initial guiding questions included: (1) *What was the role of each teacher?* and (2) *Were any student products collected, or assessments / progress monitoring data?* There was also a section to indicate the instructional model for the lesson (Figure 6.5; Appendix F).

Instruction	What was the role of each teacher? _____	
	Were any student products collected, or assessments / progress monitoring data? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Co-teaching Models	<b>*Indicate implemented model(s):</b>	
	<input type="checkbox"/> Parallel Teaching	<input type="checkbox"/> Alternative Teaching
	<input type="checkbox"/> Station Teaching	<input type="checkbox"/> One Teach, One Observe
	<input type="checkbox"/> Teaming	<input type="checkbox"/> One Teach, One Assist

**Figure 6.5** Initial Design of the *Co-teaching Lesson Guiding & Reflecting Form* (July 2015)

After the team met for the second summer design session, Amy suggested that the planning questions be revised and additional questions added (Figure 6.5):

- *How is the selected model of co-teaching appropriate for the lesson?*
- *What are the roles of each practitioner in the selected model, and why?*
- *How are students positioned physically (grouped) and supported in a differentiated method in the selected model?*
- *Were any student products collected, or assessments / progress monitoring data?*

Here, the questions succinctly addressed traditional barriers to co-teaching achievement, while attempting to be as least obtrusive as possible. The idea is to not burden co-teachers, but rather to help co-teachers become regularly attuned to student learning needs and supports. These guiding questions strategically disrupt restrictive traditional teaching models that historically marginalize students with learning differences as well as special education teachers in the co-taught classroom. Through discussion and by revisiting *and* implementing the guiding

questions it was determined that they should also include the learning target or objective, the student tools needed, and if there are student products for the lesson (see Figure 6.6).

<b>Co-Teaching Planning &amp; Fidelity Rating Form</b>	
Teacher Names: _____ / _____	
Date: _____ Lesson Topic: _____	
<b>Planning &amp; Instructional Discussion Q's</b>	<p>How is the selected model of co-teaching appropriate for the lesson?</p> <p>What are the roles of each practitioner in the selected model, and why?</p> <p>How are students positioned physically (grouped) and supported in a differentiated method in the selected model?</p> <p>Are / Were any student products collected, or assessments / progress monitoring data? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>

**Figure 6.6.** Redesign of *Co-teaching Lesson Guiding & Reflecting Form* discussion questions (July 2015)

The second section of the initial form consisted of visuals of the various co-teaching models. The title of the form also changed to the Co-Teaching Lesson Guiding and Planning Form to avoid the same evaluative language as the *Collaborative Teaching & Learning Map*. At first, the teachers marked the type(s) of co-teaching they planned to use. A major edit to this section was my addition of recommended frequency of use for each instructional model as well as a brief definition of the model including: (1) Parallel Teaching (*Frequent*) Each teacher teaches the same content in same amount of time; (2) Station Teaching (*Frequent*) Each teacher teaches a portion of the content in the same amount of time; (3) Alternative Teaching (*Limited*) One teacher takes responsibility for the large group while the other works with a smaller group; (4) Teaming (*Occasional*) Both teachers are fully engaged in delivery of the core instruction; (5) One Teach, One Observe (*Limited*) One teacher manages entire class instruction while another gathers pre-determined agreed upon data; and (6) One Teach, One Assist (*Seldom*) One teaches lesson content, while the other circulates providing unobtrusive assistance as needed. The co-teacher model frequencies are a quick reminder to teachers and are borrowed from the Utah State

Board of Education report on co-teaching (Utah State Office of Education, 2011; Figure 6.7). As was carefully described in the conjecture map (chapter 5), the addition of co-teaching model frequencies of use is to remind teachers that they should vary the selection of models to meeting student learning needs in a dynamic classroom.

A second edit of this section was the addition of guiding questions designed to help the teachers negotiate their roles (i.e. lesson objectives; student grouping; instructional model selection; and teacher roles), and also includes a question regarding student data and whether that data was included in the lesson. Amy suggested this question in order to address the individual student progress monitoring needs that typically fall under the responsibility of the special educator. This question also forces the co-teachers to discuss the lesson target with more precision if student products can demonstrate student learning.

The reflection section includes four rating questions, designed to prompt co-teacher reflection on the quality of co-taught instruction. The questions are: *[The] lesson was implemented according to plan; Student grouping matched lesson goals/objectives; Instruction was differentiated to support student needs; Co-teaching was utilized to maximize instruction and student learning.* The ratings for these prompts are on a 5-point satisfaction Likert scale: *(5=Extremely; 4=Strongly; 3=Moderately; 2=Slightly; 1=Not At All; see Figure 6.7).*

### Co-Teaching Lesson Guiding & Reflecting Form

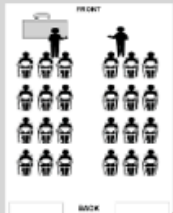

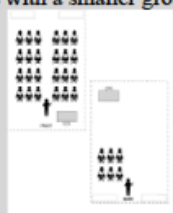

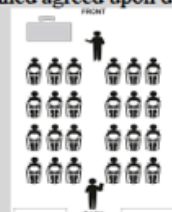
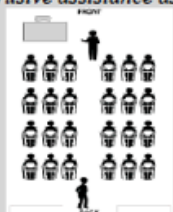
<p><b>Planning &amp; Instructional Discussion Qs</b></p> <p>What is the lesson objective or learning target?</p> <p>What is/are your selected model(s) of co-teaching? Why (is it/are they) appropriate for the lesson?</p> <p>What are the roles of each practitioner in the selected model, and why?</p> <p>How are students positioned physically (grouped) and supported in a differentiated method in the selected model?</p> <p>What student tools are needed?</p> <p>Are/Were any student products collected, or assessments/progress monitoring data? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>		
<p><b>Co-Teaching Models</b>   Please indicate planned and/or implemented model(s) *note: recommended frequency is provided</p>		
<p><input type="checkbox"/> <b>Parallel Teaching (Frequent)</b> Each teacher teaches the same content in same amount of time</p> 	<p><input type="checkbox"/> <b>Station Teaching (Frequent)</b> Each teacher teaches a portion of the content in the same amount of time.</p> 	<p><input type="checkbox"/> <b>Alternative Teaching (Limited)</b> One teacher takes responsibility for the large group while the other works with a smaller group.</p> 
<p><input type="checkbox"/> <b>Teaming (Occasional)</b> Both teachers are fully engaged in delivery of the core instruction.</p> 	<p><input type="checkbox"/> <b>One Teach, One Observe (Limited)</b> One teacher manages entire class instruction while another gathers pre-determined agreed upon data.</p> 	<p><input type="checkbox"/> <b>One Teach, One Assist (Seldom)</b> One teaches lesson content, while the other circulates providing unobtrusive assistance as needed</p> 
<p><b>Student Grouping</b>   Please indicate student grouping(s):</p> <p><input type="checkbox"/> <b>Heterogeneous</b> (Unlike needs/interest/skills; may be used assessing instructional / intervention focus for future)</p> <p><input type="checkbox"/> <b>Homogeneous</b> (Like needs/interest/skills; may be used when providing targeted instruction / interventions)</p> <p><input type="checkbox"/> <b>Skill-based</b> (Same skill level; may be used when providing targeted interventions)</p> <p><input type="checkbox"/> <b>Student interest</b> (Same research topic/project; may be used when project is assigned class-wide presentations)</p> <p><input type="checkbox"/> <b>Student Choice</b> (No formal organization; allowing students to group themselves)</p>		
<p><b>Ratings</b>   Please rate your satisfaction (5 = extremely; 4 = strongly; 3 = moderately; 2 = slightly; 1 = not at all):</p> <p>Student Grouping matched lesson goals/objectives: <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1</p> <p>Lesson implementation went as planned: <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1</p> <p>Instruction was differentiated to support student needs: <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1</p> <p>Co-teaching was utilized to maximize instruction and student learning: <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1</p>		
<p><i>Source figures adapted from: Co-teaching Handbook: Utah State Office of Education (2011)</i></p>		

Figure 6.7 Redesign of Co-teaching Lesson Guiding & Reflecting Form (November 2015)

**Co-Teaching Lesson Guiding & Reflecting Form appropriated.** When I joined the team for a mid October 2015 planning session, I was thrilled to discover that the team had taken

the latest iteration of the CTLGRF and appropriated it to their context. The team had taken the core elements from the CTLGRF and converted them into a Google spreadsheet (Figure 6.8). The team, under Maggie's suggestion, had moved to an electronic platform to plan for the individual lessons within their curricular units. Individual lesson decisions and conversations are discussed in greater detail in the next chapter, but the move to an electronic platform for lesson planning was a leap of both ingenuity and initiative by the team. The electronic spreadsheet was developed with each sheet representing one instructional unit, which the next chapter describes in depth, also evolved based on team discussions.

	A	B	C	D	E	F	G
1	f	Dates	Teaching Point	Questions	Student Task	Skill Group/Confer	Share
7	11: Revision: Rereading with a lens	10/8/15-10/9/15	Revise to make the story as strong as possible- group the kids by theme; small groups to work on specific skills throughout writing period.		adding detail to stories using rubric in areas of need	first layer-theme; pull based on skill need; station teaching	
8	13: Using mentor text to flesh out characters	10/19-10/20	How can we use other writers to help us develop characters. How do they show not tell? Ask pointed questions about what is important to know about the character: age, looks, personality, family members, traits/behaviors, habits, customs/traditions- tie to making illustrations easier and better.	I dont think this lesson is important. Its the same thing they've been doing but focused on character development.	use checklist in partners to see if they have these items: age, looks, personality, family members, traits/behaviors, habits, customs/traditions		
9	14: Editing with various lenses- save til after developing conflict and tension	10/22/2015	How can you know your spelling words correctly? small groups, use student example	This is crap. Our kids are horrible spellers. I vote we teach them 5 grammar issues and have them check there work for those issues Example: Capitalization, homophones, how to use a comma, what a complete sentence is.	sentences: breaking up run-ons. Paragraphs: when to start a new paragraph. Determine needs of kids and do workshops for each group around each editing strategy.	Perhaps we can provide a checklist of these things that they can use; each pass through they focus on one item until all of them are complete. Some kids could use sight word dictionaries that really struggle with basic spelling.	
10	18: Developing conflict and tension- do before editing	10/21/2015	How can you make your conflict more intense?		Another opportunity to hit "show don't tell"		
11	20: Choosing punctuation for effect		How different punctuation creates a different effect. small groups, use student example	Yeah I vote session 14 should be two days, this is maybe one.	small groups	4 groups rotate between teachers: leveled ability. Holbrook: annotation; Olson: illustration; Goulter: tension; Battista: editing. Rotate Monday/Tuesday 10/26-27. Wednesday 10/28: practice indep. annotation and editing.	
12				plan at this point? When do we move to picture			

**Figure 6.8** Google spreadsheet of CTLGRF, first iteration without *student tools* tab (October 2015)

During a private interview with Amy, was clear about the goals of making the tool electronic and how the tool can be enhanced:

*Amy:* Yeah, because I think on there she had like, you know what are the students going to do and what's the point of the lesson, but yeah I think, and when I was doing this at home the other night I was like, ahh, maybe I should add a column then. Adding a column of like, ok this is the point of the lesson, but this is what we're doing, you know, Tess is going to do this, I'm going to do this, or Stephanie is doing this, Donna's doing this, and then this what we want the kids to do.

*Researcher:* That's going to really help, seriously.

*Amy:* So next week, what I will focus on is not only getting through what are we teaching for the week and just kind of hammering out the lessons and trying like being more of a time keeper on that part and then going back and saying, ok lets look at Monday, how are we going to present Monday, how are we going to group the kids.

Figure 6.9 is a screen shot of the same Google spreadsheet, but also captures the addition of the student tools tab, which reflects the addition to the student tools question on the hard copy of the CTLGRF (figure 6.7) and is a direct result of Amy's thinking from this private exchange.

Lesson #	Dates	Teaching Point	Co-teaching model	Student Grouping	Student task	Thoughts	Ideas in General	Student Tools
5	11/17/2015	Organize your thinking	parallel teaching	heterogeneous-partner or small table groups	Jelly Game. 1 Rounds: organize cut apart essay. Exit Ticket pick a topic and write 2 reasons with 2 explanations each.			color coded essay parts.
6	11/18/2015	Reasons to convince.	whole group then independent and small groups	whole group and independent	Use 'stand up and sound off' graphic organizers as whole group. Exit ticket will be to use the 'Practice Guide' graphic organizer to explain their thinking on a topic of their choice for students who are independent. Students who need more support are in small group with teachers to transition from list to sentences.			Different levels get different lengths of paragraphs. 6-8+
7	11/18/2015	We should have year long school reasons, counter claims, etc.	Divide students between yes and no and have them come up with their reasons using the sentence stems then come back and 'debate' each group must come up with 3 reasons.	Ways to push our thinking sentence stems pg 38. Use sentence strips and post	use green yellow red system or other graphic structural organizer			
8	11/19/2015	peer review	learning	whole group then partner	students review their partner's work; highlight claim; give suggestions for making the presented reasons deeper/richer			use rubric to have student identify their partner's claim and reasons. Then give suggestions for stronger details. (quality check!)
9	11/20-21/2015	Teaching the E's "Strong in both form and content"	Station Teaching	heterogeneous 2 equal groups per class.	Ss will learn about the e's over 2 days... 4... then they will	Elaboration/Explain/Examples, Effective Illustrations, Everyday Life, Expert Opinion		

**Figure 6.9** Google spreadsheet of CTLGRF, with 'student tools' tab addition (*November 2015*)

Figure 6.10 is another screenshot of the final instructional unit, which is described in the next chapter, but was a unit that was enhanced with numerous student tools and examples of differentiation and universal designs for learning. Figure 6.10 is used to show the sophisticated evolution of the CTLGRF on the teachers' online platform.

Lesson # and title	Dates	Teaching Point/learning objective	Co-teaching model	Teacher role	Student Grouping	Student task or Student Product	Student tools	Ideas in general	Student Grouping matched lesson goals/objectives:
1			Parallel Teaching (Frequent) Station Teaching (Frequent) Alternative Teaching (Limited) Teaming (Occasional) One Teach, One Observe (Limited) One Teach, One Assist (Seldom)		Heterogeneous; Homogeneous; Skill-based; Student interest; Student Choice				Lesson implementation went as planned: Instruction was differentiated to support student needs: Co-teaching was utilized to maximize instruction and student learning
2	STUDENT BOOK: table of contents	Posters: "questions writers ask of entries" (P.11)	Poster: "How to write a literary essay" (p.17)	Poster: "Ways to push our thinking" (p.28)	Graphic organizer color coded (flow of actual essay)	Model of FINAL student product	copies of all (five) of the stories		
3	1: close reading to generate ideas about a text 2/29/2016	paying attention to little details then write to grow ideas	parallel	read 2 texts then begin to delve into Eleven	heterogeneous		student book:	show book read 2 texts read 11 rereading for closer understanding	
4	2: gathering writing by studying character 3/1/2016	looking at characters' motivations, traits, struggles, changes and life lessons	parallel	read 2 texts then begin to delve into Eleven	heterogeneous		audio recordings of stories	read other 2 texts.	
						use phrases from Way to push our thinking and examples from			

**Figure 6.10** Google spreadsheet of CTLGRF with addition of *student model 'book'* (February 2016)

### Summary

Often, external validity of research is compromised when a practitioner is not given the latitude to use his or her professional expertise to adapt practices. If adaptation is not permitted then practitioner motivation to use the practice in the future decreases. This scenario can perpetuate inaccurate, but all too common, educational 'research to practice gap' narratives. The tools that we developed disrupt that deficit-based perspective by using the very data generated through participant discourse to co-design the tools that the participants will use to support their practice. In other words, the very barriers that the co-teachers identify in their practice shaped the co-design of co-teaching tools as well as generating the classroom instruction and evaluation. The map provides co-teachers with a common instructional language to negotiate goals, and the lesson guiding and reflecting form addresses student variance more effectively. Common

discourse will facilitate the negotiation of policy, instructional concerns, differences, and achievements in the most inclusive and psychologically safe environment.

Co-teachers' discursive practices influence the collaborative space development because of potential contradictions between general and special education principles and professional visions and they directly affect teaching practices. For example, contradictions may lie in special education goals that focus on meeting individual student needs in historically segregated settings, while conversely, general education goals may focus on meeting class-wide curricular needs in the general education setting. Classroom settings and ideological differences exist, but, if approached from a strength-based perspective, these differences can actually complement the other and improve co-teaching practice. The map and lesson guiding questions therefore anchor discourse and dialogue around fundamental co-teaching needs and tensions.

## Chapter 7: Implementation

In this chapter, the implementation of the two co-teaching tools initially co-designed during the 2015 summer is described along with further design decisions and their implications. This chapter begins by describing the recruitment of Stephanie – the other 5<sup>th</sup> grade general educator who is implementing the Teachers College Reading & Writing Project curriculum, and Donna – a veteran Instructional Aide (IA; Table 7.1). The team grew because Amy and Maggie specifically asked if Stephanie and Donna would join. Amy and Maggie said that their collaborative space would benefit from the advice of the other same grade level teacher who would deliver the exact same curricular content and because Donna is an aide who has worked in Amy’s resource room for multiple years. Data sources and the data analysis process are then presented, followed by an analysis of outcomes and experiences at Northern Hills by using the hypothesized conjecture map originally discussed in chapter 5.

**Table 7.1**  
*Implementation Phase Participants*

<b>Name</b> <i>(pseudonym)</i>	<b>Primary role</b>	<b>Experience</b>	<b>Racial identity</b>	<b>Notes</b>
Amy	Special Educator	10 years	White	Resource room instructor; primarily serve student with Specific Learning Disabilities / Emotional Behavioral Disorders
Maggie	General Educator	7 years	Multi- racial	4 years previous experience as ELL instructor
Stephanie	General Educator	5 years	White	Currently earning a Master of Education degree

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Donna	IA	21 years	White	Served as both resource room as well as general education aide
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*Note:* IA = Instructional Aide

**Stephanie.** Stephanie is a general educator with five years of teaching experience who is currently earning her Master of Education degree. Stephanie's active engagement with her higher education heavily influenced her instructional suggestions throughout the implementation phase. She would also regularly reference her course work as informing her personal educational principles. For example, while planning for the third unit of instruction, *Bringing History to Life: Historical Writing*, Stephanie was adamant that students take a critical stance with their chosen historical event to present multiple perspectives and understand how history is actually contested and that all characters – including heroes – have personal flaws.

Stephanie expressed her eagerness and willingness to participate with the implementation of the tools that Maggie and Amy designed, and she was particularly keen to participate in a shared space to understand the writing curriculum alongside more knowledgeable others. She explicitly stated her unfamiliarity with the writing curriculum. She also expressed her excitement when the team decided that every Friday morning they would meet for planning sessions to support her skills. Admittedly, Stephanie was unfamiliar with co-teaching and its history at Northern Hills, but the appeal of planning with other professionals enticed her. When probed about her motivation to participate in a private interview, Stephanie reflected on this partnership potential:

One of the things that's hardest about being a teacher is feeling confident in the direction you're taking your students. Because, although I can think about it all day, every day, about what a lesson's supposed to be but then as soon as it happens it can be like the dumbest thing that I didn't even think about. So being able to plan with somebody and

having two minds bounce off each other makes the lesson- It can make it more efficient, it can make the lesson more thorough, and it can make- It's another voice to ensure that the kids will learn what they're supposed to learn, and in different ways. (1.18.2016)

Stephanie identifies as white, is a native of the Seattle area, and is proud of the fact that she is the first member of her immediate family to successfully complete college and become a teacher. Stephanie repeatedly described how much she enjoys teaching in both team-planning sessions, as well as private debriefs and interviews. Her commitment to professional improvement and teaching undoubtedly positioned Stephanie as more open to critically reflect on her own practice, which is imperative in the co-teaching space. Stephanie's engagement with the team occurred predominantly with Donna, who is an instructional aide assigned to both Amy's resource room, as well as Stephanie's literacy class.

**Donna.** An Instructional Aide (IA) with over two decades of experience, Donna, has insight into instructional supports and strategies that are not typically found in other IAs in her position. Although not a certified teacher, this experience and familiarity with supporting learners in many different classrooms was regularly cited by Donna as promoting her critical perspective with respect to student learning and the affordances of instruction in the general education classroom. In other words, Donna explicated discussed the instructional disconnect that so often happens for students when they are removed from the general education setting and taught in the resource room as well as not being meaningfully integrated into the inclusive classroom. Donna also identifies as white. Donna and Stephanie were not participants in the initial designs of the co-teaching tools, but their implementation and critical reflection of the tools were major contributors to redesign decisions. Prior to that analysis, a clear outline of the data sources during the implementation and iterative design phase is provided. Donna, because

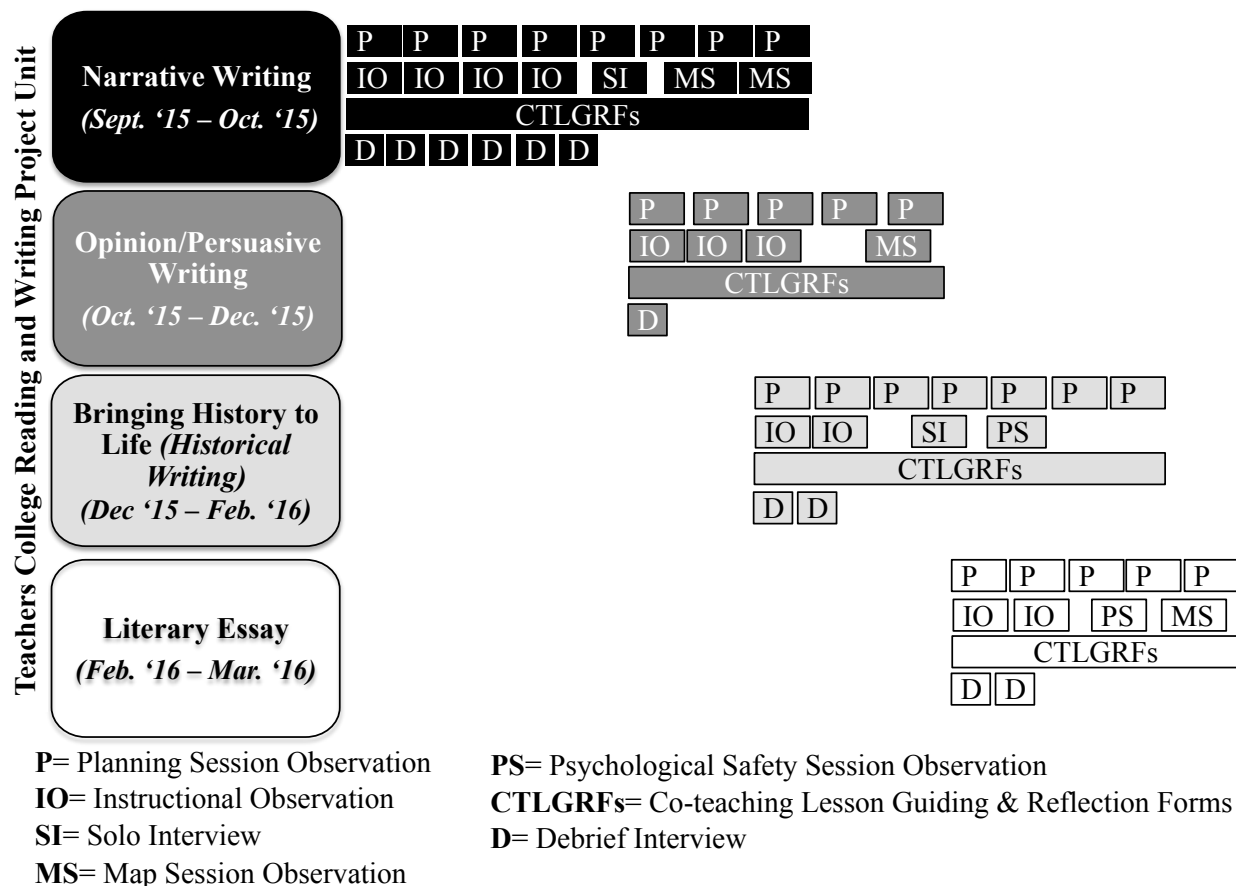
of her experience and commitment to students at Northern Hills is not a typical IA. She was explicitly asked to join the Friday planning sessions so that she was clear about her role, and oftentimes engaged with decision-making.

### **Data collection**

Data, as described in previous chapters, were collected from multiple sources in order to gain a holistic understanding of the co-teaching activity system and co-teaching phenomena at Northern Hills (Merriam, 2009; Stake, 2003). Northern Hills' district determined that not only should co-teaching be adopted to improve inclusive education, but also that literacy would be a focus of reform and improvement. The district is in its second year of implementing the Teachers College Reading and Writing Project (TCRWP) curriculum. Co-teachers focused on the writing lessons of the curriculum. This is noteworthy because of Amy's exposure to the curriculum from her co-teaching experience last year with Carol and Heather, and the fact that Maggie was on maternity leave during the school year and is using the curriculum for the first time. Amy's exposure and relative familiarity to the curriculum positions her as having curricular expertise, which is an atypical position for special educators co-teaching, but highly influential with co-teaching success (Cook et al., 2011).

Data sources and their frequency of collection during the implementation phase (figure 4, Chapter 4) included: observations of co-planning sessions (25); observations of co-teaching classroom instruction (11); interviews (3); debriefs following both planning sessions as well as instructional sessions (11); map discussion sessions (3); psychological safety self-reports (2) and psychological safety discussions (3); artifacts of student instructional tools; and lesson planning artifacts including Co-teaching Lesson Planning and Reflection forms.

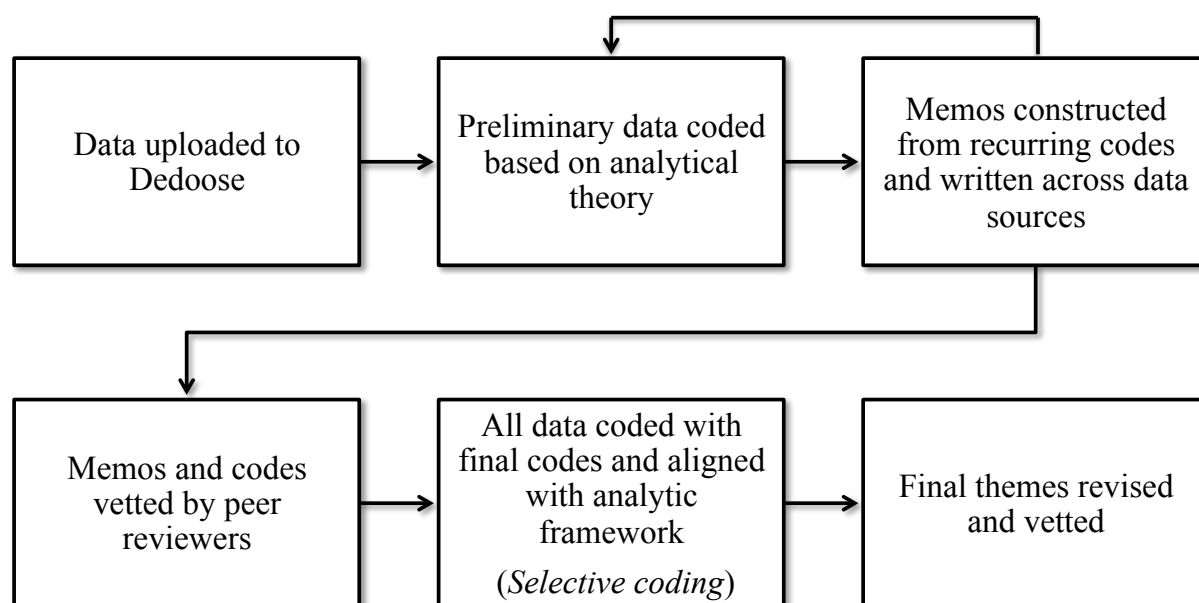
The case study was bounded according to instructional units within the TCRWP curriculum, which allows a broad picture of the co-teaching system and its evolution during the 2015-2016 school year. Figure 7.1 is a visual representation of the data sources within each TCRWP instructional unit (Narrative Writing; Opinion / Persuasive Writing, Historical Writing, Literary Essay). Each unit took multiple weeks to complete and according to Amy and Maggie, the social nature of the TCRWP curriculum provides innumerable possibilities for meaningful co-teaching to accomplish curricular goals. As recommended by leading co-teaching researchers to increase consistency, the team agreed for structured weekly planning sessions to occur on Friday mornings (Scruggs et al., 2007).



**Figure 7.1** Data Sources Collected across TCRWP Curricular Units.

## Data Analysis

The following description is an overview of the implementation phase analytic processes (Figure 7.2; Appendix E). Similarly to the exploration phase data analysis process, all interviews were transcribed from audio files, and documents were uploaded to Dedoose, an online qualitative analysis platform. Each document was read and discussed with peers to generate a preliminary round of base content codes and data descriptors (Miles & Huberman, 1994; Merriam, 2009). Analysis occurred as soon as data were collected even beginning in October to avoid, as Merriam writes, being “unfocused, repetitious, and overwhelming,” and continues, “Simultaneous data collection and analysis occurs both in and out of the field,” (p. 171).



**Figure 7.2** Implementation phase data analysis process (Merriam, 2009)

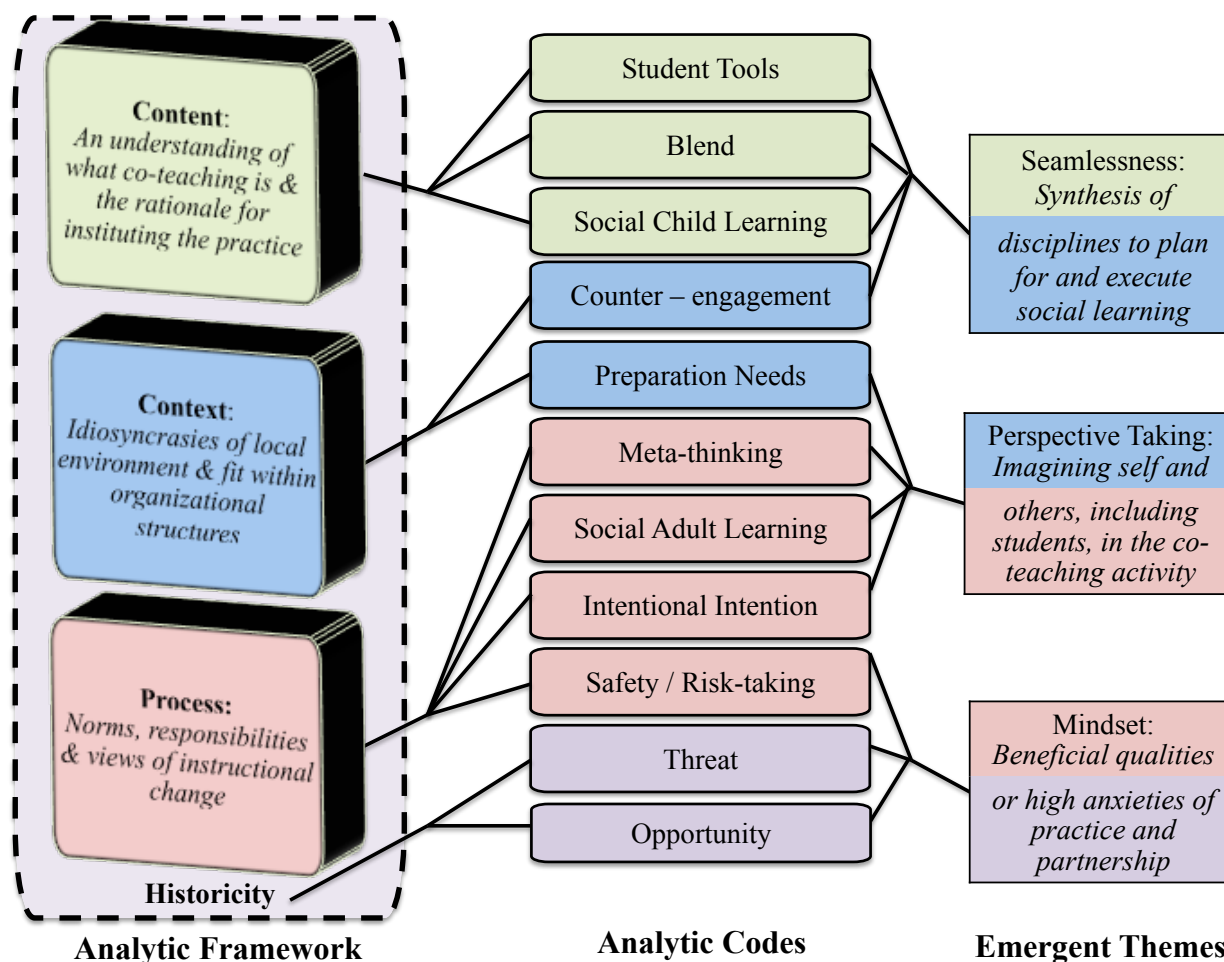
Next, using interpretation and reflection, preliminary content codes were crossed with the co-teaching implementation theory that was generated in the exploration phase of this investigation. Analytic memos were generated based on these coding patterns and alignment with the co-teaching implementation framework. I wrote memos across more than one

interview, group planning session, observational field note, or other piece of data. To this end, I made claims to triangulate with observation field notes, as well as artifacts, for further refinement of themes and findings.

Interpretive categories and themes that cut across data sources were then presented to peer DBR researchers who provided critical analysis and suggested revisions of code definitions and themes that strengthened connections between data and understanding the events and instructional phenomena at Northern Hills. The team also provided critical questions addressing my biases and position as a researcher and co-designer of the learning environment at Northern Hills (Brown, 1992; Cobb et al., 2003; Merriam, 2009), which were then examined by the researcher and accordingly edited.

As mentioned in the analysis of the exploration phase, analytic themes attempted to be as “responsive, sensitive, exhaustive, mutually exclusive, and conceptually congruent,” as possible (Merriam, 2009, p. 186). Figure 7.3 is a coding tree, which represents how the co-teaching implementation framework was the analytic theory that informed the primary codes and emergent themes. A research assistant also coded several transcripts to critically review the applicable definitions of codes as well as inter-observer agreement of code allocations.

The results from the implementation phase is now presented with an overview of the themes and the design decisions that occurred as the dynamic co-teaching team at Northern Hills to work the very tools that they co-created to support their practice as well as others’ practice. The analysis is presented and bounded by the conjecture map to present evidence supporting or questioning original hypotheses. The case study is also bound by phases, meaning that findings are delivered according to conjecture, but cross year (case) comparisons are made to understand the phenomena.



**Figure 7.3** Diagram representing the analytic process of the implementation phase

### Exploration Phase (Year 1) vs. Implementation Phase (Year 2)

Although Amy, Carol and Heather attempted to implement co-teaching at Northern Hills during the exploration phase of this investigation, their effort was met with many barriers and ultimately did not lead to an optimized collaborative space (see results in chapter 4). Because of the contextualized and iterative nature of DBR though, these barriers informed the development of co-teaching tools to support the next opportunity to implement co-teaching at Northern Hills. Development of these tools (see chapter 6) mediated growth of a collaborative space and supported clear co-teaching language, dynamic instruction, and equitable practice for participating co-teachers and students.

The proposed conjecture map in chapter 4 is used to assist with my understanding the co-teaching activity system at Northern Hills as well analyzing my hypotheses. Of the three conjectures, the first involved the implementation of the Co-teaching Lesson Guiding and Reflecting Form (CTLGRF) and its hypothesized increase in creative lessons leading to the integration of student learning supports. The conjecture also hypothesized an increase in student participation, student learning and performance, and classroom community. The second conjecture posited that designing and implementing the Collaborative Teaching and Learning Map would create a safer and more transparent co-teaching space. The third conjecture claimed that by meeting regularly the number of lessons that support the social nature of student learning would increase, as well as the development of a safer collaborative space for practitioners. These conjectures represent an intervention with the Northern Hills co-teaching community of practice, which sought to fundamentally alter literacy planning, instruction, equity and student learning. Each conjecture is now discussed in comparison from year 1 to year 2.

**Conjecture 1: Design and Implementation of the *Co-teaching Lesson Guiding and Reflecting Form***

Alternative forms of classroom assessment, instructional presentation, and activity choice prepares both basic and critical academic skills while simultaneously addressing multiple learning differences (Tomlinson, 1999; Tomlinson & Imbeau, 2010). Using these Universal Designs for Learning and differentiation reduce environmental, instructional, and ideological barriers to learning differences and disability and highly influence many professional training programs for special education teachers – including Amy’s.

**Year 1.** During the exploration phase, instruction at Northern Hills, although rooted in unit-based instruction, was described and observed as not optimizing principles of differentiation

or social student learning. Practitioner expertise was not used to integrate supports for student learning needs, and students were relegated to the same consistent skill-based groups and instructors. These cultural norms became commonplace and were practices that were intentionally targeted for disruption during year 2 to increase the variance in co-teaching instruction.

Throughout the early planning observations and debrief interviews of year 1, Amy privately described her expertise with Universal Design for Learning and Differentiated Instruction principles. Amy repeatedly spoke of the importance to use these principles to guide accessible instruction for all students, regardless of disability or language proficiency. Amy's expertise was integral while she was persistent in weaving UDL and DI language into our two co-teaching tool design features. As was discussed in previous chapters, year 1 saw little to no examples of UDL or DI lessons for class wide instruction. Our first conjecture, however, stated that by designing and implementing a tool – the Co-teaching Lesson Guiding and Reflecting Form (CTLGRF) – to disrupt that norm, that there would be an increase in creative co-taught lessons as well as an increase in meaningful student participation, learning, and performance. Gathering data from many sources (figure 7.1) supports such a complex conjecture (figure 5.2).

**Year 2: Creative co-teacher integration and instruction.** As stated above, year 2 data sources have been bounded within four major TCRWP curricular units spanning from September 2015 to March 2016. CTLGRFs were analyzed during these instructional units. Although the CTLGRF didn't exist in year 1, by comparison to observed year 1 instructional activities, there was a sharp increase of creative co-taught lessons that were implemented. This increase of creative lessons is represented and measured by the number and variance of co-taught models. Highlighting this diversity begins with the opinion and persuasive writing TCRWP unit, which

began in November 2015 and utilized four different models of instruction: Station (n=7); One Teach/One Assist (n=3); Teaming (n=5); *and* Parallel (n=2). The unit also utilized four different structures of student grouping including: Heterogeneous (n=6); Homogenous (n=3); Student Interest (n=4); *and* Student Choice (n=4). The dynamic nature of these co-taught lessons significantly disrupted the overuse of the One Teach/One Assist model that the Northern Hills team relied on during year 1. In fact, only once out of six observations was a year 1 lesson not the One Teach/One Assist model, and student groupings were never varied.

As school resumed following the year 2's winter holiday break, a third instructional unit began and focused on historical writing. According to multiple data sources including instructional observations, planning sessions and archived CTLGRFs, this unit incorporated four different co-teaching models and four different student-grouping configurations. A fourth instructional unit focused on literary essays and represents perhaps the most dynamic unit of the year, due to both the variance in models, but also the abundance of DI and UDL inspired student supports that littered the unit. In this unit, four different co-teaching models as well as four different student-grouping configurations were implemented. The unit goal was to deeply analyze four fictional pieces of writing to understand the author's craft, character development, and story themes and the final student product was the creation of a literary essay analyzing one of these texts to support a thesis. Individual lessons within this unit were planned to systematically integrate all learners and ensure that those students with learning differences were not relegated to the same small group or separate setting.

In addition to teaching models and student groupings, many student tools were implemented, including: individual student copies of the four 'anchor texts'; audio recordings of those texts; student copies of models of expected writing; access to Google documents; posters

of unit vocabulary; student copies of styles of writing within the unit; sentence stems and starters; color coded graphic organizers to support the essay structure; question prompts for student group discussion; a rubric of expected essay components for self-assessment; and another graphic organizer for a comparative essay between stories. These student tools are highlighted to demonstrate the deep attentiveness given to student needs irrespective of ability and English proficiency, which is essential to meaningful learning and engagement in the inclusive classroom.

These findings were a direct result of adding a question to the CTLGRF regarding student tools, which proved to be a critical design decision. The CTLGRF question was phrased: *What student tools are needed?*, and is in the lesson discussion section of the form. This design addition led to regular planning and instructional decisions focused on supportive objects to achieve lesson targets. It also led to the regular engagement of Amy, the special educator, and her expertise concerning learning supports. In the following passage from a planning session, Amy suggests to the team that the next unit's curricular goals could and need to be supported by lessons and graphic organizers that she has used in the past:

Then her [Lucy Calkins] next thing is: *Writing to learn: Providing guided practice*. And I'm wondering if we want to build in, umm, so like, Step Up to Writing has a lot of graphic organizers, and it has a lot of things they can do, like these Stand Up and Sound Off things, and umm, like there's this organization theme that I have done with my kids before, where they're given a ton of words, and they have to organize them into some sort of theme that make sense for them, so that they start to understand the idea of organization. I don't know. I'm just wondering if we want to build in some things that they can do, instead of just, I know we want them to write, and to be writing, writing,

writing, but at the same time, they can't just jump from, "I'm going to tell you how to organize" and then "try it on," without some sort of structure. (11.6.2015, Figure 7.4)

In a manner that was not present during year 1, Amy not only identified student-learning needs, but also gaps in the TCRWP curriculum and suggested solutions.

The image shows a spiral-bound notebook page with a graphic organizer for writing an accordion paragraph. The page is titled "Writing an Accordion Paragraph" and includes the following sections:

- Name \_\_\_\_\_ Date \_\_\_\_\_
- This form is set up to help you write a 14 sentence paragraph. You may not need that many sentences. Also, you may decide that in some cases you need only one "explain."
- Title \_\_\_\_\_
- topic sentence \_\_\_\_\_
- first reason, detail, or fact with a transition \_\_\_\_\_
- explain \_\_\_\_\_
- explain \_\_\_\_\_
- second reason, detail, or fact with a transition \_\_\_\_\_
- explain \_\_\_\_\_
- explain \_\_\_\_\_

Three smaller, colorful sheets are layered in front of the main sheet:

- A yellow sheet with a "Topic Sentence:" section.
- A green sheet with a "Topic Sentence:" section.
- A pink sheet with an "Explain:" section.

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**Figure 7.4** Graphic organizer tool Amy developed to support student engagement and learning.

Amy's willingness to engage like this was no doubt supported by encouragement from her general education counterparts. Maggie's approach of genuinely seeking advice exemplifies her earnest desire to collaborate with Amy as well as the true social aspect of learning and

teaching. The following planning session excerpt is one of many instances where Maggie involves Amy in the planning process as both a source of knowledge and equitable planning partner:

Would you want to do that first, or would you want to pretend generate the list from the children's discussion of a mentor text? It doesn't have to be 'Stray'. We could go back to 'Stray', but should we generate that list, or pretend to generate that list with them while using a mentor text of some sort? Like, 'Thank You Mr. Falker' where Trisha has this whole big family around her. They have this big tradition of tasting honey off of a book, then her grandma and grandpa die. They move to a new place, she's with her family but she still feels so alone. What do you think? Mentor text first, list first? Mentor text? List? Check with mentor text? (10.16.2015)

By regularly seeking Amy's perspective on curricular designs, Maggie affirmed Amy's position as having power and not simply a temporary guest in the collaborative space. This engagement certainty began to shift Amy's relational identity to Maggie and Stephanie in an equitable way that she did not have with Carol or Heather. Increased meaningful engagement such as this also led to another critical team discovery. It became clear that in order to strengthen an instructional unit, a clear unit goal must be agreed upon to allow for adequate scaffolding and creating unit benchmarks. The team felt adamantly that a final unit product would also be best supported with a model to show students.

Although the team planned for this student model for the historical writing unit (3<sup>rd</sup> TCRWP instructional unit), it did not happen. They planned for a student book to be created to support students throughout the unit, but because of the labor involved, the team did not create

the book until the unit's final week. This exchange during the last planning session before winter break strongly suggests that the team wanted a student model for the unit:

*Stephanie:* So, at what point are they writing- So, they're writing two books. When do we want their first book done by as far as these six weeks go? And keep in mind, we gave them a week to do this final product and we're all saying that was not enough time.

*Amy:* Yeah.

*Maggie:* But they're starting with the end goal in mind from day one of this unit. So-

*Stephanie:* And they'll have one example to guide them. (12.18.2015)

The team had good intentions to integrate a strong student support and clearly saw a value in preparing a student model, however, Maggie did not create the student model until the final week of lessons, which was less than ideal. The following private reflection by Stephanie shows that this really struck her as critical point moving forward:

I think we need to do even more for the next writing unit. I think it needs to be where we're clear about the rubric at the very beginning, that we have a student example for their final product at the very beginning, so that kids have more of a guide. Cause even now, you see kids come up to me they're like, "so is our letter supposed to be part of our four subtopics or after?" And it's like, it wasn't clear to them cause it's not part of the rubric. (2.9.2016)

This private sentiment was also brought up to the entire team at the preliminary Literary Essay unit (4<sup>th</sup> TCRWP instructional unit) planning session in the following February exchange:

*Stephanie:* When Jacob came in yesterday and we were talking about that we wanted it to be where we knew what the final product was at the beginning of the next unit so we could prepare the kids for it.

*Amy:* Mm-hmm (affirmative).

*Stephanie:* Do we know, the literary essay, they're writing a literary essay then, correct?

*Amy:* Mm-hmm (affirmative), I believe so, yeah.

*Stephanie:* Okay, then it would need to be where we would have that model done, or we had different examples to show them. (2.11.2016)

A student example, as Stephanie had strongly suggested, was then prepared for the unit. In a balanced and equitable team effort, the student booklet was compiled before the unit began and it consisted of all the aforementioned graphic organizers, student tools, and anchor texts. The team also audio recorded all of the stories that the students needed for meaningful participation. Although not isolated to the last unit, the frequency of intentionally planned and executed lessons to align dynamic co-teaching models and student-grouping configurations occurred at a higher rate than the first three units. As the units progressed, the amount of time spent discussing curricular topics and goals during planning sessions reduced and shifted to strategy discussions about the lesson outcomes, co-teaching models, and appropriate student groups. Although Amy could easily engage in curricular conversations, the time engaged with instructional delivery decisions really illuminated her expertise.

As opposed to year 1, Amy's increased confidence in contributing to lesson development shone through in planning sessions as well as lesson and unit implementation. For two units spanning from late November to mid-February, all students, at Amy's suggestion, were given choices for their final products. By creating a unit with a menu of learning assessments, the team embraced a fundamental principle of differentiated instruction (Tomlinson, 1999) to support learning differences. Amy regularly suggested a tiered-product approach to units, and most importantly, that approach was implemented.

**Year 2: Active co-teacher engagement.** The first of these choice-driven units focused on persuasive writing (2<sup>nd</sup> TCRWP instructional unit) and the students were provided the assessment choice of: a) writing an essay; b) creating a pamphlet; or c) writing and performing a play. The full execution of planning, teaching, and learning for this unit positioned Amy as an equitable member of the co-teaching team, which she described during this debrief:

Yeah but in this unit for sure- I mean, I felt very comfortable kind of spearheading some things, which was really nice. And that they also responded in a way that made me feel like that I could continue that. It wasn't like- Even if they had said they didn't like the final project idea, I don't think I would have been shut down. Whereas in other instances it may have made me feel shut down, like what I had to say wasn't worthwhile.  
(12.16.2015)

In this conversation Amy really shows the difference in her co-teaching positioning and willingness to suggest instructional support as opposed to year 1. Maggie – who was also present during that debrief following an observation of their dynamic lesson – was certain that she and Amy's new roles were the catalyst for this creative instruction to happen. During this debrief, when posed with a question about co-teaching's affordances, Maggie names them as well as her own learning that she feels is supported by her co-teaching partners:

*Researcher:* So, what is it about co-teaching that allowed something like today and something like this unit to happen?

*Maggie:* You have more options. Like if I have to do this all by myself then management is a huge piece. Being able to individualize instruction is pretty damn near impossible when it's one teacher and thirty kids and they're all at different levels and- Like for the play, they're learning a new vehicle for getting their thoughts out there as well as really

learning how to write an essay and all the other pieces. For making the pamphlet, they're learning how to use Google Docs, they're learning how to use Lucidpress, they're learning how to import pictures as well as all the other parts to just writing an essay. So if this were me in my class there wouldn't be the options. We would write three essays. The first one would be actual essay structure. Then we would take that same essay and we would put it in a presentation, pamphlet form. We would take that same essay and again do it as a play- If we got that far because generally speaking- Like for reading and writing, we have six units to get through in a year. That means I have to do two separate units every trimester. There is not time to do that and actually teach well and address the needs of the children.

*Researcher:* So does this help student learning?

*Maggie:* Yes.

*Researcher:* Why?

*Maggie:* Because it [co-teaching] allows greater freedom for styles of learning. It allows for teachers to really hone in on the needs of the students. Not just the ones who go to Amy. It lets for teachers also to have a sounding board to bounce ideas off of because we all have our strengths and we all have huge gaps and weaknesses. (12.16.2015)

Here, Maggie directly credits co-teaching for supporting creative instruction and subsequently supporting student learning. In addition, the team's focus soon became their purposeful decisions concerning which co-teaching models and student groupings would best support student learning and lesson targets. While assessing the state of their practice at a Collaborative Teaching & Learning Map session in March 2016 this exchange really underscores the

complementary nature of how both disciplines can support student-learning needs when done intentionally:

*Stephanie:* So I think it's hard because- feeling- I don't ever feel red [performing zone of Map]. I don't ever feel like I'm doing a good job. Like I feel like I'm- And then when we talk about it it's like 'okay pat yourself, there you are Stephanie, you're doing okay' but I go straight to like-

*Maggie:* This doesn't say though that you're perfectly red. This says that the roles are clear, they're defined, and they intentionally fit all student-learning needs. Does that mean that you meet them all? No, because that's the part you're talking about where you always feel like you could do more. But are things set in place to try? Like are you trying your best? Are you fitting what we all come together with for the kids as best as you can at that point in time? Because of course hindsight is always 20/20 and the future is all [*expletive*] up like my vision. So that part. And creative co-teaching models are used to meet a range of learning goals. So do we meet them all? No. Do we meet a range of them?

*Amy:* Yeah.

*Stephanie:* Very good language then.

*Amy:* Yes very good language and again it's the intention behind it. Are we intentionally choosing models that we think are going to support the students? Yes. Does it always hit the mark 100%? No. But we're trying a variety of them too. I mean throughout the year we've tried every single co-teaching model that- of the six that you know are the ones that or there. We've done them all. And we've done them because we've said 'okay this is really going to target those kids, this is going to target those kids' or even

if it's just like purely for the idea of trying to raise engagement. You know, breaking the class in half and we're doing the same exact instruction, we're reading the stories, we're having the discussions but you know the idea is there's less kids and so they engage more. (3.11.2016)

Stephanie is also very honest in this conversation about her vulnerabilities as an instructor. She feels that her practice is never in the red zone – indicating *performing* – on the Collaborative Teaching and Learning Map, but Amy and Maggie are there to provide reassurance that being intentional with their practice is the goal rather than perfection. Amy notes that it is really the intentionality to serve students in ways that promote the social nature of learning and to support their differences. This perspective is especially complementary with Stephanie's overall philosophy of teaching and learning, for example this point she made at a planning session in which she suggests fostering learning's social nature:

And I vote with the last like 15 or 20 minutes is just sharing because like we still- I am not the best at having kids just share their work. And every time- not every time, but when they share their work and they're able to see other kids' good examples it means so much more than just me up there droning away at them. (12.4.2015)

Here, Stephanie is aware of the interactional nature of learning and the power of peer influence. Peer editing and review became cornerstones of the teams' instructional goals, which allowed for Amy to seamlessly thread her methods of differentiation and student supports for engagement. Student learning is fostered by dynamic co-teaching instruction that is fundamentally different from traditional didactic instruction and this increased through the development and implementation of the Co-teaching Lesson Guiding and Reflecting Form. The CTLGRF reinforced planning and implementing multiple arrangements of instructional models and student

configurations and helped to achieve curricular goals by integrating UDL and DI principles. Additionally, and perhaps more importantly, completing the CTLGRF positioned Amy – the special educator – as an instructional expert and equal co-teacher. Amy’s agency also shifted with her participation in designing, developing, and implementing the Collaborative Teaching and Learning Map, which is the core of our second conjecture and is discussed next.

### **Conjecture 2: Design and Implementation of Collaborative Teaching and Learning Map**

**Year 1.** Teacher positioning is of particular interest when studying the development of inclusive collaborative spaces (Naraian, 2010). Co-teachers are asked to both sacrifice and co-exist in a brand new space that forces them to take on new roles and confront potentially inequitable positions, as was previously the case at Northern Hills. As discussed in the previous chapters, Amy referenced the silencing and confusion that she regularly encountered as she and Carol attempted to negotiate and plan their practice with little experience or guidance from their school or district administration. The second conjecture attempted to support that guidance and hypothesized that by co-designing and implementing a Collaborative Teaching and Learning Map, a safer collaborative space would develop. Construction of the first few map iterations was discussed in the previous chapter and the Northern Hills team first broached the implementation of this touchstone map in late October over two sessions.

**Year 2: Equitable practice.** At the first map discussion session, Amy presented the map’s rationale to Stephanie and Donna – who were not present for the summer design sessions. As Amy presented the map’s logic and design, she was essentially given the space to provide her understanding of how the map could support their practice. The following passage shows Amy’s understanding of the map’s design:

So when we first started it was more of a rectangle and it had four different categories which built on each other, but it kind of felt like more of a rubric where it was like ‘oh here you’re like not very well here and here’s where you’re really, really great’. But what we really wanted to make it feel was a map that this is what- This is like our roadmap of where we want to go and the target is the middle. We’re doing all of this work in the benefit of the kids. And that these are different places to be as far as where we are all starting and where we’re growing to. And so it’s not evaluative it’s just looking at where we are in our own practice and where we think we might be able to grow and learn. And each one is meant to build onto the next one. So it’s not a better or a worse it’s adding on. (10.28.2016).

Amy description and rationale of the map reveals its strength-based nature and the possibility of it supporting meaningful engagement with her co-teaching colleagues. This potential is a result of the ambiguity and frustration stemming from the previous year’s co-teaching experience. Design of the map is such that the special educator’s historic marginalization is addressed with wording that suggests how each practitioner should be positioned, rather than describing the pitfalls of poor practice. The intention of this wording and design is to avoid the evaluative stance and punitive language that Amy described above. Communication is also a critical component of the design and was shaped by Maggie due her concern that in the past there was a lack of communication structure to convey concerns of her partner’s practice. When interviewing privately about both her contributions to the map, and her ability to structure feedback language to her co-teacher, Maggie answered, “Yes, which is why I like making that tool, and that it’s very additive rather than punitive. I like our shape of a circle.

But yes, that would definitely help guide the conversations so that it wouldn't be like '*and what the heck were you [other co-teacher] thinking?*'" (10.6.2015)

Maggie highlights how frequently, feedback to other co-teachers can be imprecise and unclear from both the deliverer and the recipient. The Collaborative Teaching and Learning Map anchors performance feedback focused within each co-teaching construct. During the exploration stage, oftentimes feedback and suggestions among Carol, Heather and Amy did not stay within any one construct and was rarely acted on. An instance during the implementation phase where that very consequence could have occurred again is revealed in the following exchange from the initial map session. Here, Stephanie introduces both her feelings when she's unprepared with planning during the first literacy unit as well as the labor involved in that preparation:

*Stephanie:* I think it's- The part that's hard for me is- I'm going to just be real transparent here. Like the grunt work- I was here til 7:10 on Friday and I was here- I came here at 7 o'clock in the morning on Monday because annotating is not easy and I- a lot of it was just getting my kids prepared but a lot of it was preparing to teach four different lessons. And I think that it's one of the parts that I want us to be aware of as we plan. Like, all this differentiation is awesome but the work that goes behind it is strenuous. Like Donna didn't know what to do, we didn't tell her when we talked to her about what she wants. But I think it would be really good for us next time if we're going to be doing different kinds of stuff we really use our time wisely so we can be prepared as possible.

*Researcher:* Yes.

*Stephanie:* So that's what I would put out there is that- I don't know if it goes with the collaborative intelligence but it is something that I did not- I want it to be like when we teach whereas- Whereas- I am as prepared as possible so we can use our time efficiently as possible when we're here.

*Maggie:* Yes.

*Researcher:* Completely agree.

*Amy:* I'm trying to find- I don't know. I was looking for a category that that might fit in. But I agree also like making sure that when we do have a plan we've got like this overarching like 'yes this is what we're doing' but we really need to look at the details and make sure that everybody has like five- you know, that we all know where we're going to be, we all know what we're going to do. I mean even that idea of like on Monday it was like 'okay what group are you having? Oh yeah Tuesday, who am I having today?' And just making sure that we have all those things down. I agree with that because it did feel like there were a few times where it was like 'uhhh'.

*Stephanie:* Yeah, and I think it went really, really well and it was like- I mean I think I was super happy about it, I don't know how you guys felt, but I- I don't want it to be where- We won't be happy if we don't plan the details. We'll be really frustrated and we'll think it's crap.

*Amy:* And especially if there's something like there's more planning for one person than the other and this like- For you, you know, your particular lesson, planning for that was huge. So if there's going to be more planning heavy for one person maybe sharing that burden. You know, making sure that we're helping each other with that. (10.30.2015)

Stephanie is expressing her displeasure with an inequitable division of labor here, and perhaps because of her desire to be an equal partner herself, Amy quickly offered a solution. Amy appears to approach the opportunity to collaborate from a stance in which equitable engagement is actually providing resolutions in which she may voluntarily take on a larger workload. Perhaps Stephanie would not have revealed her unease with unpreparedness if her team did not have the map to help understand their activity system? As implementation of co-teaching progressed from Stephanie's concern in October, Amy became satisfied with the equitable workload and power relations during a conversation at the second map session over the Thanksgiving holiday break:

*Amy:* ...I love the fact that all of us are planning together because she's my partner in a lot of this and so I think to get into the red is making sure that all four of us when we're in the classroom have like...Because it took a lot to get over that idea for me at least of like ok I'm going to stand back here and I'm going to listen to the instruction, and not really join in until it's my turn. That was really hard for me.

*Stephanie:* Really?

*Amy:* Yeah.

*Stephanie:* No the last year or this year?

*Amy:* This year was easier but I think last year was like..

*Stephanie:* Really? That sucks.

*Researcher:* That's like 80-90% of the time.

*Amy:* I think that if we are in the red [performing zone] it's because all four of us feel like we really do have that joint ownership and so that when we're in the classroom feeling like we are on that same level playing field the kids see us as valued members of the

classroom, and I think that we're getting there, for sure, but last year yeah, I mean every time I'd go into the classroom I'd feel like a bouncer because all I did was tell kids, you shh, listen to what the teacher is saying. (11.24.2016)

Equity among co-teachers is a primary target of the Collaborative Teaching and Learning Map, but other targets involve the improvement of high quality instruction including the integration of each member's professional expertise and the use of student data to make instructional decisions and support student learning. The map provides precise language to identify how their instruction is being used to move to a more transformative practice. This is highlighted by the use of student data in the classroom and not just between the teachers. When the team was identifying where their practice was with respect to student data usage Stephanie immediately stated that she felt this was a team strength, and Amy provided data to support her claim:

I would say that we're either dark orange [norming zone] or red [performing zone] for that one, because we're doing, we're really getting a lot more in into...they [students] are scoring their own work, we got the rubric, we're continuing to do that, even on Monday when we come back they're going to be looking at each other's work, and looking at what they can improve on. (11.24.2015)

The rubric Amy has referenced is the grade-level and student-friendly evaluative tool that the students have been using to both identify their own writing essentials, as well as peer's, which thoughtfully supports reflective practice for the students and is a key DI principle. As the units progressed and the use of student data diversified, Stephanie felt that the team had improved even more by the March map session, perhaps even in the red 'performing' zone. The team, however, challenged her because they felt that they were not having the students rate their

performance enough and this becomes a point of conversation. Eventually the team lands their performance assessment on the dark orange or ‘norming’ zone:

*Stephanie:* I would say red though because I think that we’re doing good with that like- I would say red because we’re having kids assess themselves constantly. Like they are grading themselves they are- We’re giving them feedback all the time. I would say definitely it’s more formative than it is summative. Which in this case makes us red.

Maggie disagreed and made the following point:

*Maggie:* Because they’re not constantly doing it like they do it at the end of their projects and we check in with them but when I look at like Lucy- like almost at the end of every day they should be giving themselves a grade like ‘did you accomplish this today?’ If not then you failed. If so- If not then you have homework and you need to come back tomorrow and get that done.

Stephanie was still a little murky with Maggie’s perspective and then Amy provided clarification and Stephanie agreed:

*Amy:* Yeah. I think we are definitely there [dark orange norming zone] I don’t think the kids have at all mastered how to do that because they’re trying it on still and they’re still learning how to do it.

*Stephanie:* You’re right.

*Amy:* But we’re providing the opportunities for them to do it.

*Stephanie:* Good point.

This negotiation of where their practice is situated focused on their use of student data, but even little exchanges over potentially challenging information create moments of team cohesion if conducted with empathy and from growth-oriented mindsets.

**Year 2: Psychologically safer participation.** Another example of making a design decision following the implementation process was originally covered in the previous chapter, but occurred at the second map session in November. The team brought up this need during that map session as they began their assessment of the psychological safety within the team. While discussing the zones within the construct of psychological safety the following design decision was reached that a change of wording for ‘psychological safety’ should occur:

*Amy:* I would say either light [evolving zone] or dark orange [norming zone] because I think this whole personal flaws thing feels...now that we're actually in this I don't know if personal flaws, I don't know if I like that terminology, it still feels judgmental to say it that way, because we all come with our own comfort levels, so if we're in the process of trying to get, okay I don't feel comfortable with this type, but I'm gonna try it on, it isn't a personal flaw necessarily, it's just trying to shift what we're doing and taking that risk of ok I'm gonna try it on even though I feel like it might...I might feel uncomfortable.

*Maggie:* Can personal flaws be instead something like new learning, or...

*Stephanie:* Uncomfortable feelings?

*Maggie:* Risk taking? (11.24.2016)

The team felt that even though they were comfortable with the original wording of *psychological safety* and its description while designing the map over the summer, it felt differently implementing the use of the map to gauge their practice. The team felt that a term such as psychological safety and the use of the term ‘flaws’ was too intimidating and judgmental, so it was changed to *interpersonal skills* and *personal flaws* was changed to *strengths and weaknesses of practice*. As stronger wording within the map focused on team members’ safety,

Stephanie revealed in a private January interview just how challenging it still is to navigate the co-teaching relationships in the following exchange:

*Stephanie:* And there's so many ways to mess up that it's an unwritten law that you don't talk to another teacher about what they could do instead or what they're doing wrong, you just don't talk about it. And any time that I've tried it's not gone well.

*Researcher:* Delivery matters?

*Stephanie:* Yeah. But I mean it's- So it's easier to just do your own thing. It's really hard to step outside of you- It requires two things. If I'm going to talk to another teacher it means that I know more than them. Like it implies that I know more than them. That- Ooh that's bad. And it also implies that the teacher doesn't know what they're doing. There's a huge power thing associated with that. No teacher would want to give up their power. It's always given to us with all of our professional development it's like 'you grow from each other and you learn and you grow'. And you know there's no- It's totally told to us like no pressure 'you know there's no pressure' but every time that we're told that there's no pressure there is motherfucking pressure. And so it's hard because it's- Why would we want to put our pressure on our fellow teachers? That's what it ends up being when it shouldn't be. It should be just 'how can we make each other better?' But when you're- It's not- I haven't yet found how to get to that area. Unless you really, really trust the person.

*Researcher:* But then it's- So there's trust and there's ego. Can you talk a little bit more about the ego perhaps?

*Stephanie:* Yes. We're in a position where- As a teacher, I'm in a position where I'm supposed to know it all. I mean granted they'll be like 'no you don't need to know it

all' but really we're supposed to know it all. And if somebody finds a chink in my armor it's like I'm a- I suck. It's so easy for it to go from 'I'm a teacher' to just 'I suck'.

*Researcher:* So how you receive information is important.

*Stephanie:* Yes.

*Researcher:* So not only does delivery matter but reception matters.

*Stephanie:* Yes. And we're not getting a lot of- We don't get a lot of professional development on how to receive information. So I see that as being hard too. Like the way- Okay for myself I think I'm pretty good with acknowledging my flaws and when I'm wrong being able to say I'm wrong. Because I do it a lot in my life. It's like a moral thing with me. But not everybody is that- People can get incredibly defensive. People can get incredibly negative or super upset. It can be where you tell somebody something and they go home and cry all weekend. Nobody wants to do that to anybody. Like the way that they can receive information is- And I'm not seeing where there's a lot of people that do like the way it's given to us where 'we just take it in and chew on it and you become better'. That doesn't happen with most people. So the- Like our egos can be so tied- I don't know anybody who- I can name on my hand the people I know that are able- that I can tell hard truths to and they'll take it.

Based on this exchange a implementation decision was suggested when Stephanie was pressed for a potential support for her concern about team safety and critical feedback:

Well, this might get kind of corny- But this kind of like worksheet that was having teachers like identify- what I would see being- I feel like I'm the only one talking about how I feel when we come to meetings about what I think- or not all- That's not all the

way true, but I have no problem talking to the group about like ‘I feel this about this’. I’m blunt. But some people are not as blunt and they can be shy about how they feel or what they think. So if there was some like worksheet where it was like ‘name a time that you felt supported’ and ‘name a time you didn’t feel supported’ (1.18.2016)

We decided to incorporate the modified psychological safety scale to get an accurate picture of the co-teachers’ practice. At the next planning session the team completed the self-report and used the information to target goals for themselves as well as the team. Table 7.2 displays the average team ratings of the psychological safety questionnaire (Tynan, 2005). Following Stephanie’s suggestion that a document be used to gauge team members’ perceptions of team safety beyond the Collaborative Teaching and Learning Map description, this scaled questionnaire was distributed at the January 22<sup>nd</sup> planning session and again at the March 11<sup>th</sup> map session.

Table 7.2

## Psychological Safety Questionnaire

<b>Questionnaire Item</b>	<b>Average team rating (1/22/2016)</b>	<b>Average team rating (3/11/2016)</b>
1. If you make a mistake on this team, it is often held against you	1.00	1.33
2. Members of this team are able to bring up problems and tough issues	5.75	5.33
3. People on this team sometimes reject others for being different.	1.25	1.00
4. It is safe to take a risk on this team.	6.50	6.33
5. It is difficult to ask other members of this team for help.	1.50	2.67
6. No one on this team would deliberately act in a	7.00	7.00

way that undermines my efforts.

7. Working with members of this team, my unique skills and talents are valued and utilized.	6.50	6.33
8. This team frequently seeks new information that leads us to make important changes.	6.50	6.33
9. Team members often speak up to test assumptions about issues under discussion.	5.50	5.50

*Note.* (7 = Very true of what I believe; 6 = True of what I believe; 5 = Somewhat true of what I believe; 4 = Neutral; 3 = Somewhat untrue of what I believe; 2 = Untrue of what I believe; 1= Very untrue of what I believe)

Psychological safety self-reports revealed a consensus among team members that they do not hold any mistakes against other members and no one feels as though other team members would deliberately undermine anyone else's efforts. Although already described at higher levels than during the exploration phase, the team identified two items as places to improve: 1) team members' ability to bring up problems and tough issues, and 2) team members' ease to ask other members for help. Stephanie's need for preparation and discomfort with changing her classroom instruction was very clear in another exchange. In this exchange Stephanie voices her concern for student performance during the unit on opinion writing. Here, students were first given a choice for their final product including writing and acting out a persuasive play, which really pushed Stephanie out of her comfort zone. Fortunately, Stephanie expressed her concern, but also acknowledged her willingness to learn from the opportunity rather than shutting down the co-teaching partnership to future dynamic project-based instruction:

*Stephanie:* So I think the parts that are good are- Basically about this whole like team model I think we need- I'm talking to myself and I'm talking out loud- It's important that we keep an eye out that this is our first time doing it and that we are learning as we

go along just like when we say that with the kids. Like you know, it's going to be the first time and they're getting exposed to this stuff. Bringing me back to my point about why, I cut in-

*Maggie:* Keep going.

*Stephanie:* So the thing that I think could be good about- Maggie brought it up, the thing that I think could be good about this is them [students] being exposed to- like the kids are exposed about how to create a pamphlet. And is it going to be perfect? Hell no. It was their first time doing it. And the kids are writing plays. Is it going to be perfect for all of them? No. But the positive is do you know how many kids are bringing in props into my class? Like and they're-

*Amy:* Yeah! They're so excited!

*Stephanie:* They're so excited. And Ricardo and like all of my dingbats, their play is only one page but they acted the crap out of it. And they were super into it and involved and like 'you need to look at him more when you say your line, bro'. Like there's- It- And so is it going to be- With the picture books [the next unit] I think I want to take that lesson of yesterday of like it's not going to be perfect, we can't plan every single thing, but how can we be- How can we do our best and how can we keep- Implement as much as- How can we use as much forethought as possible as we plan whatever we do?  
(12.18.2015)

Stephanie reiterated her growth mindset and pledge to co-teaching at the March map session as well. There, she brought up the need to discuss help as something that is still a relative difficulty for her by stating, "relationships are hard," but that with clearer planning, she will have even better understanding of what to ask for as opposed to staying silently confused.

As the March map session progressed, two responses to tension and conflict were discussed. When posed with a threat mindset, a co-teacher may view hazards of performance with anxiety and resistance or may approach tension with a growth mindset in which this conflict is an opportunity to learn and grow professionally, but only if that tension is communicated well.

Stephanie identified tension in that map session conversation and the need to approach it as though, “We’re going to learn.” Amy responded with the example of sharing classroom space and how Stephanie said, “I know I’m loud...but I’m going to try really hard not to be’ That’s- ‘I’m going to learn,’ instead of saying ‘no you take your kids to the computer lab. I’m going to stay here because I’m loud...and I’m not going to change’.” Stephanie affirmed her growth mindset by acknowledging her own behavior, and also Amy’s responsiveness by saying, “And you did really good with that like ‘so we’re going to try this- ‘lead me along’.” Both of their commitments to practice are reaffirmed in this conversation and they have assured each other that this is tough practice, but can be accomplished if they’re both willing to adapt and learn. Final assessments of their practice left the team at the following zones within the Collaborative Teaching and Learning Map: Collaborative Skills: *performing*; Planning: *performing*; Teacher Talk: *performing*; Teaching: *performing*; Professional Expertise: *performing*; Interpersonal Skills: *norming*; Student Assessment (use of data): *norming*; and Classroom Community: *performing*.

### **Conjecture 3: Meeting Regularly in the Collaborative Space**

Creative co-teaching instruction supports variance in student learning needs by intentionally disrupting the overreliance on one form of co-teaching or one role for co-teachers. By actually using multiple co-teaching roles a team can support a fusion of both curricular goals and individual student learning goals. This was the rationale to develop student tools that align

co-teachers' understanding of instructional goals, practice, and outcomes. The third conjecture centered on that disruption of traditional or restrictive forms of instruction. It claimed that by meeting regularly in a structured collaborative space then co-teachers would negotiate how their respective expertise could enhance instructional delivery methods to achieve curricular unit goals and improve the classroom community and ultimately student learning.

**Year 1.** As was discussed in chapter 2, many researchers including Friend et al. (2010), Cook et al. (2011) and Scruggs et al. (2007) among others, have documented the intention of integrating the two camps of instruction in the co-taught classroom. This integration is really between general educators and special educators and their historical focus on curricular standards and goals or individual student performance goals. Integrating these two camps is vital to the Collaborative Teaching and Learning Map. This integration was not present in year 1.

**Year 2: Integrated collaboration.** Year 2 began to see the emergence of an integrated approach to professional disciplines. During planning sessions in October 2015, Maggie encouragingly revealed her perspective about not only how the two professional expertise camps can support one another, but how Amy's expertise is very strong during this private interview:

We as gen ed teachers, we have to teach whole group so much, unless we're doing stations or rotating, that I honestly think that Amy has a better handle of small group instruction than I do in a lot of areas. Maybe not in content areas because she doesn't have to teach that but when it comes to especially the basic skills of reading and math that she's got me beat for sure. (10.6.2015)

Stephanie also highlighted the ways in which Amy's expertise in instructional delivery is used to improve student learning and broad curricular goals in literacy this year. Stephanie brought up the following example as data to demonstrate their beneficial blend of expertise and perspective:

When we were doing essays how she [Amy] got the bullet points with the circles and the colors for kids like to me that's what I'm reading that as- 'seeks new information that leads us to make important changes' We think about stuff that we can add to the curriculum to support our kids like the audio shit that she came up with like that- or that you guys [Amy and Donna] did. Like that's the same stuff, like we're thinking about ways we can make this accessible to kids. (3.11.2016)

Figure 7.5 is a screenshot of the very graphic organizer/student tool that Stephanie is discussing. I watched the implementation of this student tool to support all students – particularly those with learning differences or learning English as a second language – over several TCRWP units. Of course, the student tools and dynamic integration of the two professional perspectives were also connected to the selection of co-teaching models and student grouping options.

Name \_\_\_\_\_

Claim \_\_\_\_\_

Day	Task	Whats Due	Grading your group
12/9 Wed	<ul style="list-style-type: none"> <li>Your group needs to decide your topic/claim and your 3 reasons to support your claim</li> <li>Everyone fills out their own sheet</li> </ul>	<ul style="list-style-type: none"> <li>Essay outline with green and yellow filled out for each group member</li> <li>Check out with teacher</li> </ul>	<ul style="list-style-type: none"> <li>Everyone contributed _____</li> <li>Staying on topic and getting work done _____</li> <li>Group being respectful _____</li> </ul>
12/10 Thurs	<ul style="list-style-type: none"> <li>Groups decide supporting details for reasons</li> <li>Make sure you have different types of details (Expert opinion, Example/Elaborate, Everyday life)</li> </ul>	<ul style="list-style-type: none"> <li>Essay outline with two reds (details) to support each reason.</li> <li>Check out with teacher</li> </ul>	<ul style="list-style-type: none"> <li>Everyone contributed _____</li> <li>Staying on topic and getting work done _____</li> <li>Group being respectful _____</li> </ul>
12/11 Fri	<ul style="list-style-type: none"> <li>Create scenes and who/what is happening in each scene. Rough draft</li> <li>Once students finish they may begin typing in computer lab</li> </ul>	<ul style="list-style-type: none"> <li>Play guide needs to be filled out and finished</li> </ul>	<ul style="list-style-type: none"> <li>Everyone contributed _____</li> <li>Staying on topic and getting work done _____</li> <li>Group being respectful _____</li> </ul>
12/14 Mon	Typing and working session	The beginning to middle of your play needs to be typed by the end of this session	<ul style="list-style-type: none"> <li>Everyone contributed _____</li> <li>Staying on topic and getting work done _____</li> <li>Group being respectful _____</li> </ul>
12/15 Tues	Typing and working session	Your play needs to be almost all the way finished being typed	<ul style="list-style-type: none"> <li>Everyone contributed _____</li> <li>Staying on topic and getting work done _____</li> <li>Group being respectful _____</li> </ul>
12/16 Wed	Finish typing, begin rehearsing	Your play needs to be ready to print by the end of this session	<ul style="list-style-type: none"> <li>Everyone contributed _____</li> <li>Staying on topic and getting work done _____</li> <li>Group being respectful _____</li> </ul>

**Figure 7.5** Student pacing and peer assessment guide.

**Year 2: Intentional and harmonizing participation.** The team sought to design units and lessons by intentionally selecting an instructional model and student grouping option to meet lesson targets to develop community and meaningful participation of all students. By meeting regularly to plan, group dialogue shifted to not only hone in on what the lesson targets were for a particular sequence of lessons, but really about how the various co-teaching models and student groupings could enhance the outcomes of those lessons. A prime example of this focus occurred during the first planning session following the winter holiday break. At that session Amy took a risk and suggested how all members of the team could be used to deliver instruction to small groups of diverse students. In this exchange the team was open to suggestions and figuring out a

strong course of action to best use their talents to optimize the student to teacher ratio while also adhering to broad TCRWP curricular goals with appropriate student tools:

*Amy:* Right. And when we do our examples in front of them whether it's a whole group or whether we all split off, and each one of us has a smaller group...When they go to write though they're going to need to try it on with whatever their topic is, so they're going to need to know- And so that was what I was wondering, because we have these different text structures, do we want to do a rotation like we did before where we take a text structure and we do like- maybe not all 4 days but maybe 2 days and flip flop kind of a thing where we show them and- show them the format? So like if I have 'problem/solution' I show them the format. You have a sentence that introduces what you're talking about you're going to identify the problem that was occurring with some details then you're going to state what the solution was

*Stephanie:* I could see that, if we wanted to do a rotation it would be- Would it be- So I'm up there I'm exposing them to 'problem/solution' we're talking about? Then we- I write a problem and solution about something about the American Revolution and then they do it, like, with me? And then the next day they go to Donna and do cause and effect?

*Amy:* Yeah... Because aren't they supposed to write in a text- Like using a text structure?

*Stephanie:* Yes! And they haven't done that with me yet. That'd be good.

Stephanie is immediately comfortable with Amy's suggestion to utilize a station-teaching model for instruction because she can envision how a smaller group would support learning. Then Stephanie suggests this student tool to harmoniously support Amy's grouping suggestion:

All right, so for me when I hear that I want to be able to check in with them of what is their topic and what is their heading. So, I'm going to be creating a worksheet where they state their topic and then they state their 3- their 4 headings. Then the next pages are going to be the notes...I think I might have it be where it's like a 2 sheet paper that goes inside a folder or something and it can be where I can check in on it as they do their work they can take their notes but then- Some kind of graphic organizer to be the next step. Like yesterday they- they did- A 5th grade standard is that you can compare 2 different text structures...of like what's this guy's- what's this text structure- or what's the first text structure and what's the central idea? What's the second text structure and the central idea? How are they the same? How are they different? And it kept the kids on task so much more. So giving them some kind of graphic organizer as they're doing each step to assist them.

As the general education teacher, Stephanie provides a perfect example of what has been coded in our analysis as – *counter-engagement* – or instances of co-teachers making an instructional suggestion that is counter to what their stereotypical discipline is traditionally deemed as having expertise. These are instances of boundary-crossing language and suggestions by co-teachers. In the previous example, Stephanie made a suggestion of creating a student tool, which may be traditionally seen as the work of the special education department.

Boundary crossing by all parties began to really increase as planning sessions went along and instruction became more daring, dynamic and intentional. In the very same planning session, Maggie also crossed traditional boundaries as she noted the need to provide student supports and tools. Maggie chimed in with her willingness to create a student self-assessment tool – a rubric (figure 7.6) – to “help make this more accessible to the kids who need that

repeated visual reminders. So I have my ‘look-fors’ and just the simple like what do you need to get a 3?” Here, all of the team members have made suggestions and implemented components of creative and dynamic co-teaching. These instances of counter-engagement are a drastic difference from year 1.

**5** Claim:

Category	Look Fors	Rating 1-4
Word Choice	<ul style="list-style-type: none"> <li>• Vocabulary is appropriate for role.</li> <li>• Firey (school appropriate) words are used to incite the audience for your cause, or against another cause.</li> <li>• Great use of comparatives and superlatives.</li> </ul>	
Engagement	<ul style="list-style-type: none"> <li>• Actions convey meaning</li> <li>• Moderate speech rate</li> <li>• Clear voice</li> <li>• Body Language, Voice conveys the appropriate Tone</li> </ul>	
Flow	<ul style="list-style-type: none"> <li>• The audience is hooked from the beginning.</li> <li>• They are left with your strongest point.</li> <li>• They are moved to action, belief, or curiosity to know more through your argument.</li> </ul>	
Highlights		
Improvements		

**7** Claim:

Category	Look Fors	Rating 1-4
Word Choice	<ul style="list-style-type: none"> <li>• Vocabulary is appropriate for role.</li> <li>• Firey (school appropriate) words are used to incite the audience for your cause, or against another cause.</li> <li>• Great use of comparatives and superlatives.</li> </ul>	
Engagement	<ul style="list-style-type: none"> <li>• Actions convey meaning</li> <li>• Moderate speech rate</li> <li>• Clear voice</li> <li>• Body Language, Voice conveys the appropriate Tone</li> </ul>	
Flow	<ul style="list-style-type: none"> <li>• The audience is hooked from the beginning.</li> <li>• They are left with your strongest point.</li> <li>• They are moved to action, belief, or curiosity to know more through your argument.</li> </ul>	
Highlights		
Improvements		

**Figure 7.6** Graphic organizer tool developed by Maggie for student self- and peer-assessment.

Counter engagement, or the ability to talk across typical professional boundaries, was also strong for Amy due to her exposure to the TCRWP curriculum during the exploration phase.

Although not close to the level of involvement that she currently experiences, Amy, was still a member of the co-teaching team trying to make sense of the TCRWP curriculum last year. Even this surface level exposure positioned Amy as a relative knowledge source. In the following exchange, Maggie concedes that she is a novice when it comes to knowing how to implement the Literary Essay unit in mid February as they beginning planning for this major unit by discussing mentor texts to use:

*Maggie:* We might want to read one or two of those books to the kids. Work that in so that they understand all the points, like how the kids who wrote these got their points for their literary essay.

*Stephanie:* Is it about character development? What is their essay about? Is it about the theme statement?

*Maggie:* You're asking a person who wasn't here last year.

*Stephanie:* Okay.

*Jake:* I think that book *The Fox* isn't that really good.

*Amy:* Yeah, and we did *Fox* last year, so the fifth graders have done *Fox*. (2.12.2016)

As the session progresses, the following response from Amy really shows how she could provide curricular guidance rather than simply focusing on instructional delivery techniques which would be typical for her profession, specifically how students need to understand author's voice and word choice to succeed in the unit:

From what I remember about this unit, the first few lessons really get into the nuances of the text itself. You do read the whole story maybe, but then you take one paragraph and, as a group, you analyze that one paragraph. Little tiny little things like why did the author chose to say that somebody whispered this instead of screamed it when they're upset?

This really shows how Amy has noticed a complete transformation in her integration and comfort as a co-teacher. The positioning was seen even as early in the year as November, while reflecting on the execution of an imperfectly planned lesson a few weeks prior, Amy said:

I think there's been a few times where we planned, but maybe we haven't planned quite detailed enough, because I know the other day when I walked into her room she was like, are you doing this lesson? I was like I don't know, are you doing this lesson? We knew what we we're doing, but it was the organizational stuff. One of us had to introduce the game and this is what we're doing today, and we're like, are you doing it? Am I doing it? I don't know. I don't know. It was one of those days, and it was like you do it! OK!  
(11.24.2016)

Although this quote reveals that there is much progress to be made with respect to thoughtful planning, this selection highlights that even though the lesson was discussed, finer details were still missing which is a scenario that happened regularly in year 1 with Heather.

**Year 2: Opportunity-oriented responses.** In year 1, when professional disconnection would happen with Heather, Amy would feel distraught and insecure, however, as was revealed in the previous exchange between Maggie and Amy, her and Maggie were comfortable enough to improvise and achieve the lesson target and maintain a positive relationship. Their foundation and growth-oriented mindsets provided space for the co-teachers to improve their practice and achieve many of the imagined goals of proposed in the Collaborative Teaching and Learning Map. One of these imagined goals focused on foregrounding student learning needs when planning instruction, and Amy discussed this goal in relation to year 1 at the March map session:

When we plan we look at how to support all the kids. I mean we talk a lot about you know do we need graphic organizers, what kind of student tools do we need, should we

record the stories, and that's coming- that's coming before we- that's coming at the beginning of planning. You know or it's coming during the planning process instead of being an afterthought.... I think it's kind of the ratio of like did we intentionally plan for all kids in the beginning and like we hit 90%. And then afterwards it's like 'eugh' that 10% is kind of that on the fly stuff. Whereas in the past it's been like you know 10% was thinking intentionally for kids where 90% I 'oh shit I need this for the kids, oh shit I need that, oh let me run and grab this because it'll support this kid in the moment'.  
(3.11.2016)

Although not perfect, Amy publically acknowledged the team's growth, particularly in relation to year 1's experience. Also, the team made instruction more dynamic and the classroom more accessible to promote and retain students with learning differences in their peer environment and build a more cohesive and inclusive classroom community.

**Year 2: Community from word choice.** In the following map session exchange, the team reflected on how their discursive practices have contributed to a more inclusion environment and community:

*Amy:* I think that's something that we've really focused on a lot. You know, is making sure the kids, like those kind of historically targeted kids, oh the I-E-P kids, it's not just them anymore, like we've really worked on making sure that they are integrated...Half the time we're not even saying IEP kids anymore, I mean when we're grouping our kids, we're like ok, the kids who struggle, the medium kids, and the kids that don't need...and it's just all kids.

*Stephanie:* yeah!

*Donna:* That's a great thing.

*Stephanie:* okay, so, we're red [performing] for that, Classroom community.

Although language is not perfect, the team is working through their workplace vocabulary to detach from marginalizing and reductive labels. This vocabulary transitions is a struggle that challenges many teams and practitioners, as Naraian (2010) noted in her analysis of co-teachers' identities and language use. In her report, one integral participant who shifted professional role and identities between general education and special education, is both afforded opportunities for student participation by the use of traditional language, and constrained by the objectifying nature of such terms. The Northern Hills team also faced this dilemma as they grappled with the term "IEP kids" and "Amy-ites" from year 1, but actually still use terms such as *high*, *medium*, and *low* kids. Although still uneasy with such terms, the team discussed the intention behind the use of such words. For example Amy provides clarification at the March map session in which she makes the case that the team's conversations and terms are drastically different from year 1 because they don't use them to only identify student needs or to assign their instructional responsibility to any one teacher:

*Stephanie:* Good that's what I'm trying to say, yeah. So it- and it's not like- yeah.

Because I would hope- I'm thinking of somebody that like if they listened to what we were saying it could be flipped- like when you say the Amy-kids like to me it's- some people would say that that's not a good thing. Because you're labeling the kids the Amy-kids. To me I see it as like- I don't really think of it's a good thing or a bad thing to me it's like well you're going to go where you go and these kids- like I say the band kids or I say like wherever you go it's-

*Amy:* I think it depends on the context that we're using it because since we're doing all of this work and yes I am a special education teacher but because we're all members of

this group when we say the “Amy” kids I don’t see it as all the kids that have IEPs anymore I see it as who are the kids that I am working with today or in this unit. Like the “Amy” kids are going to be the kids who are all doing the Titanic.

*Stephanie:* Yeah right now it’s all the kids who go to the computer lab.

*Amy:* Yeah it’s not IEP versus general education based, you know. Stephanie’s kids or Maggie’s kids is based on who we selected- is how we’ve grouped the kids while we’re planning. And that’s a huge shift in thinking. It- Because this whole thing about teacher talk is really taking away the label of ‘special ed kids’ or you know ‘students with learning disabilities or needs’ and separating them from the general education population. You know and I mean it’s- there’s many, many, many layers but like even-even right now on a daily basis when I’m talking with you know, Susie [another special educator], she is still very old school and when she talks to me about the kids that are in here because they do have IEPs and they have needs you know her language is still ‘the SpEd kids, the SpEd kids’ like it’s just constantly ‘the SpEd kids, the normal kids’. She talks in that language and that’s the old school language that we’re really trying- those are the labels that we’re trying to move away from. And I feel like we’ve been really successful in that, you know. And when we do say so-and-so’s kids it’s not SpEd versus Gen ed it’s all the kids that we’re choosing to work with in that moment.

Obviously from this exchange, the team is still grappling with how they talk about students and classifications, but it is through tough conversations that they are able to surface assumptions the underlie word choices. In year 1 the reference to IEP-kids implied ownership of the special ed teacher and it was revealed in that exchange that ownership and authority is no longer assumed when referring to students.

**Year 2: Community from meaningful student participation.** Inclusive environments and student participation increase in a reciprocal nature. In other words, as community membership increases then the safety and integration of students increases along with their participation and willingness to contribute to their community. This was not the case in year 1, as students with learning differences were not meaningfully integrated. Furthermore, because the broad historic segregation of children with learning differences is so politically charged, co-teachers must discuss how co-teaching can increase meaningful inclusion. Each of the tools that these co-teachers used in their meetings really addresses – both in the short-term and long-term – foundational assumptions about student learning, integration and practitioner identity and expertise to tackle the historic segregation and reliance on a resource room. Teacher talk – which was deficit-based and divisive in year 1 – is influential on teachers’ perceptions of students in an inclusive classroom. Language and participation patterns have shifted in the inclusive environment at Northern Hills as children with learning differences and who would have strictly been historically served in the resource room were integrated in the general education classroom. The following comical exchange from Stephanie about a student who receives special education services was one of many that ran counter to segregated and disconnected scenarios of the past:

*Stephanie:* Dou you guys know, Edward- okay wait- Edward killed it with main ideas, he was better than everybody.

*Amy:* Oh my god really?!

*Stephanie:* Yeah he did the best. And so I pulled him and I’m like ‘you did the best in main ideas’. He was able to read stuff and actually able to give me a sentence about what the whole [*expletive*] text was about when all the other kids just restated like-

they gave me- here's a sentence here, here's a sentence here. Here's Edward who's actually giving me the main idea of the paragraph. So I brought that up-

*Amy:* [I'm] Flabbergasted.

*Stephanie:* Yeah me too, he did a really good job. And then he danced around the classroom for a long time but I was really, really proud of him. (12.4.15)

Edward is a student who receives IEP services and is regularly discussed in planning sessions, but who is part of the inclusive classroom in a way that has improved his performance and his classroom community participation and membership. Stephanie is seeing Edward's success in large part due to the instructional supports provided in their co-teaching model, which has been discussed as a motivator for general education teachers to maintain their engagement and commitment with inclusive education. Stephanie echoed these sentiments in her private interview:

*Stephanie:* So they lose out on the teacher information, they lose out on- To me, more importantly, they lose out on student information of how the students are doing whatever the task is or what the student knows about the task.

Researcher: Yeah.

*Stephanie:* Yeah. A huge reason I love inclusion is because it's like the students are able to get further and they learn more and they feel like they're part of the group. And they're able- I can't stress how important it is to have kids explain to other kids how something works... They learn so much better when they work with each other and when they're able to grow something and able to actually do something, and do something as a group too. (1.18.2016)

Stephanie's perspective is similar to findings that Marks and Gersten (1998) wrote nearly twenty years ago, "Seeing observable change in student performance and/or behavior during lessons often is a powerful motivator in teachers' attitudes toward innovative techniques or practices," (p. 35). Meeting regularly has provided the collaborative space for the Northern Hills' co-teachers to discuss, plan, implement, and reflect on their dynamic instruction in ways that is directly improving the inclusive classroom.

### **Summary**

Based on the deeply contextualized investigation and analysis of co-teachers at Northern Hills Elementary School, understanding of, and change in, their co-teaching practice occurs across the: content (mutual understanding of *what* co-teaching is and *why* it is utilized, including agreement on instructional improvement and teaching goals), context (*how* change in co-teaching fits within existing practices, organizational or school priorities and idiosyncrasies of their local environment), and process (challenging norms, professional identities, and perspectives of responsibility with regard to co-teaching roles and students' ways of learning).

All three of the constructs that these social service providers encounter during service delivery (context, content, and process) are historically situated and are affected in the present day by norms, language, and policy that have been developed over time (Vygotsky, 1978; Engeström, 1987). Through our exploration stage of inquiry these constructs became integral to the development of the local learning theory leading to co-design and implementation of co-teaching tools. The three conjectures were revisited to understand and analyze the co-teaching activity system at Northern Hills. Using several different data sources, it is appropriate to determine that implementing the very tools that the team designed to support their practice did achieve the collaborative space essential to co-teaching implementation. The following October

exchange, which was absent from year 1, set the tone for co-teaching and inclusion:

*Researcher:* And this is the most like, structured you are for the following week, would you say?

*Maggie:* On days when we don't do this we can definitely tell the difference.

*Stephanie:* And we're meeting kids needs which-

*Researcher:* So I hear that you like Friday planning. You think it's very valuable?

*Maggie:* Well I would love to do Friday planning for all my subjects with my teammates but I don't get that luxury.

*Stephanie:* I really like this group. I think it's really good. It's really good that we're talking about kids and we're talking about how we teach stuff. You can do tension in a positive way, I didn't think of that.

*Researcher:* And I think you brought up a really good point, like you know being real with the kids. Being honest you know at the level and I think that you have a better understanding of when it's appropriate and when it isn't appropriate, you know what I mean? As long as you vary it up it is.

*Stephanie:* My thing is for kids if you're going to- I was a kid that sucked and it was- right? And if somebody was able to just say to you like 'hey right now you're here, let's try and get you here' kids are super responsive to that. It's the point where it's like 'you're here now go along in your little corner'. That's the part that sucks. And I agree with you there. (10.26.15)

Co-teachers are compelled to change their classroom organization due to a policy that may have altruistic motives, but often lacks support for co-teacher learning during implementation. In the past, co-teaching has been presented in an a-theoretical manner that

foregrounds a procedural orientation and a checklist of prerequisites. This design-based investigation has surfaced the contextual nature and human-centered approach to this complex teaching endeavor and highlighted the professional adult and student learning that it may afford. Co-teaching is a politically charged model of instruction that invariably faces tension and conflict. Tensions and conflicts are not bad things, but rather opportunities – if approached from a socio-cultural perspective – to surface power differentials and see which social agendas are being served in an organization. Due to the nature of co-teaching, adults must navigate personal fears such as instructional doubt and judgment from their colleague, political tensions such as providing specialized instruction for students with learning differences in a general education environment, and personal knowledge such as curricular or instructional expertise and professional identities.

## **Chapter 8:**

### **Discussion**

In this chapter, I will present the implications of our design-based research investigation at Northern Hills Elementary School. Findings and tool design decisions have been presented in previous chapters, whereas this chapter both elaborates on those findings, and also synthesizes them for future directions. Foremost, the choice to employ a design-based approach to support co-teachers at Northern Hills was a deliberate decision. This allowed my research to be flexible to local contextual persistent needs from multiple stakeholders' perspectives, responsive to practitioner expertise, generative of co-teaching learning theory, and iteratively and collaboratively design tools to build capacity at Northern Hills. DBR also explicitly attends to equity and power differentials in teacher practice as well as student learning, while also attempting to build capacity with sustained change in practice (Brown, 1992).

Our intervention was and is mutually beneficial for both co-teacher practice and the co-teaching research base. I carefully navigated practitioner sense-making while supporting professional relationships and student learning needs to bridge the regularly bemoaned “research to practice gap”. The chapter begins with a reframing of the intervention’s original purpose followed by key design and implementation decisions, and ends with defining what our tools and co-designed process afford the shared common practice of co-teaching between two distinct – yet complementary – disciplines (general education and special education). This was a return to the human-centered nature of collaborative teaching, after all co-teaching, like mathematics, can’t be a ‘ready-made’ product or endeavor.

### **Original Research Intentions**

#### **Co-teaching Theory Generation**

Philosophically, education often operates from a paradigm that places special education at the fringes of general education, thus establishing a normative culture of ability and perpetuating the notion that learning differences are deviant (Smith, 2000). In other words, as long as special education is seen as a system that is less than general education, then students who receive special education services may be seen as embodiments of that deficit (McDermott, 1993). Also, when practice operates in that paradigm, addressing needs of learners may be seen as individual interventions rather than issues caused by systemic inequalities. These interventions are often created with the intention of “matching a specific difficulty in learning to a strategy...However, when an intervention is based solely on an individualized (or personalized) response to impairment, or a specific difficulty in learning, important contextual requirements may be overlooked, exacerbating the problem of ‘most’ and ‘some,’” (p. 16; Forlin, 2014). Misguided or disconnected instructional intentions neglect contextual and social aspects of learning, this neglect can also perpetuate ideas that students with exceptional needs are a problem to be handled outside of the normalized general education classroom and be served by isolated specialists (Florian & Black-Hawkins, 2011).

As was discussed in previous chapters, a disjointed system for students who receive instruction in two distinct settings was seen as a tremendous challenge for student learning by the participants and rarely supported the transfer of skills across settings. This investigation strongly considered context, classroom integration, and student membership to specifically disrupt historical inequities of segregation-based instruction and to design learning opportunities for all learners.

Another intention of this DBR investigation was to develop theory related to learning and implementation as well as supporting practitioners to reimagine their inclusive environment and

reducing their school's dependence on resource room instruction. Northern Hills' district has rebranded their special education department as the *Department of Inclusive Education*, and it wishes to take a more critical perspective on traditionally disjointed methods of instruction and organizational structures for students with learning differences. Amy was also aware of the disconnections and social consequences of removing students from general education and when she reflected on her practice during the 2014-2015 school year, Amy lamented about the impact of not exposing students to the social studies curriculum:

Last year, I think what was really difficult about this particular unit [historical writing]...There were a lot of issues, but one of the biggest issues was that they [students not removed to the resource room] were learning about the American Revolution in social studies at the same time that they [students pulled to the resource room] were supposed to be learning how to write an informational essay or historical essay, and they didn't understand jack shit about the American Revolution. When they had to write about it, they had nothing to say. (12.11.2015)

Amy was clearly not fond of removing students during the social studies period to the resource room, a move which consequently compromised their knowledge of the very content students were being asked to write about during literacy instruction. Amy vowed to not continue a disjointed structure and sought support for co-teaching as a model to maintain students' classroom engagement. Amy sought co-teaching, but making sense of co-teaching policy is complex and involves multiple ecological layers. Previous research has focused on conceptualizing co-teaching as either 'procedure-oriented' by providing advice in a checklist format (Cook et al., 2011), or as describing either the pitfalls or successes of co-teaching (Scruggs et al., 2007), but rarely has it been examined or reported from a human-centered

orientation. A human-centered orientation has potential to support the implementation and address power differentials that shared spaces surface. Inequity and power differentials have been documented in co-teaching literature previously, but the reports have focused on recommendations and have been atheoretical, rather than being theoretically sound investigations of the learning processes that occur during co-teaching (Friend et al., 2010).

Year 1's exploratory findings led to a theoretical understanding of the co-teaching activity system that has been absent from co-teaching literature, but has been specifically requested from some of co-teaching's prominent and influential voices when Marilyn Friend and colleagues (2010) wrote:

...far more literature exists describing co-teaching and offering advice about it than carefully studying it. Contributing to the admittedly equivocal evidence base for co-teaching are factors such as the still emerging understanding of this special education service delivery vehicle, [and] inconsistencies in definitions and implementation.... The future of co-teaching may be dependent on increasing the quantity and quality of research on it...(p. 9)

In this dissertation, I have completed a more thorough and theory-generating investigation of co-teaching.

### **Expansive Learning**

Theory generated in my inquiry has supported a more complex study of co-teaching, and in particular, the learning environment of co-teaching. This must also continue to be studied since it is inevitably formed among co-teachers as they attempt to improve their practice through execution and reflection. Practitioner learning is tied to both the process of developing and negotiating co-teaching as well as the practice of implementing it. Year 1 results generated the

Co-teaching Implementation Framework. Its explanatory nature describes the co-teaching learning environment and foundational principles of sense-making involving co-teaching – a politically charged policy. Just like the co-teachers in this study, co-teachers embark on the learning journey, which is intimately tied to both the process of developing tools and safer spaces and their instructional products. Process and product are in fact, inseparable.

Co-teachers at Northern Hills participated in several long-term cycles of expansive learning (Engeström & Sannino, 2010). An output of the initial cycle was the development of an integrated framework and sense-making theory of practice. Then, that theory informed the construction of tools to support practice in the second cycle of learning. The tools were then used to analyze their progress in that cycle. In other words, the phases – although disparate based on observed instruction – are intimately tied together in their ways of learning. Amy was the constant thread through all phases and her identity and practice in the exploration phase directly informed the tools to support and evaluate her practice in the implementation phase. Co-teacher learning occupied all of the spaces and transitions throughout the phases. Everyone's learning was situated in both acquiring information and enacting practice based on that information.

### **Co-teacher Learning**

#### **Learning at the Site of Acquisition *and* Participation**

Anna Sfard (1999) has presented two metaphors of learning and their assumptions: one a form of *acquisition*, and the other as *participation*. The acquisition metaphor rationalizes a fixed endpoint when learning, whereas in the participation metaphor there is no endpoint, but rather the learning is in the process of participation. Sfard outlines the shortcomings of privileging one of these metaphors over the other, and reaffirms the importance of membership in learning. Co-

teaching is a prime example of the important role membership plays in the community of practice as the members gain knowledge of what is possible and then learn through attempting to enact those cultured practices (Wenger, 1998). So, learning is both acquiring and participating, and negotiating meaning in this practice and reflective space (Ramsten & Säljö, 2012). Throughout planning sessions across the study, co-teachers were actively dissecting the curricular, Individualized Education Programs, and Common Core State Standard goals to learn how to teach all the students in their classrooms. The social and cultural nature of learning emerged as these adults worked together to increase their knowledge and understanding of teaching and co-teaching. The reflective nature of adult learning even became a model of what co-teachers should structure in their own classrooms to support the social forms of discovery among their interactive students.

As revealed through the cross-case analysis from Year 1 to Year 2, it was clear that specific orientations to student learning were critical for Amy's participation and integration. Regardless of Year 1 teachers' desire or psychological safety with engagement, orientations to student learning in the classrooms existed that restricted dynamic co-teaching from occurring. In other words, the didactic instruction that occurred throughout Year 1 was fundamentally different to the social models of student learning that Maggie and Stephanie wanted to cultivate in Year 2. These differences in teacher understanding of fostering group-based learning and its social enterprise created entry points for Amy to engage that was fundamentally absent before. During Year 1, as Amy and her same group of students were relegated to the back of the room, there was no disruption of restrictive theories of learning by the co-teachers.

Restrictive and traditional didactic instruction assumes that learning is a private, strictly cognitive endeavor and this assumption can undermine meaningful community and classroom-

based forms of learning through peer interaction and group sense-making that support students who learn differently and are not speakers of the dominant language. The data in this study suggest that opening up a classroom to interactional forms of learning is necessary for creative and dynamic co-teaching to occur. Of course scaffolds and student supports need to still exist at the individual student level to ensure meaningful participation, but even those supports are meaningless if environment and instruction are not conducive to social theories of learning. This is particularly true in inclusive classrooms where student diversity can be seen as a strength or weakness.

Learning in meaningful inclusive environments happens when there is a fundamental transformation of students with special needs' positioning from one that supports classroom access to one that supports active participation (Connor, 2008; Smith, 2010). Historically, however, co-teaching globally and at Northern Hills, has not been understood in this participation-centered way. Data from this study and research by Isherwood and Barger-Anderson (2008) suggests that making this distinctive shift from simply providing students access to active participation in the general education classroom was vital to the co-teaching efforts. The Northern Hills team was open to socially constructing their own understanding of instruction, and then making the environment conducive for teachers and students to engage in that instruction through the writing curriculum. Routinely, teachers referenced the positive influence of both academic and behavior skills, particularly the influence of peer modeling of positive behavior. Peer modeling is in fact critical to student development, and the team discussed how inadvertently counterproductive consequences of removing students from the general education classroom are common (Cushing, Clark, Carter, & Kennedy, 2005). In fact, Stephanie directly credited inclusion by way of co-teaching as improving student learning when

she referenced the progress of a student (Micah) who receives special education services in the following exchange:

*Researcher:* You know you mentioned in planning the other day how much you are seeing, like, student progress for all children.

*Stephanie:* Yeah.

*Researcher:* Is that true?

*Stephanie:* Yeah. Like as far as- I don't think that teachers talk about like the progress of stuff enough. For writing this year, I'm seeing a lot of- I'm just seeing a lot of growth with the kids. And it comes in differently, different days show different things...It was so big just being able to talk to Micah, and reading something to Micah, and Micah being like 'oh it's problem and solution', and him being right, and it'd be like 'okay he just guessed that' but then being able to say 'well the problem is this and the solution is this' and him being right like that. Finding out text structures in the fifth grade is hard as crap...And Micah was just able to perfectly explain how the author's trying to show you the problem and show you the solution, and the problem is this and the solution is this. And that's like sixth grade standard.

*Researcher:* And you feel like that would not have happened had you not been in- with the co-teaching model?

*Stephanie:* No. (1.18.2016)

In this conversation, Stephanie described meaningful inclusion as beneficial and an integral contributor to student learning. Reinforcing Stephanie's sentiments, social aspects of student learning also counter traditional cognitive notions of learning. These strictly internal, individualistic or cognitive notions of learning can be barriers to inclusion and can be the very

ideological and environmental obstacles for historically marginalized students (e.g. student with learning differences) that many disability scholars have shown to exist (Ashby, 2012). Conversely, if learning is viewed from a socio-cultural perspective than removal from the classroom lies in direct conflict with learning and becomes a barrier to not only learning, but also classroom community engagement. With respect to adult learning and sense-making, social constructions and knowledge construction are also vital.

Perhaps because the traditional aspects of co-teaching that occurred during Year 1 were not disrupted, co-teacher learning across practice, student performance, and reflection was limited. Environmental and social boundaries of students with learning differences prevented engagement and participation. Data from this study suggests that this disconnect is especially true if there is a general culture of student ownership based on special education service needs, meaning that those students are the responsibility of the special educator alone. Maggie did not agree with an ownership-oriented co-teaching approach. In fact, Maggie was adamant that there was no ownership of specific students, and that there are multiple micro learning environments within the larger learning environment of the co-taught classroom. In the following private interview exchange, Maggie talks about both the benefits of students not leaving for the resource room as well as retaining a certified educator as a co-teacher:

I get Amy in here every morning, we split our kids. I don't lose any kids so I get to know my kids better. I don't really like a pull out model because I have lots of- I have lots of brain cells to rub together. I have activities for all the kids to be able to do, and I would rather have another body, co-teacher, para in here- I would love to have a co-teacher, but I'm just saying I'd love to have another body in here period, to kind of bounce ideas off of, to help wrangle the kids and guide them, to really support all of them. Because there

are some kids who are really self-conscious about getting pulled out, but I have taught at other buildings where it [the resource room] is down a narrow hall or it's down on the basement floor, it's with somebody who just puts them on a computer all the time, or it's- You know, it's just not worth their while. And then they [students] are pulled out, they miss instruction, so they feel like an idiot when they come back. (10.6.2016)

Maggie was sure that the co-teaching partnership was beneficial to students and teachers alike. The benefits also increased during planning sessions as the team reflected on instruction and student activities. In other words, reflection in team planning sessions inspired the reflective nature of learning to be purposefully integrated into classroom student practice. Lessons began to integrate student self-reflection and self-regulation data, which was a very important skill set missing from Year 1 instruction (Graham, Harris, & Mason, 2005). Since the teachers purposefully integrating these skills in Year 2, it was a big shift in not only teachers' practice, but for the students as well. One example was the student rubric, which was analyzed in the previous chapter. These rubrics were written in student-friendly language and scaffolded for student language proficiency and integrated throughout two TCRWP instructional units. These self- and peer-grading systems for student engagement and participation accompanied units to facilitate recognition of peer practice as well as self-reflection. By collecting these dynamic forms of student data, student and teacher practice improved by encouraging perspective taking by children and adults, and the data mediated co-teachers' instructional decisions.

Specifically, when the team used play writing and acting as a form of differentiated assessment during the persuasive writing TCRWP unit, the students rated the quality of their participation, their group members' participation, as well as the quality of other classmates' performances. These student ratings were both quantitative and qualitative to give all students a

chance to rate their participation, performance, and set learning goals. These metacognitive exercises and results were then reviewed by the team at their planning session and mediated their own instructional learning goals, which was discussed in the team's March map session, which focused on their use of student data. Although not perfect, the team cited this process as incredibly informative for both them as well as students, irrespective of perceived ability. These co-teachers had reimaged their learning environment.

Learning was also socially constructed when the team negotiated to design instruction with student arrangements that aligned with lesson objectives, and varied group membership so that students were not always assigned to groups based on ability. These intentional unit and lesson designs – in which instructional models and student grouping meet the needs of a lesson target developed community and meaningful participation of historically marginalized students – became the norm, whereas they were nearly absent during year 1. These political and vital negotiations are all part of co-teaching and the co-teaching implementation framework. They also counter the potential normalizing by co-teachers to revert to a paradigm of student ownership to specific teachers. It also challenges normalizing restrictive notions of discipline-specific expertise within the co-teaching system.

### **Co-teachers' Practices and Expertise Leveraged**

Anne Edwards (2012) writes that relational agency shifts and is revealed when practitioners are confronted with and discussing a problem with a child and “practitioners could understand what was important for others,” (p. 30). Edwards describes this as a two pronged process of “expanding the object of activity to reveal its complexity and the motives and resources each [participant] bring through their interpretation” followed by the “alignment of one's responses as they act on the newly expanded object,” (p. 26).

The object of activity at Northern Hills – co-teaching – was fundamentally expanded, disrupted, and studied. Within this new system, the teachers regularly discussed student problems, but they were fundamentally different from Year 1 to Year 2. Year 1 faced student problems as being handled exclusively by the special educator in the back of the room. Year 2 saw student problems as opportunities to inform class-wide instruction and supports for the entire learning environment. Over time, the team recognized what was vital to their partners, how they navigated that recognition, and their responses to those recognitions. This often surfaced as the team examined support needs for specific learners. The team discussions and plans addressed specific student needs, but then expanded to general instructional delivery supports and teachers' roles in that plan.

As the year progressed, there were frequent instances of seamless fusing of each instructor's perspective and discipline. The complementary nature of both professions was authentically applied in ways that support the learning needs of an inclusive environment. The team integrated special education and differentiated instruction and general education and the Common Core State Standards in intentional ways to highlight their compatibility, rather than their disconnect, and to guide instructional decisions. This utilized Amy's specialist knowledge to make choices about group work in order to respond to individual differences during whole class teaching, which is precisely the core paradigm shift in rethinking special education's 21<sup>st</sup> century relationship in classrooms and schools. Here, an equal opportunity is provided to learners. To this point, Florian (2014) noted that researchers (Florian & Black-Hawkins, 2011; Florian & Linklater, 2010; Florian & Spratt, 2013) have, "shown that teachers who are adept at embedding responsiveness to individual need within the process of whole-class teaching are able to sustain inclusive practice," (p. 17). Planning revealed each teacher's goals for co-teaching, and

their ability to support the needs of the diverse classroom, but planning is but one piece of the transformative learning cycle as actually enacting plans was revealed to be as fundamentally vital as that planning.

### **Co-planning *and* Instruction Is Vital to Co-teaching Transformation**

Implementing co-teaching to improve outcomes of inclusive education includes the ways teachers respond to student differences during instruction, the decisions they make concerning how students work in groups, and how the knowledge of a specialist is integrated into the work of the classroom (Florian, 2008). The beginning of inclusion occurs in co-teaching planning sessions; however, the actual transformation of practice occurs during implementation. This cycle of action, reflection and planning, which was absent from Year 1, is well documented as vital to practitioner growth and transformation (Bransford, Sherwood, Hasselbring, Kinzer, & Williams, 1990; Lewis, Perry, & Murata, 2006). Unfortunately, transformative space can be elusive for in-service teachers, but can be a significant benefit to co-teaching, assuming that participation is supported and actually happens (Walther-Thomas, 1997).

Our planning sessions were learning sites where Maggie, Amy, Stephanie, and Donna dissected practice and tensions concerning student-learning needs by way of their instructional practices. They used each other to learn how to maximize their expertise and implement the most creative and dynamic instruction possible. The following exchange is used to highlight how the team perceived learning by planning, implementing and reflecting:

*Amy:* Like at the very beginning of the year we didn't think about recording a lot of stuff or having things that kids could listen to but as we've gone through and realized 'hey that would have been really helpful' we've done it. And so that you know that's

definitely- that's not- I don't see that quite as the same as- I don't see that as an afterthought, that's reflecting and then changing practice.

*Stephanie:* Right. And I think that's where it needs to be. And with me I always see everything as like 'this is an afterthought and this is an afterthought' and yeah-

*Amy:* But then if we change and we implement on the next round then that's what it's all about. (3.11.2016)

Here, Amy and Stephanie have broken down the learning cycle, which begins with instruction moves to reflection, and then implementation of intentionally deliberate change. This is a 'site' of learning and it was especially rich when practitioners spoke to the strengths of their own discipline, but also from the discipline of the other co-teacher (Wenger, 1998).

Another example of learning between the team members occurred when they planned, enacted, and reflected on individual lessons. This reflection dissected both teacher performance as well as student performance and then provided a space to alter the next lesson based on those performances and products. The valuable instances of cross-discipline discussion richly dissected and then integrated curricular goals with differentiated instructional methods and transcended any one particular teacher contributing from any one particular camp. These seemingly disparate camps have normalized their perspective and co-teaching can actually be a practice that tests assumptions of normalized practice from those camps. The following conversation surfaced how the team perceives teachers from those camps who they dichotomize as either focusing on curricular needs (they term camp "A") or individual student needs (they term camp "B"):

*Maggie:* But also I think that there's some value to B and A being both present at the table to a certain extent.

*Stephanie:* True. And that can mean that-

*Amy:* Well I was going to say because B and A come to the table they have different philosophies but then working their way through this the idea is that you learn to see the other side you learn to see what the other person values and brings to the table and then working together and implementing some of these things you know.

*Maggie:* Because I can't say that B or A when, to the extreme, is the best practice for the student.

*Stephanie:* True. Right.

*Amy:* It takes both. But it also takes that mindset of being open to communication, that's like the interpersonal skills, being open to recognizing the strengths and the weaknesses of one philosophy or another and being able to change some practices to make it- to make it the best system that we can for the kids. For them- for the way they learn for getting- you know getting their curriculum taught like all those different pieces.

This exchange represents the idea this team had in which ownership of the curriculum, planning, or instructional strategies was not restricted to either educational discipline. In other words, engagement of the general educator or special educator with design and instruction occurred in ways that one does not typically observe in the field.

Curriculum knowledge and instructional strategies were not relegated to the role of either the general education or special education teacher. In fact, teacher roles have become normalized in our culture and co-teaching causes an inherent blurring of those historical norms, which some co-teachers may embrace and others may reject. However, embracing these forms of counter engagement from other practitioners is important to translate how your role can support – and be integrated into – meaningful co-teaching. In the following comment, Maggie

talks about the fluidity of her perspective and ability to make counter-engagement comments because she used to be an ELL instructor, and how she not only values both perspectives, but also recognizes the benefit of her maintaining both:

I feel passionately that when kids travel from point A to point B, but you're like 'well but this is what I'm passionate about this is what I know about this is what- these are all the great things that I'm going to do with the kids you know and how they're going to learn' and so in that regard I was A you were B. But when it comes from our background, our professional expertise, like my background [as an ELL instructor] is all about tailoring to the individual, the individual needs, not kids who necessarily have a learning impairment but kids who are language deficient for one reason or another. And your's is the state standards... at the beginning of the year I took from your lead where you're like 'we're doing LA [language arts] standard 1' standard 3- whatever it was- 'and here's what is and here's what needs to happen and here's how they're going to respond to it and I'm like 'okay great' so I have that focus but do you see what I'm saying like in some ways you are A and in other ways I am A and B?

Maggie is comfortable with and recognizes her stances and even appreciates them. Maggie possessed a mindset that can never be objectified or packaged into an educational reform, or procedure-oriented institutionalized attempt to implement co-teaching. Opportunity and growth-centered mindsets are rather fostered through a human-oriented approach to co-teaching implementation that foregrounds the participants involved rather than reducing them to a peripheral afterthought of implementation. From this viewpoint, equity and agency can be supported in a safer space for participants.

### **Safer Collaborative Spaces**

## **Navigating Co-teaching Tensions And Paradoxes**

One's mindset is integral to the imagination and the engagement required of co-teaching. Two mindsets can surface during co-teaching implementation, termed *threat* and *opportunity* (Mohammed, & Billings, 2002). In a similar vein to other human collaboration, if the mindset is one of *threat*, then anxiety heavily influences the implementation and there is a fixation on all of the possible shortcomings or consequences of performing poorly. If the mindset is one of *opportunity*, then one focuses on all of the good things that can come from executing well (Mohammed & Billings, 2002). Opportunity mindsets even approach poor execution as learning opportunities to dissect and inform the next lesson and unit. A threat mindset is fundamentally different than feeling uneasy from simply not being completely prepared for the lesson. The threat mindset looms larger and is incompatible with creating a collaborative space.

One can, and should, have concern over preparation needs or have a healthy dose of skepticism about sharing instruction, but the difference lies in whether one's threat mindset saturates his or her approach to every tension that she or he encounter during the co-planning and teaching processes. Imagine if one's mindset can be represented by full spectrum, on one end of the spectrum lies 'threat' and 'opportunity' is at the other end. Now, having preparation needs falls throughout the spectrum. For example, during the persuasive writing unit, while discussing the physical layout of the room in preparation for the play performances, Stephanie said, "then just everybody sits on the floor? See this is the stuff we do that stresses me out, like all of a sudden we're moving desks and moving stuff," (12.18.2015). Clearly just a preparation need, Stephanie expressed concern, but did not retreat to a stance of threat which would actually undermine the whole team's effort to implement the lesson, and in this case the plan was for students to perform the persuasive plays they had written.

Co-teachers' mindsets are important to recognize as they navigate co-teaching tensions. Making sense of co-teaching can be a nebulous endeavor as legally-bound individualized services must be provided to students who are eligible for special education, but completed in a generalized setting, all while sharing a limited physical space. This tension will invariably create conflict. However, situated in an opportunity-oriented open mindset, this conflict can be a site of personal and professional growth for all practitioners.

Social science research by Bradley, Postlethwaite, Klotz, Hamdani, and Brown (2013) specifically found that a variable they titled 'task conflict' actually had a positive impact on team performance. This included groups with high levels of openness or emotional stability; in contrast, task conflict had a negative impact on performance of teams with low levels of openness or emotional stability. Thus, when task conflict emerged, teams composed of open-minded or emotionally stable members are best able to leverage conflict to improve performance. According to the researchers, openness to experience when working through the conflict referred one's disposition to be "open-minded, imaginative, and curious" (p. 386). In fact, Antonioni (1998) wrote that open people do not avoid conflict, but rather approach it with a collaborative attitude, and that the highest performing teams openly and explicitly discuss underlying reasons for decisions – potential sources of conflict. When task conflict emerges, these teams are not likely to ignore conflict and let it intensify, but will usually respond with collaboration, flexibility, and open discussion to ensure that divergent viewpoints are heard. This collaborative climate should enable constructive debate, which will increase the likelihood that team decisions, strategies, and tasks have a positive effect on team performance.

These challenging avenues are more comfortably traversed with emotional stability and the tendency to be composed, steady, and self-assured (Bradley et al., 2013). These indicators of

safety, which were not seen during Year 1 of this investigation, were critical elements of our tools and provided language from outside research to support the teachers in our context. Simply avoiding conflict is another damaging approach to challenge. For example, Bradley and colleagues (2013) found that “emotionally stable people involve others in resolving disagreements and are less likely to use conflict-resolution styles that lead to unsuccessful outcomes, such as obliging and avoiding,” (p. 386). Conversely, if conflict is addressed and viewed as a competition for dominance then extroverted team members can counteract a team’s ability to resolve task conflict in a productive manner (Moynihan & Peterson, 2001). Therefore, it is important to understand one’s own approach to conflict.

These concepts, terms, and language all populated the Collaborative Teaching and Learning Map and the psychological safety scale that the team used to assess their comfort, safety, and group membership. The results were promising as the team felt that they could take risks and feel supported, that mistakes are not held against them, and that they are able to bring up and discuss problems and differences in opinion. No prescriptive way to work through multiple layers of interpersonal skills exists; however, they cannot be ignored in team dynamics. They especially cannot be ignored within co-teaching since tensions are inevitable and these feelings cannot be reduced or simplified into a checklist under the term, ‘trust’, which has been the history of co-teaching research. Safety and interpersonal skills are abstract and often misinterpreted, but the language provided by group-dynamic research has afforded definitions for co-teachers to productively use to assess and discuss their own group dynamics. This is particularly important as issues of equity and agency are so closely tied to, and cannot be separated from, the co-teaching experience.

**Agency (Power & Equity for Teachers): Taking Other Perspectives Into Account**

Equity and agency are intertwined, and can be elusive in co-taught classroom, especially if it is unclear as to why the policy should even be enacted in the first place. In addition, equity is affected by the power dynamics that the policy creates. To remedy this inequity, co-teachers' transformative and relational agency that works as antidotes to inequity increases by identifying and intentionally working through power relations. As ownership of place, space, and instruction is discussed and negotiated, power becomes more equitable and distributed. As previously mentioned, compromising space can be done from a stance of threat and retreat or one of opportunity and growth. Naturally, participants fluctuate between the responses and mindsets throughout the year, but it is by recognizing and possessing the language to acknowledge where one's response is coming from that benefits team cohesion.

Specifically, equality of co-teaching practice can be achieved by creatively transforming a collaborative space by honoring and leveraging both teachers' expertise and understanding team members' motivations and historically situated dilemmas. The Northern Hills team designed tools and safety scales to directly inform how they could understand those components, and creatively measure them for informed decision-making. The safer collaborative space comprises each member's interpersonal skills, which includes both giving and receiving critical performance feedback in productive ways. This includes assuming good intentions from the communicator, which is also supported by an ability to take various perspectives. Others' perspectives were regularly taken at Northern Hills, both between other team members, but also of teams at other schools like when they would discuss how co-teaching could and has unraveled at other schools in the district.

Taking others' perspective is vital to see how social interactions and structures may influence practice. Perspective taking of either immediate partners or practitioners at other

schools promotes participants to think beyond their immediate situation and see their role in the larger ecology. Maggie was such an influential contributor to these ideas, not only in tool design, but also as an active agent integrating Amy in the co-teaching system. According to Maggie her experience as an ELL teacher traveling to another general educator's classroom had a major impact on her outlook. In the following private comment, Maggie reflects on how she was perceived as the outsider co-teacher, and the process her co-teacher went through to become more collaborative and supportive of an instructional activity that Maggie knew was beneficial to the students:

And so when- When I had a teacher that I was working with, she was gen ed I was ELL, I'm like 'okay and now we're going to do a boogaloo [language activity], and now we're going to take the paper and rip it up and all the kid- each team is going to make a sentence and then we're going to put it all together' she's like 'I don't have time for that, I am not singing in front of my class'. Later on she became the mistress of tunes and she really excelled, but it took a little while to kind of- One, get over herself, and two, move beyond the training that she didn't receive. (10.6.2015)

Maggie described her familiarity with being an outsider attempting to share professional space with another professional as well as her ability to shift that space to encourage professional growth and positive change in practice. It was this experience that perhaps made Maggie immediately welcoming to Amy and her willingness to practice co-teaching. Maggie not only empathized with Amy's position and equity, but she also fundamentally approached education and instruction from the stance of ensuring student supports. Equity was also discussed and scrutinized as these interdisciplinary professionals designed and implemented our two tools: the

Co-teaching Lesson Guiding & Reflecting Form; and the Collaborative Teaching and Learning Map.

## **Tools**

### **The Inseparability of Process and Product**

Sustained change in systems and the ability to develop capacity for practitioners is a central focus of DBR (Brown, 1992). A central focus of this investigation was to develop tools that could both support the co-teaching practice at Northern Hills as well as provide support in other settings. The act of co-designing tools to support co-teaching practice was an existential and reflective process by the team, as they would thread in and out of thinking about their practice as well as co-teaching practice globally. By designing the tools with Year 1 findings, implementing the tools, and then redesigning the tools based on their implementation, the Northern Hills team was able to strengthen the tools as well as their practice, and therefore build capacity to sustain their progress over time. Learning was located at the ‘site’ of designing and implementing those tools.

Co-teaching is essentially a boundary practice (Edwards, 2010) since multiple professions and disciplines work together to accomplish tasks and goals. By using the very tools they co-authored, the tools also supportively mediated the teams’ own practice, which was another boundary practice in itself. Therefore, it is impossible, nor necessary, to separate the process (tool and practice design) and the product (tool completion). In other words, the team regularly zoomed in and out between their practice and general tool design to improve not only their own work, but also – through their design-decisions and suggestions – the future work of other co-teachers.

Although inseparable, tool development was the purpose of tool design, and practice improvement was the purpose of meeting regularly to plan and reflect on practice. It is clear, however, that each enterprise contributed to the other in meaningful ways for the team. Team members' direct authorship of the tools almost certainly encouraged them to commit to other members and the co-teaching field since design decisions were immediately reflected in the tools and implemented in their own practice. This occurred for instance when the "student tools" question prompt was integrated into the Co-Teaching Lesson Guiding and Reflecting Form; an act that led to the subsequent increase of student tool integration in the team's lesson planning and delivery. Another example was Stephanie's suggestion that the psychological safety questionnaire be integrated into the next planning session to accurately measure and discuss team member safety. A pillar of strength in the tools is clearly the balanced and meticulously scrutinized language.

Precise language of the tools also afforded the team a relevant grammar to identify, assess, and navigate the naturally vague landscape of team building and co-teaching's interpersonal elements. This is particularly important due to historically-situated marginalization of special education and special education practitioners both generally and specifically at Northern Hills. It is also important because of the inevitable tension that arises when professionals share space and collaborate on what should be shared practice. Precise language of the tools also attuned the team to essential co-teaching elements and principles of practice in order to disrupt inaccessible classroom conditions and support inclusion. This language strategically accustomed the team to pivotal points in the co-teaching activity system. Our ecologically inspired tools address the knowledge, personal and interpersonal safety, and practice that are the foundation of negotiating co-teaching and co-teacher meaning-making.

Importantly, the social enterprise of co-teaching challenges normative notions about teachers, teaching, and disability in order to improve inclusive environments, and the team – just like all co-teachers – continue to learn as the tools become appropriated to their context with integrity.

### **Tools Appropriations Transform to Local Needs, Encourage Capacity Building, and Sustainability**

Over the course of this nearly two-year investigation, our tools began as abstract concepts and morphed into initial concrete designs. Then they were appropriated into tools fitting the local context and needs of Northern Hills. Flexibility to reinterpret and re-appropriate tools for the local environment and to fit local needs is a central feature to the learning process and a DBR principle. In order to build capacity and value all sources of knowledge, active and equitable participation was nurtured from the general education (Maggie, Stephanie), special education (Amy, Donna), the current co-teaching literature and the institute of higher education (Jake). Furthermore, participation is considered across both tool design and tool implementation, as participants individually and collectively understand the content, context, process *and* history of their practice – where co-teacher learning is located (Powell et al., 2009; Wenger, 1998).

Tool appropriations – specifically the Co-Teaching Lesson Guiding and Reflecting Form – are in fact, as Ramsten and Säljö (2012) write, “entity codifications of central features of local knowledge...that make them [tools] portable to new settings, where they are reinterpreted and re-appropriated to fit local needs,” (p. 34). To not allow or encourage tool appropriation would actually limit design and practitioner motivation to implement, and dismiss local needs as inappropriate or unworthy. These factors were considered when, unbeknownst to me, the team took the central core features of the Co-Teaching Lesson Guiding and Reflecting Form and converted it to a Google spreadsheet so their lessons and units would be captured and stored in

one electronic place (see figures 6.8; 6.9; 6.10). Re-appropriating the Co-Teaching Lesson Guiding and Reflecting Form to an electronic version engaged the team so that their authorship and ownership would also motivate the team to populate the tool and in turn, design and implement dynamic co-taught instruction.

The Google version of the Co-Teaching Lesson Guiding and Reflecting Form soon captured all of the dynamic co-teaching at Northern Hills. This was represented in the wide variance and dynamic nature of instructional models, student groupings, lesson targets, and student tools that were all indicators of the creative co-teaching the team employed as they fundamentally shifted the learning environment from year 1. Besides the Co-Teaching Lesson Guiding and Reflecting Form, this variance was also indicated on student tool artifacts, instructional observations, and both lesson planning and instructional observation debriefs. Participation in this boundary practice enterprise generated common knowledge of how best to adjust the tool according to local demands and conditions for subsequent tool developments (e.g. supplemental lesson materials, etc.) as well as “user competencies (e.g. computer proficiency),” (p. 35; Ramsten & Säljö, 2012). This was clear as differentiated student tools integrated lessons to support learning targets and student participation needs.

Differentiated materials become commonplace as all teachers suggested tools including, but not limited to: sentence starters, graphic organizers, color-coded strips for paragraph outlines, and self-regulating writing strategy rubrics. Disruption of the Northern Hills team’s teaching and learning environment occurred as they designed tools for their practice and co-teaching practice elsewhere, demonstrating a true collaborative research study between community partners and university researchers.

### **Implications For Research & Practice**

### **Common Knowledge and Human Centered Investigations: Implications for Research**

Anne Edwards (2012) refers to common knowledge as that knowledge that is generated when disparate parties work in boundary practices, which was the case at Northern Hills. As multiple disciplines were represented in the design team, boundaries and practices were crisscrossed regularly to find the common ground. The team designed tools and generated common knowledge from a safer and strength-based stance. This common knowledge was generated through the conflicts, diverging and converging interests, and competing demands between the special education and general education communities. Through these tensions the two communities were presented in a complementary fashion to not only generate common knowledge, but also learn through the process for their own sustained improved practice. Initially, there was a problem analysis followed by designing solutions, and then designing processes to engage in the direct improvement of the educational practices at Northern Hills and co-teaching generally (Edelson, 2002). This cycle captured teachers' common knowledge to integrate and strengthen their voice. By allowing the Co-Teaching Lesson Guiding and Reflecting Form and Collaborative Teaching and Learning Map to change form and evolve through iterative designs, the focus did not emphasize implementation fidelity, but rather teacher learning to redesign and apply our tools.

Co-teaching has broadly been researched from either a procedure-orientation (Cook et al., 2011; Murawski, 2006), or descriptive stance (Scruggs et al., 2007). In both of these cases the human-centered nature of investigation is obscured as well as the co-teacher learning environment. These stances neglect the co-teacher learning, which is at the core of design-based approaches to investigation. By focusing on the humans in the learning environment, there is an

intentional shift to build capacity with practitioners and to privilege their knowledge, pedigree, and experience.

Shifting research themes also addresses the failure-based narrative commonly accompanying reports on implementation of educational policy, evidence-based practices, etc. (McDonald, Wachter, & Owens, 2004). In these quality reports on implementation fidelity blame has been historically placed on practitioners for their lack of uptake and/or augmentation. This narrative can and has led to further distancing between institutes of higher education and field practitioners. What is also ignored from the ‘research to practice gap’ narratives are ideas that dissect the locus of control for implementers. For implementing practitioners, if that locus can shift to be more internal, then sustainability increases as well as the likelihood to implement. To this point, what could have been misconstrued as resistance and misguided or unclear implementation in Year 1, teachers’ actions were viewed not as a failure, but rather learning opportunity to integrate local and outsider knowledge to design supportive tools (Edelson, 2002; Marks & Gersten, 1998). The locus of control for the Northern Hills team shifted internally as team members designed and made sense of our tools and their learning environment and had an active role in their design.

### **The Co-teaching Implementation Framework and its Tools: Implications for Practice**

Year 1 findings and organizational change literature (Powell et al., 2009) were synthesized to create the Co-teaching Implementation Framework (chapter 2). This is a novel, empirically based framework of the pressures and tensions that co-teachers encounter as they implement co-teaching – a politically charged education policy. Without a broad framework, co-teaching implementation can become confusing and ineffective, and inequity can be normalized. The Co-teaching implementation framework also broadly guided the development of two more

specific tools – the Co-Teaching Lesson Guiding and Reflecting Form and the Collaborative Teaching and Learning Map – that support the social nature of learning, equity among co-teachers, and the disruption of traditional didactic teaching methods.

The Co-Teaching Lesson Guiding and Reflecting Form, or ‘short-term’ lesson-guiding tool, can be appropriated to local environmental needs so that co-teachers can identify how the tool can best serve them without compromising its integrity. The Northern Hills team demonstrated one way that co-teachers can communicate with one another to support practice and prepare efficiently by adapting the form to Google. With a strategic number of prompting questions and steps, the Co-Teaching Lesson Guiding and Reflecting Form is designed to be minimally cumbersome on co-teachers’ limited time, but is highly intentional in the questions it poses so that it can focus co-teachers to critical co-teaching components. Year 1, as well as other empirical studies, reported an overrepresentation of a single teacher instructional model, unaltered student groupings, and traditional forms of instruction. The Co-Teaching Lesson Guiding and Reflecting Form considers those potential consequences and addresses them, not in a prescriptive manner, but as discussion points for co-teachers to make sense of together.

In addition to the Co-teaching Lesson Guiding and Reflecting Form, The Collaborative Teaching and Learning Map is a strength-based ‘long-term’ tool that co-teaching teams can use as a touchstone mediating object. Teams identify where their current practice is and where it can go and plot out that transformation in flexible non-prescriptive ways. The map uses broad and positive language so that teams can build on their practice with local control and not be judged for unorthodox approaches to that process. The map, which was practitioner-designed includes the following essential elements to collaborative teaching and learning: (1) Collaborative Skills; (2) Planning for Student Learning; (3) Teacher Talk; (4) Classroom Community; (5) Student

Assessment (use of Data); (6) Interpersonal Skills; (7) Professional Expertise; and (8) Teaching. These are all concepts that teachers have been exposed to in pre-service training programs and professional development sessions and apply to co-teaching. In the co-taught learning environment, teachers can now have a mediating tool to make sense of these elements and strategically plan for their specific and contextually designed implementation.

### **Limitations**

As with any study, there are limitations to this work and questions that were not addressed. As an active and critical member of the both the research team, but also the tool design and implementation process, it is clear that who I am factored directly in this project. While I described my position and critical perspective in several sections, particularly in the exploration phase's ethnographic inquiry (Chapter 4), then during the initial design phase as a university representative and knowledge source of current co-teaching literature (Chapter 5), and finally as an active designer in the implementation phase (Chapter 6 & 7), I did not include an explicit analysis of my role and position of power as part of this case study. A productive area for future analysis is a focus micro-analyzing incremental moments of my engagement to further understand and report my involvement. For space limitations of both analysis and accounting, this report focused on the tool design and integration from the participants, thus ideas of relational agency (Edwards, 2012), psychological safety (Edmondson, 1999; Tynan, 2005), and instructional knowledge (Tomlinson, 1999) were at the forefront.

### **Conclusion**

Naraian (2010) conducted a yearlong analysis of a dynamic dual-certified educator who wrestled with her identify as a special educator within the co-taught classroom. In the report, the study's spotlighted teacher discovered alternative perspectives to the classroom and student

learning when she took on multiple teacher roles by recognizing the unintended consequences in her own previous practices. Support and space for reflection during that transition period of co-teacher learning was deemed to be vital. Based on her analysis, Naraian strongly warned of an “uncritical leap [by policymakers] into practices ostensibly to support the inclusion of students with disabilities into mainstream settings,” (p. 1684). Naraian warned that if left uninterrupted, the normalized practices of routinely not moving beyond categorizing students in inclusive settings may reinscribe the very student marginalization inclusive classrooms intend to disrupt. This was the case in year 1, and was directly combated in year 2. As community-based research partners, the participants in this study accepted a critical stance to inclusion, their position as a co-teacher, and the positions of all students as meaning-makers and vital sources of knowledge. Our commitment addresses what Naraian poses as *the* next important collaborative education question: *how can teachers be supported to develop the knowledge, beliefs and practices that support inclusion?* These co-teaching tools, Design-Based Research, and the Northern Hill experience are tools, research methods, and an applied case study of how co-teachers can be supported for inclusion.

A mixture of multiple methods, a design-based methodology is used to work within historically inequitable power relations – possibly institutional, possibly interpersonal, or possibly a combination – to position local knowledge sources as legitimate and appropriate. Here, knowledge production is transdisciplinary, problem-driven, with social context and values positioned as integral parts of the problem’s definition, and tending to blur the distinction between fundamental and applied research (Haggarty, 2014). In other words, our research fostered an approach that deviated from the common educational research practice of transferring information to practitioners. Erickson (2014) supports a design-centered approach to foster “a

long term continuing professional education – supportive of the clinical judgment of teachers rather than vain attempts to replace the complexity of that judgment with simple compliance to administrative [or research] fiat,” (p. 3).

Edelson (2002) agrees writing that designing with and for practitioners permits researchers to “have the freedom to explore innovative design free from market considerations that drive traditional educational designers and have the opportunity to create truly innovative designs,” (p. 119). Housed in a research-justice orientation to inquiry, design, and participation, our tools were those very innovations to support the inclusive classroom referenced by these theorists.

Throughout his book, Phil Smith (2010) posed the question, *Whatever happened to inclusion?* Although challenging and oftentimes at tension with other educational policies including special education policies, inclusion can and should be the ultimate goal of education. In a democracy we need civic engagement and participation as much as ever, and inclusion is a goal of democracy. Although contested, inclusion forces a critical perspective to power, access, and participation in the classroom. Inclusion should always be our goal, and the research and practice questions should stem from that point – inclusion, the tie that binds. Co-teaching is one potential systems-level model to improve school inclusion, and when researched as a human-centered learning endeavor, co-teaching can expand the power of an inclusive classroom dramatically. Amy, Maggie, Stephanie, and Donna have demonstrated this power, and they are not the exception.

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**Appendix A: Co-teacher Practitioner Initial Semi-Structured Interview Protocol** (*Both special and general education instructor*).

1. From your view or perspective, what is co-teaching?
2. In what ways is this different from the ways that you would describe your role(s)?
  - a. Different from the past?
  - b. Resource room role?
3. Please think of the *general* educator as a co-teacher...
  - a. In your view, what are their **goals**? (**Probes**: Teaching, learning, social, and behavioral)?
  - b. What is their role/responsibilities/identity
4. Please think of the *special* educator as a co-teacher...
  - a. In your view, what are their **goals**? (**Probes**: Teaching, learning, social, and behavioral)?
  - b. What is their role/responsibilities/identity
5. Are there any **contradictions** between the special & general ed. perspectives/motives?
6. So, can you please walk me through how co-teaching/push-in came to be a policy in your district/school?
  - a. *What* are some reasons/rationales for this model?
  - b. *Why* should co-teaching be utilized?
  - c. *How* does co-teaching fit within existing practices, organizational or school priorities and idiosyncrasies of the local environment?
  - d. *How* are decisions made affecting co-teaching practices and lessons?
  - e. *How* would the *district* describe your role(s) as a practitioner?
7. Can you please think of a student, perhaps with special needs, and their experience with co-teaching... can you please describe their experience?
  - a. Probe opposite (success vs. failure & special needs or not) (Academically? Behaviorally?)
8. *What* are some **tools (conceptual & material)** that support effective co-teaching?
9. What are some negative aspects of co-teaching? (Student level/Teacher level)
  - a. Barriers?
  - b. Consequences?
  - c. Tradeoffs?
10. Leading co-teaching researchers (Friend & Bursuck, 2011) have provided a list of “vital” co-teaching elements, and I would like you to describe/elaborate each for what they mean to you:
  - *Flexibility*
  - *Commitment to the concept of co-teaching*
  - *Strong interpersonal and communication skills (other sources emphasized constant, open communication)*
  - *Strong clinical judgment*
  - *Voluntariness*
  - *Collaborative skills & attitudes (Including: teamwork; respect; sharing knowledge, ideas, materials/space)*
  - *Trust*

**Appendix B: Interview-Guided Interview.** (*Interview focused on lesson plan artifact & conducted with lesson plan present*)

1. Does this lesson connect to a unit? If so, how does it connect to the previous lesson and next lesson?
2. What are the objectives/goals for this lesson?
3. How is this lesson going to be delivered?
4. Is this lesson delivery different because of the co-teaching classroom?
5. Is this lesson differentiated? If so, is that differentiation included in this lesson?
6. What student products do you expect to generate from this lesson?
7. How is this lesson different from a non co-taught lesson?
8. Does being delivered in a co-taught class enhance this lesson? How?
9. How are variance student learning needs met in this lesson (including IEP goals and objectives)?

### **Appendix C: Direct Observation Protocol: Observation of Co-Planning**

*-Participants:* who are the participants in the co-planning session?

*-Role of instructors:* what are the planned primary job duties for each instructor during the lesson?

*-Participation of Instructors:* How does each instructor participate in co-planning?

*-Identified recipients:* How are specific students identified? How are specific students referred? Is the tone the same?

*-Interaction Patterns:* How do instructors engage with one another during the lesson and instruction?

*-Planned delivery:* Is instructional delivery the same as was planned or does it deviate?

*-Student Interaction:* How do students interact with each respective teacher?

*-Discourse Patterns:* What is the language used in the classroom to address students, deliver instruction, or communicate between practitioners?

***Data record:*** These events and activities will be captured in detailed field notes (actual messages in written text, things said by participants, movements and actions, body language, salient happenings during the event time frame, etc.). Individuals will not be identified in the field note record unless the research team receives their expressed written consent.

### **Appendix D: Direct Observation Protocol: Observation of Co-teaching Practice and Instruction**

- Use of space*: what is the physical arrangement of the classroom?
- Instructional delivery*: what are the instructional delivery methods?
- Role of instructors*: what are each instructor's primary job duties for the class period?
- Participation of Instructors*: How does each instructor participate in the lesson delivery? Which students are the primary recipients of instruction from the general educator? From the special educator?
- Interaction Patterns*: How do instructors engage with one another during the lesson and instruction?
- Planned delivery*: Is instructional delivery the same as was planned or does it deviate?
- Student Interaction*: How do students interact with each respective teacher?
- Discourse Patterns*: What is the language used in the classroom to address students, deliver instruction, or communicate between practitioners?

***Data record***: These events and activities will be captured in detailed field notes (placement of particular students, actual messages in written text, instructional delivery techniques, things said by participants, movements and actions, body language, salient happenings during the event time frame, etc.). Individuals will not be identified in the field note record unless the research team receives their expressed written consent.

## Appendix E

## Co-Teaching DBR Investigation Content Code Handbook

## Exploration Phase (year 1)

<b>Codes &amp; (Co-Teaching Implementation Framework Element)</b>	<b>Definitions</b>	<b>Example &amp; explanation (if necessary)</b>
<b>Goals:</b> <i>Context</i>	Perception, thought or idea of what co-teaching, co-teaching tools, or student outcomes could or do look like.	<i>Amy (special educator):</i> I mean my goals are to have my kids to be active participants, and you know, to access what the other kids are doing and <b>to actually feel like members of their classroom, and not always feel separate, like oh, I'm a "Amy-ian", oh I go to that [special ed] classroom.</b> I mean it's going to happen because they have special needs, and some of them have enough special needs that they kind of need to be in a separate environment
<b>Psychological Dimension:</b> <i>Process</i>	Conscious or unconscious feelings of resistance to implementing co-teaching or perception that your partner is resistant.	<i>Carol:</i> it made me think about <b>how resistant I was to it [co-teaching], and I can imagine other teachers who maybe aren't as confident or overly confident as I am or don't have as good of a relationship with the resource room teacher as I do and that would have really knocked me or a loop</b>
<b>Barrier:</b> <i>Process</i>	Real or perceived block to any plan and execution of instruction.	<i>Amy:</i> I personally haven't reached that level where, <b>I mean I feel very comfortable in front of the classroom and the kids, but there's still that feeling that they [general education teacher] run the classroom,</b> it's their classroom and I'm just kind of coming in, so I'm not sure. The teachers here that I've worked with are extremely open to having people come in, there is still that idea that it's their classroom and <b>I'm kind of a visitor,</b> umm, and for being so open for someone to come in and help, like "ohh, step in when you need to." But for some reason there is always, like this worry of stepping on toes or over stepping my bounds.
<b>Social Consequences of Segregation:</b> <i>Context</i>	Behavioral or classroom community integration results	<i>Carol:</i> I remember one year, Amy may have shared with you, all the 6th graders <b>IEP kids came to her for math and as it happened they were all terrible behavior problems and they just fed off each</b>

	of having a structure that uses a separate setting for instruction of students.	<b>other</b> and actually got worse that year. And Amy has amazing management, but it was awful.
<b>Communication:</b> <i>Process</i>	The messaging and communication of co-teachers to achieve optimal performance.	<i>Amy:</i> Taking place in the general education classroom, where the general education teacher and the special teacher come together and, you know, <b>using both of their expertise coming together to best serve all the kids</b> in the class especially the kids that have the special needs.
<b>Influence / Policy / Organization:</b> <i>Process</i>	Outside forces beyond the co-teaching team to negotiate and make sense of with respect to roles and responsibilities.	<i>Amy:</i> And so that is what <b>the district is looking for</b> , where they are like, <b>“we need to make some drastic changes” [to special education]</b>
<b>Practitioner Tool:</b> <i>Content</i>	A conceptual or literal object to support co-teaching in any way.	At the focus group to discuss strategies for co-teaching support, Carol, a general ed teacher from year 1, suggested the following tool:  <i>Researcher:</i> How is the expertise going to be leveraged?” So just the reasons behind some the instructional decisions potentially.  <i>Carol:</i> That helps me visualize, <b>like if it’s a lesson plan, we all have our standard lesson plan, but it were slightly tweaked</b> to be like: “Role of Amy/Carol,” It could be just a quick jot of “Amy does x and y, and Carol does c.” or something like that. That [tool] helped me visualize what you were saying
<b>Disconnection / Tension:</b> <i>Process</i>	Student needs versus curricular needs in both push-in and pull-out scenarios.	<i>Amy:</i> I mean for years most of the work we did with kids [in the resource room] <b>was very disconnected from what they were doing in the [general education] classroom.</b> You know separate programs. I mean sometimes the kids, like they would learn something here and then they would go back to class, and they are like “I don’t get it”, because it is so different and there was no transferring of skills, and that was really hard for them
<b>Discursive Practices:</b> <i>Context</i>	The talk that any professional is using to describe	<i>Amy:</i> But I kind of wonder if there's like this idea that you know, you're going to have another teacher in, to swoop in, and there's going to be a “magic bullet”

	roles or student and their needs.	and all of the sudden the kids are going to be producing at grade level, or something like that. I kind of have this idea, or it's like, "you're going to come in and you're still going to have your kids, like there is <b>still going to be a separation because you're the special ed teacher and I'm the general education teacher.</b> " So, even though we're there to 'co-teach' and support all kids, there might still be that disconnect, like okay, but you're still going to just have " <b>the Amy-ians</b> ", instead of working with all kids
<b>Paradox:</b> <i>Process</i>	Incongruent demands or ideas either real or perceived.	<i>Carol:</i> I can imagine some teacher in my position saying, " <b>I don't want another teacher in my classroom, and these kids, they have IEP's, and they go to you for a reason.</b> " They think, "do your job, get them out of here, take them to your room, do your reteach, do your phonics.
<b>Beliefs / Perspectives:</b> <i>Content</i>	Views of what current practice is or what future practice and partnerships can or should look like.	<i>Amy:</i> I mean for years most of the work we did with kids was very disconnected from what they were doing in the [general education] classroom. You know separate programs. I mean sometimes the kids, like they would learn something here and then they would go back to class, and they are like " <b>I don't get it</b> ", because it is so different and there was no <b>transferring of skills</b> , and that was really hard for them.
<b>Instructional Decision:</b> <i>Process</i>	Decisions that involve either setting's [general education or resources room] curriculum or instruction.	<i>Amy:</i> Before, it [reading materials] was at their 'just right' level, <b>and so it was matching more of using what we had and matching it with the general education.</b> Now it's really going in and looking at 'what is the general education using?' and how do we take that and use that instead of what we already had.
<b>Professional Role:</b> <i>Content</i>	The responsibility, action, and skills of each profession.	<i>Amy:</i> well, yeah, that's like, <b>when you're trained in special ed, that [differentiated instruction] is your world!</b> You know, like, that's [differentiation] what you do! That's totally it.
<b>Traditional Instruction:</b> <i>Context</i>	Didactic forms of instruction with few student resources or tools and/or an unclear lesson or unit target as well as approaching co-teaching from a	<i>Heather:</i> or me co-teaching is actually two teachers sharing the responsibility of the classroom and the learning of the students. That's in a nutshell. I'm not sure I'm that familiar with the term 'push-in', it feels a little bit more like what we have with what's going on here, <b>we don't share the bulk of the classroom right now, its not split evenly or even equally, it is more one teacher working with the lower students, and myself working with the remaining</b>

	traditional view of separate	<b>students.</b>
<b>Negative Aspect/ Positive Aspect</b>	A general comment on the negative or positive aspects of all other codes. These are second tags to the other codes.	These were attached to other codes to indicate if there was a value judgment on the code or piece of data. For example, the code just above with Heather referencing her current practice, is double coded with “negative aspect” because of the disconnection of what co-teaching could be and what she has described.

### Implementation Phase (year 2)

<b>Code &amp; Co-Teaching Implementation Framework Element</b>	<b>Definition</b>	<b>Example &amp; explanation (if necessary)</b>
<b>Student Tools: Content</b>	Discussion, suggestion, debate about student objects for support and tools to achieve lesson target.	<p><b>EXAMPLE:</b> When describing contributions of other co-teachers, Stephanie identifies the objects that Amy has introduced to their instructional plans to support student learning needs:</p> <p><i>Stephanie (general educator):</i> Wouldn't that be like how I think of Amy (special educator) got the- when we were doing essays how she got the bullet points with the circles and the colors for kids like to me that's what I'm reading that as- 'seeks new information that leads us to make important changes' We think about stuff that we can add to the curriculum to support our kids like the audio [expletive] that she came up with like that- or that you guys did. Like that's the same stuff like we're thinking about ways we can make this accessible to kids.</p> <p><b>NON-EXAMPLE:</b> <i>Not a tool because there is no tangible object that can be used by students to aid them in achieving the lesson target.</i></p> <p><i>Maggie (general educator):</i> We might want to read one or two of those books to the kids. Work that in so that they understand all the points, like how the kids who wrote these got their points for their literary essay.</p>

<p><b>Blend:</b> <i>Content</i></p>	<p>Common Core State Standards or curricular standards fused with talk of Differentiated Instruction or Universal Design for Learning talk and suggestions are given about the merging potential of these two perspectives that drive instruction.</p>	<p><i>Example:</i>  <i>Stephanie:</i> Question. <b>In fourth grade, it's not a standard that they use text, right? To support anything? It can just be straight, "This is my opinion. It's just an opinion."</b>  <i>Amy:</i> Yes. Unless we want to ...  <i>Stephanie:</i> We can push them to.  <i>Amy:</i> There's a variety of ways we can do that. <b>They can look for stuff online. They can do research. They can talk to people.</b>  <i>Maggie:</i> In the rubric it does say, especially to get to that next level, did you use a variety of sources? Even if it's your opinion, to back up with evidence your opinion, you could use text. You could use videos. You could use other people. <b>You're supposed to have a variety of evidence.</b></p> <p><i>Non-Example: Here the discussion is focused on curricular standards only and does not incorporate aspects of UDL or DI</i>  <i>Stephanie:</i> What I'm seeing is she wants them to generate a thesis. How did you guys do that last year? Did you guys focus on character development because a lot of the writing in here is the kid saying, "The character blank is blank."  <i>Amy:</i> Yeah.  <i>Stephanie:</i> So, it's not a theme statement.  <i>Amy:</i> It's character.  <i>Stephanie:</i> So they have to make a claim about a character and support that with characters' actions, all of that stuff, correct?  <i>Amy:</i> Yes, I believe so.  <i>Stephanie:</i> Okay, so a lot of the stuff that I'm seeing we've already done. Testing a thesis, they've already done that with arguments.  <i>Amy:</i> Yes.</p>
<p><b>Intentional Intention:</b> <i>Process</i></p>	<p>The deliberate alignment of learning targets and co-teaching models to student grouping configurations. Learning target that thoughtfully groups students and aligns with standards,</p>	<p><i>Example: The co-teachers have come up with the learning targets that they want to achieve that incorporates standards) with thoughtfulness about the best way to fit student needs during the lessons.</i></p> <p><i>Amy:</i> That starting point is <b>‘what is your purpose of the lesson?’ and ‘how are you going to group the kids?’ and you know ‘what model do you need to use?’ and from there everything kind of like flows from that you know. And each lesson really lends</b></p>

	<p>which is the unique product of the co-teaching model.</p>	<p><b>itself- Like the skill or the content in the lesson lends itself to a model and a grouping.</b> You know it's not- You're not just like 'oh well today we're going to <b>pick stations</b> and we're going to make it <b>student choice</b> and then <b>fit the lesson</b> around that'. No like it- It's really coming from this is what we need to teach them and then knowing the kids we choose the one that fits the information that we're trying to get across.</p>
<p><b>Social Adult Learning:</b> <i>Process</i></p>	<p>Model of how co-teachers are learning the curriculum and instruction socially. The actual engagement with others in the meaning-making process in order to understand lesson and unit goals.</p>	<p><i>Example: The frequent conversation where the teachers are grappling with and trying to make sense of the curriculum together, which really shows the social nature of learning. The co-teachers are interacting with each other to come to a better understanding of how to teach the lesson target:</i></p> <p><i>Stephanie:</i> Yeah, right there. I guess the third down, I found specific words to state my claim. They're going to be like, "the". How are they going to be able to adequately grade themselves? Or how do you guys think that they're going to be able to adequately grade themselves?</p> <p><i>Maggie:</i> Well, I was thinking about this yesterday, because yeah, I hate Lucy [Calkins; curriculum developer]... This second part is all about making sure that your [expletive] is out there and very plain. I'm beginning a game of my opinion to let readers know I was going to try to convince. I love ice cream. That's my opinion. Using that as an example. In the beginning, I tried to hook them into caring about my opinion. Ice cream is the best.</p> <p><i>Stephanie:</i> Right, but how are the kids supposed to know if it's one or the other? That's the part that's going to be ... All of my kids are going to say that they got a level five. Then I'm going to be like, "Really? Prove it. Show me where this is, and show me where this is." They're going to be like, "What's that?"</p> <p><i>Non-example:</i> Here social planning is being used to fine tune schedules rather than to fine-tune what lesson targets look like and how they want to achieve it.</p> <p><i>Jake:</i> How long is this literary essay unit? Two weeks?</p> <p><i>Maggie:</i> It is twenty lessons, so give or take four weeks.</p> <p><i>Jake:</i> That's a good one.</p> <p><i>Maggie:</i> Okay.</p> <p><i>Amy:</i> All right, we're starting this new unit on the 22nd,</p>

		<p>right? That what you said?</p> <p><i>Stephanie:</i> Mm-hmm (affirmative), the 22nd of May, I mean, of February.</p> <p><i>Amy:</i> Sure!</p>
<p><b>Social Child Learning:</b> <i>Content</i></p>	<p>Discussion of the social nature of student learning and the suggestion of how to support that in the classroom, lesson and/or unit.</p>	<p><i>Stephanie:</i> And I vote with the last like 15 or 20 minutes is just sharing because like we still- I am not the best at having kids just share their work. <b>And every time- not every time but when they share their work and they're able to see other kids' good examples it means so much more than just me up there droning away at them.</b></p>
<p><b>Opportunity Mindset:</b> <i>Historicity</i></p>	<p>Discussion of all the benefits that can happen with co-teaching and the</p>	<p><i>Stephanie:</i> So being able to plan with somebody and having two minds bounce off each other makes the lesson- <b>It can make it more efficient, it can make the lesson more thorough, and it can make- It's another voice to ensure that the kids will learn what they're supposed to learn, and in different ways. So for me the reason- what I like about co-teaching-</b> The biggest reason I like co-teaching is just somebody to tell me if my ideas are crap or not.</p>
<p><b>Threat Mindset:</b> <i>Historicity</i></p>	<p>Focusing or dwelling on consequences of performing poorly, where potential consequences are such that the entire learning environment is undermined or eroded or student needs are compromised.</p>	<p>Here, Stephanie describes the pitfall of their co-teaching model because students with significant learning needs – Edward – may get their learning needs satisfied if the lesson goes as currently planned:</p> <p><i>Stephanie:</i> I'm going to put this out there. Them being able to show what they learn is important, and I like the idea of them doing it different ways. <b>However, we're not teaching to the test, but it needs to be where if a kid reads a persuasive text, that they can identify all the parts. If Edward goes straight to writing a play and he gets caught up in that, when he gets that persuasive text, he's not going to be as good as identifying pieces.</b> I don't know if that means that we need to make sure that we just expose him to a lot of persuasive text, so that when it's the final product, they've already had that exposure. I know that for us, we spent two weeks with them writing this final piece. If we spend two weeks with Juliet who is an ELL student, if she spends two weeks writing a play and that's the only exposure she has to persuasive writing, it's going to be harder for her.</p>
<p><b>Preparation needs (Get it in the books!)</b> <i>Context</i></p>	<p>Anxieties related to not being properly prepared</p>	<p><i>Stephanie:</i> I think it's- The part that's hard for me is- I'm going to just be real transparent hear, like the grunt work- I was here til 7:00 on Friday and I was here- I came here at 7 o'clock in the morning on</p>

		<p>Monday because annotating is not easy and I- a lot of it was just getting my kids prepared but a lot of it was preparing to teach four different lessons. And I think that it's one of the parts that I want us to be aware of as we plan. <b>Like, all this differentiation is awesome but the work that goes behind it is strenuous.</b> Like Donna didn't know what to do, we didn't tell her when we talked to her about what she wants. But I think it would be really good for us next time if we're going to be doing different kinds of stuff we really use our time wisely so we can be prepared as possible. So, that's what I would put out there is that- I don't know if it goes with the collaborative intelligence but it is something that I did not- I want it to be like when we teach whereas- Whereas- I am as prepared as possible so we can use our time efficiently as possible when we're here.</p> <p><i>Maggie:</i> Yes.</p> <p><i>Jake:</i> Completely agree.</p> <p><i>Amy:</i> I'm trying to find- I don't know. I was looking for a category that that might fit in. But I agree also like making sure that when we do have a plan we've got like this overarching like 'yes this is what we're doing' but we really need to look at the details and make sure that everybody has like five- you know, that we all know where we're going to be, we all know what we're going to do. I mean even that idea of like on Monday it was like 'okay what group are you having? Oh yeah Tuesday, who am I having today?' And just making sure that we have all those things down. I agree with that because it did feel like there were a few times where it was like 'uhhh'.</p>
<p><b>Meta thinking:</b> <i>Context</i></p>	<p>Perspective-taking promotes understanding co-teaching from other co-teachers' perspectives to both empathize with their role, but also consider the big picture of why co-teaching is being used to improve student outcomes, inclusion, equity as</p>	<p><i>Amy:</i> So last night was the first of 5 workshops that the district was doing for- they offered it to a lot of people but it was mostly- Actually there was a wide variety of people even though there was only like 20 people there. But there was a wide variety. There were a few resource teachers, some gen ed teachers, there was an SLP, a couple district folks. And it was- They're highlighting 5 of the different models of co-teaching with station teaching and parallel and all those techniques. <b>It was interesting to hear people's perspectives because some people who were there had actually been trying it on like we've been doing this for a while.</b> Other people were still in that realm of like 'I'm trying to find the person that I can</p>

	a co-teacher, etc.	<p>approach to be like hey let's try some of this work on just like a little tiny bit maybe a little foot in the door'. There was one woman there who joked several times that her co-teaching partner, the gen ed co-teaching partner, kicks her out of the classroom. Yeah, flat out tells her to leave. That's not co-teaching.</p> <p><i>Donna:</i> That doesn't feel good. Thanks for not kicking me out ever. 'Will you please leave? You're bothering me.'</p> <p><i>Amy:</i> I was a little flabbergasted.</p> <p><i>Donna:</i> <b>I don't think that's co-teaching.</b></p> <p><i>Amy:</i> <b>No, it's not</b></p>
<p><b>Counter Engagement:</b> <i>Context</i></p>	<p>Instances where the non-traditional professional is able to give a valued opinion to the team that is out of their typical wheelhouse (unorthodox engagement)</p>	<p>Teachers here are describing using a student tool, or in this case a rubric for self- and peer-evaluation to help support their learning and final unit product. A student tool in this case is considered a traditional suggestion from a differentiation expert (special educator) and a curricular suggestion would be considered traditional from a general educator:</p> <p><i>Maggie (general educator):</i> Well I was going to- So I'm starting because you were saying you were doing the rubric, <b>so I was thinking of how can I make this more accessible to the kids who need that repeated visual reminders.</b> So I have my "look-fors" and just the simple like what do you need to get a 3? So for the table of contents it has to be neat the title- The headings have to be there, the page numbers have to be there. Just structure wise. For the introduction it has to be in chronological order. I want 9 to 10 major points. I want it geared towards your focus. So no they haven't written it yet but if their focus is Abigail Adams then like I was saying yesterday they have to include the bit about spies or you know other women-how women were important. Then the plus is how do you- because they were also asking- the kids always ask 'how do I get a 4? How do I get a 5? How do I get a 6?' It's like there is no such thing as a 5 or 6 but a 4 for sure. So for the table of contents not only do they have the heading but they have a subheading that tells me or they have an image that shows me more that goes along with each one. For the introduction they use figurative language. I will be specifically looking for that. They have 15 to 20 major points and why they're critical. So there's higher thinking rather than just regurgitating facts. And down for when it gets to</p>

		<p>the critical decision for if we're doing the Battle of- I don't even care. If we're doing passing the-</p> <p><i>Non-example: MB, a general educator, provides a valuable opinion on standards; however, this is a part of a typical general educator's wheelhouse</i></p> <p><i>Maggie: One more thought, is I do know that one of the standards is to be able to compare theme and character between texts. She does have in the back like a compare and contrast literary essay.</i></p> <p><i>Amy: ahhh.</i></p> <p><i>Maggie: And bend 3, I don't feel is always crucial in her things, but in this particular one, because I've seen it starting in second grade where they write them and they have to compare them that I think we need to get to bend three this time.</i></p>
<p><b>Safety &amp; Risk Taking:</b> <i>Process</i></p>	<p>Teachers making suggestions for instruction or student configurations and taking on different duties or roles to support dynamic instruction and creative student engagement.</p>	<p>Amy, the special educator is taking a risk by making a suggestion to the team to really disrupt traditional models of instruction to use numerous small groups. This risk-taking did not occur frequently during year 1.</p> <p><i>Amy: Right. And when we do our examples in front of them whether it's a whole group or whether we all split off and each one of us has a smaller group so it's a little bit more like you know 'here you go'. When they go to write though they're going to need to try it on with whatever their topic is. So they're going to need to know- <b>And so that was what I was wondering, because we have these different text structures, do we want to do a rotation like we did before where we take a text structure and we do like- maybe not all 4 days but maybe 2 days and flip flop kind of a thing where we show them and- show them the format so like if I have problem solution I show them the format. You have a sentence that introduces what you're talking about you're going to occur the problem that was occurring with some details then you're going to state what the solution was and that-</b></i></p> <p><i>Stephanie: <b>I could see that</b> if we wanted to do a rotation it would be- Would it be- So I'm up there I'm exposing them to problem and solution we're talking about it then we- I write a problem and solution about something about the American Revolution and then they do it like with me and then the next day they go to Donna and do cause and effect.</i></p> <p><i>Amy: <b>Yeah</b></i></p>

## Appendix F- 1<sup>st</sup> version of Co-Teaching Lesson Guiding and Reflecting Form *(formerly Co-teaching Fidelity and Rating Form)*

### Co-teaching Fidelity & Rating Form

Name: \_\_\_\_\_ Circle one:    Observation    /    Self-Report

Date: \_\_\_\_\_ Lesson Topic: \_\_\_\_\_

Who Delivered Instruction and in what role? \_\_\_\_\_

Were any student products collected, or assessments / progress monitoring data?     Yes     No     N/A

**\*Indicate implemented model(s):**

Parallel Teaching

Station Teaching

Teaming

Alternative Teaching

One Teach, One Observe

One Teach, One Assist

**Please indicate student grouping:**

- Heterogeneous** (Unlike needs/interest/skills/mixed gender, this may be useful when assessing instructional or intervention focus for future grouping)
- Homogeneous** (Like needs/interest/skills/same gender, this may be useful when providing targeted instruction or interventions)
- Skill-based** (Same skill level; this may be useful when providing targeted interventions)
- Student interest** (Same research topic/project; this may be useful when a project or topic is assigned for class-wide presentations)
- Action research** (Teachers may wish to do action research on instructional or intervention strategies for an identified group of students)
- Random** (No formal organization; allowing students to group themselves)

**Please rate:** (5=Extremely Well; 4=Well; 3=Neutral; 2= Okay; 1=Not Well)

Lesson was implemented according to plan:	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Student Grouping matched lesson goals/objectives: _____	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Instruction was differentiated to support student needs: _____	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Co-teaching was utilized to maximize instruction and student learning: _____	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

Additional Comments:

## Appendix G- final version of Co-Teaching Lesson Guiding and Reflecting Form

Your Name: \_\_\_\_\_ Teacher Names: \_\_\_\_\_ / \_\_\_\_\_

Date: \_\_\_\_\_ Lesson Topic: \_\_\_\_\_

### Planning & Instructional Discussion Qs

What is the lesson objective or learning target?

What is/are your selected model(s) of co-teaching? Why (is it/are they) appropriate for the lesson?

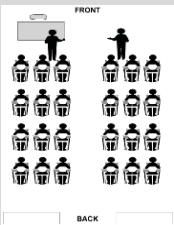
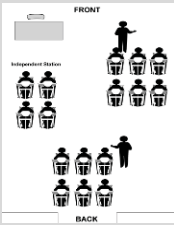
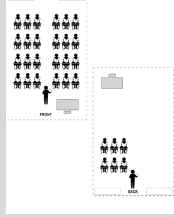
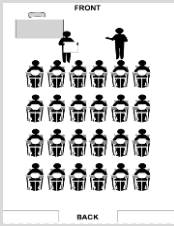
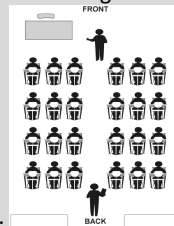
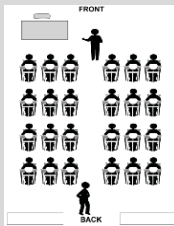
What are the roles of each practitioner in the selected model, and why?

How are students positioned physically (grouped) and supported in a differentiated method in the selected model?

What student tools are needed?

Are/Were any student products collected, or assessments/progress monitoring data?  Yes  No  N/A

**Co-Teaching Models** | Please indicate planned and/or implemented model(s) *\*note: recommended frequency is provided*

<input type="checkbox"/> <b>Parallel Teaching (<i>Frequent</i>)</b> Each teacher teaches the same content in same amount of time 	<input type="checkbox"/> <b>Station Teaching (<i>Frequent</i>)</b> Each teacher teaches a portion of the content in the same amount of time. 	<input type="checkbox"/> <b>Alternative Teaching (<i>Limited</i>)</b> One teacher takes responsibility for the large group while the other works with a smaller group. 
<input type="checkbox"/> <b>Teaming (<i>Occasional</i>)</b> Both teachers are fully engaged in delivery of the core instruction. 	<input type="checkbox"/> <b>One Teach, One Observe (<i>Limited</i>)</b> One teacher manages entire class instruction while another gathers pre-determined agreed upon data. 	<input type="checkbox"/> <b>One Teach, One Assist (<i>Seldom</i>)</b> One teaches lesson content, while the other circulates providing unobtrusive assistance as needed 

**Student Grouping** | Please indicate student grouping(s):

- Heterogeneous** (*Unlike needs/interest/skills; may be used assessing instructional / intervention focus for future*)
- Homogeneous** (*Like needs/interest/skills; may be used when providing targeted instruction / interventions*)
- Skill-based** (*Same skill level; may be used when providing targeted interventions*)
- Student interest** (*Same research topic/project; may be used when project is assigned class-wide presentations*)
- Student Choice** (*No formal organization; allowing students to group themselves*)

**Ratings** | Please rate your satisfaction (5 = extremely; 4 = strongly; 3 = moderately; 2 = slightly; 1 = not at all):

Student Grouping matched lesson goals/objectives:  5  4  3  2  1

Lesson implementation went as planned:  5  4  3  2  1

Instruction was differentiated to support student needs:  5  4  3  2  1

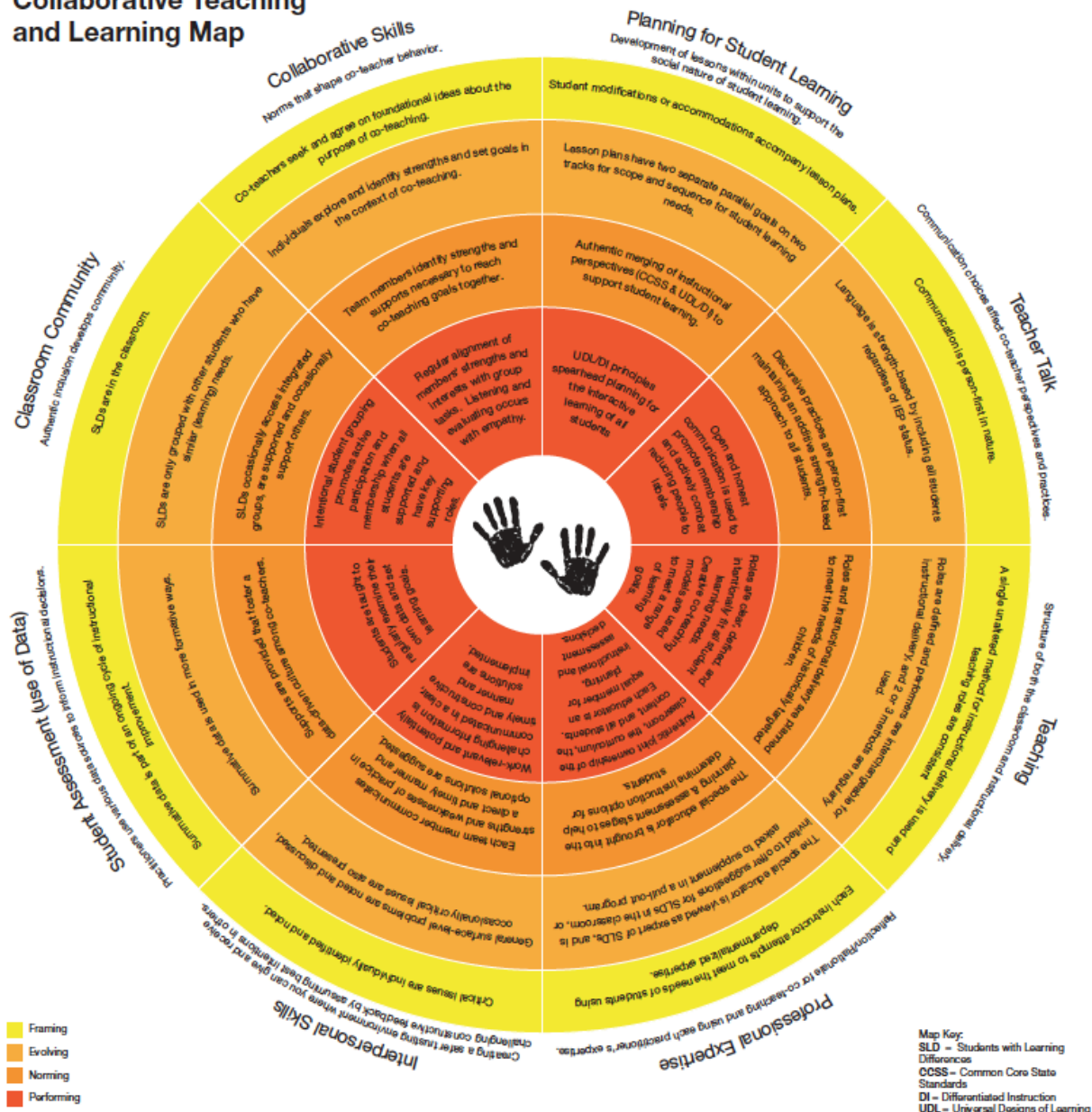
### Appendix H- 1<sup>st</sup> version of Collaborative Teaching and Learning Map

Co-Teaching Implementation Outcomes		Co-Teaching Equity MAP			
		<i>Foundational Forming Framing Founding</i>	<i>Evolving (Storming)</i>	<i>Refining (Tweaking) (Norming)</i>	<i>Performing</i>
<b>Classroom Community</b>	Community development through student inclusion. <i>(Content 80% Context 20%)</i>	Students with exceptional needs (SENs) are kept in the classroom.	SENs are grouped with other students with similar (exceptional) needs.	SENs occasionally access integrated groups, are supported and occasionally supporting others.	Intentional student grouping promotes active participation and membership when all students have key supported and supporting roles.
<b>Collaborative Intelligence</b>	Norms and standards of co-teacher behavior <i>(Process)</i>	Co-teachers seek and derive a foundational agreement on the purpose of co-teaching.	Individuals explore and identify strengths and set goals in the context of co-teaching.	Team members identify strengths and supports necessary to reach co-teaching goals together.	Regular alignment of members' strengths and interests with group tasks. Listening and evaluating is occurring with empathy.
<b>Planning</b>	Development of lesson and unit <i>(Content)</i>	Modifications or accommodations accompany lesson plans.	Lesson plans have 2 parallel goals on two separate tracks for scope and sequence and those of student delivery needs.	Authentic merging of instructional perspectives (Common Core & DI)	Lesson development is based on / held up by Universal Designs of Learning or Differentiated Instruction (spearheads lesson development)
<b>Discourse</b>	Communication <i>(Process)</i>	Communication is person-first in nature.	Language is strength-based by including all students regardless of IEP status.	Discursive practice are person first and strength based within an additive approach to all	****open and honest communication that promotes membership and actively combats reduci

<b>Teaching</b>	Instructional delivery and classroom structure <i>(Context)</i>	A single unaltered method for instructional delivery is employed and roles are consistent.	Roles are defined, performers are interchangeable for instructional delivery. 2 or 3 methods are regularly employed.	Roles and instructional delivery are planned to meet the needs of historically targeted children.	Roles are clear, defined, and intentionally fit <i>all</i> student learning needs. Creative co-teaching models meet a range of learning goals.
<b>Professional Expertise</b>	Reflection/ Rationale for co-teaching and using each practitioner's expertise <i>(Content)</i>	Each instructor attempts to meet the needs of students using departmentalized expertise. (own)	The special educator is viewed as expert of SENs, and is invited to offer suggestions for SENs in the classroom, or asked to supplement in a pull out program. (advisor)	The special educator is brought into the planning & assessment stages to help determine instruction options for students. (limited teaming)	Authentic joint ownership of the classroom, the curriculum, the content, and <i>all</i> students. The special educator is an equal member for planning, instructional and assessment decisions (yoke mate)
<b>Psychological Safety</b>	Personal and team comfort with respect to both delivering and receiving threatening information/feedback. mutual respect and trust among those very members. Trust in this instance is the willingness to engage in interpersonal risk taking with the self-assurance that other members of the team will not ignore, humiliate, or	Face threatening information is rarely delivered, roles are uncomfortable and unquestioned. * problems are individually identified/noted	Important and potentially disagreeable information rarely focuses on personal flaws. Critical news is often delayed, distorted, or not communicated at all, even if it would be beneficial for the hearer to have the information. *general/surface problems are noted and discussed.	Personal flaws are referenced and team members begin to admit or challenge errors. * areas in each team member needing support are identified, optional solutions are suggested.	Task-relevant face threatening information is bi-directionally communicated clearly, unambiguously, timely and constructively.

## Appendix I- final version of Collaborative Teaching and Learning Map

### Collaborative Teaching and Learning Map



## Appendix J- Psychological Safety Scale Questionnaire

*Please indicate your beliefs regarding these statements and the current status of your co-teaching team.*

<p>7 = <i>Very true of what I believe;</i>          6 = <i>True of what I believe;</i>          5 = <i>Somewhat true of what I believe;</i>          4 = <i>Neutral;</i>          3 = <i>Somewhat untrue of what I believe;</i>          2 = <i>Untrue of what I believe;</i>          1 = <i>Very untrue of what I believe</i></p>	
1. If you make a mistake on this team, it is often held against you.	<input type="radio"/> 7 <input type="radio"/> 6 <input type="radio"/> 5 <input type="radio"/> 4 <input type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1
2. Members of this team are able to bring up problems and tough issues.	<input type="radio"/> 7 <input type="radio"/> 6 <input type="radio"/> 5 <input type="radio"/> 4 <input type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1
3. People on this team sometimes reject others for being different.	<input type="radio"/> 7 <input type="radio"/> 6 <input type="radio"/> 5 <input type="radio"/> 4 <input type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1
4. It is safe to take a risk on this team.	<input type="radio"/> 7 <input type="radio"/> 6 <input type="radio"/> 5 <input type="radio"/> 4 <input type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1
5. It is difficult to ask other members of this team for help.	<input type="radio"/> 7 <input type="radio"/> 6 <input type="radio"/> 5 <input type="radio"/> 4 <input type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1
6. No one on this team would deliberately act in a way that undermines my efforts.	<input type="radio"/> 7 <input type="radio"/> 6 <input type="radio"/> 5 <input type="radio"/> 4 <input type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1
7. Working with members of this team, my unique skills and talents are valued and utilized.	<input type="radio"/> 7 <input type="radio"/> 6 <input type="radio"/> 5 <input type="radio"/> 4 <input type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1
8. This team frequently seeks new information that leads us to make important changes.	<input type="radio"/> 7 <input type="radio"/> 6 <input type="radio"/> 5 <input type="radio"/> 4 <input type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1
9. Team members often speak up to test assumptions about issues under discussion.	<input type="radio"/> 7 <input type="radio"/> 6 <input type="radio"/> 5 <input type="radio"/> 4 <input type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1