ABSTRACT

Norah A. Olaly, DEVELOPING AN ECOLOGY OF CO-TEACHING: AN ETHNOGRAPHIC STUDY OF A CO-TEACHING PARTNERSHIP (Under the direction of Dr. Matthew Militello). Department of Educational Leadership, December, 2023.

In this qualitative ethnographic and autoethnographic study, I examined a co-teaching partnership between a general education teacher and special education teacher in an international school. The school inclusion policy, which resulted from a shift in student demographics by admission of students with significant learning needs, supported the ecologies of knowing to encourage intentional engagement of co-teachers. The study goal was to tell the story of two co-teachers' experiences as they worked collaboratively to overcome the general education/special education teacher dichotomy in their classroom and develop a robust co-teaching partnership. The overarching question that guided the study was: *How do a general education and a special education teacher develop a co-teaching partnership?* Using an ethnographic and autoethnographic research methodology, the study offered the opportunity to collect and analyse thick descriptions of participant experiences. I analyzed reflective memos, co-planning meeting notes, field notes, classroom observation reflections and other artifacts to determine emerging themes. After two phases of inquiry over 10 months, we uncovered key elements of success about our co-teaching learning process to co-develop an ecology of co-teaching that would promote student achievement and access. Two findings contribute to understanding the intricacies of co-teaching partnerships: (1) Catalytic moments in a co-teaching relationship can contribute to a shift in practice; and (2) *in situ* professional development is key to co-creating an effective ecology of co-teaching. The co-instructors identified and addressed obstacles to co-teaching when they capitalized on catalytic moments. Despite the absence of common planning time, each teacher brought knowledge, experience, and skill to the partnership and learned to use each other's skills and dispositions to be productive. Other schools that use or intend to use co-teaching as a service

delivery model can better understand how the teachers' professional learning is a complex and multidimensional process that has far-reaching consequences for teacher relationships and classroom practice. When teachers share certain values and beliefs, they can garner sufficient support from each other to co-teach inclusive classrooms.

DEVELOPING AN ECOLOGY OF CO-TEACHING: AN ETHNOGRAPHIC STUDY OF A CO-TEACHING PARTNERSHIP

A Dissertation
Presented to the Faculty of the Department of Educational Leadership
East Carolina University

In Partial Fulfillment of the Requirements for the Degree
Doctor of Education in Educational Leadership

By
Norah A. Olaly
December, 2023

Director of Dissertation: Matthew Militello, PhD
Dissertation Committee Members:
Marjorie Ringler, EdD
Lawrence Hodgkins, EdD
Lynda Tredway, MA

DEDICATION

I dedicate this work to my parents, the late Michael Frederick Nyambuoro Olaly, and Dr. Wilfridah Aduol Olaly. Mama, thank you for showing me by example that one can reach great heights in education at any age. Because of you, I could not give up, even when things seemed so hard. To my late father, thank you for instilling a love for education in me. I know you would have been very proud of me as I reached this milestone. Baba, this degree is in your honor.

ACKNOWLEDGEMENTS

I extend my sincere appreciation and gratitude to the many people who helped make this study possible.

My deepest appreciation to my lead reader and mentor, Lynda Tredway, who provided guidance, insight, and encouragement throughout the dissertation process and who enabled me to broaden my perspective both personally and professionally. I simply could not have succeeded without her.

A special appreciation is extended to the teacher who participated in this study. Without his willingness to share his time and experiences with me, this study could not have happened.

I am grateful to have had the encouragement and support of friends and fellow cohort peers during this process.

Finally, I would like to acknowledge and thank my loving family, who encouraged me to keep pushing on until I reached the finish line.

The collective assistance of all has been a deep inspiration to me. It is my hope that I may someday be in a position to support others as you have done for me.

TABLE OF CONTENTS

Page

TITLE…… i

COPYRIGHT…… ii

DEDICATION ……. iii

ACKNOWLEDGEMENTS ……. iv

LIST OF TABLES…… xii

LIST OF FIGURES…….. xiii

CHAPTER 1: NAMING AND FRAMING FOCUS OF PRACTICE …… 1

Focus of Practice …… 4

Assets and Challenges for the Ethnographic Study ……. 7

Micro Context …… 8

Meso Contexts …… 8

Diverse Student Population……... 8

School Policy…… 9

Commitment to Learning…….. 9

Internal Organizational Support…… 10

Teacher Knowledge and Skill……... 11

Professional Learning Needs……. 11

Student Admission ……... 12

Possible Policy Shifts ……... 12

Macro Context ……... 13

Significance of Study ……... 15

Significance to Practice …….. 15

Significance to Policy …… 17

Significance to Research ……. 17
Connection to Equity …… 18
Economic ……... 18
Psychological …… 19
Purpose Statement and Research Questions …….. 21
Overview of the Ethnographic and Auto-Ethnographic Study …… 22
Ethnographic and Auto-Ethnographic Research Methods ……... 22
Theory of Action …….. 24
Project Design …….. 25
Confidentiality and Ethical Considerations ……... 26
Study Limitations ……... 27
Conclusion ……..…… 28
CHAPTER 2: LITERATURE REVIEW…….. 30
Special Education as Field of Practice…… 33
The Individuals with Disabilities Education Act……... 33
IDEA Provisions ……... 34
Benefits and Challenges of Special Education under IDEA ……. 35
Benefits ……...…….. 35
Challenges ……...…….. 36
Inclusion as a Key Practice for Improving Special Education Practices…… 38
Defining Inclusion…….…… 39
Inclusion Frameworks …….. 41
Inclusion in International Schools …… 44
Key Factors in Moving Toward Inclusion ……..……. 46
Co-teaching: Definition and Necessary Components ……..…….. 48

Defining Co-Teaching…….…….. 48

Conceptual Framework of Co-Teaching……... 49

Co-Teaching Requirements: Relationships and Reflection ……. 51

Nurturing Relationships …….…… 52

Reflection ……... ……... 53

Conclusion and Conceptual Framework ……..... 54

CHAPTER 3: METHODOLOGY……...……. 57

Study Design ……..... 58

Ethnographic Research ……. 59

The Researcher's Role ……. 61

Setting of the Study …….. 62

Study Participants ……... 63

Organizational Supports…….. 64

Activities and Data Collection ……... 65

Research Activities ……... 66

Data Collection and Instrumentation ……... 66

Semi-Structured Interviews ……... 68

Observations …….. 68

Reflective Memos ……. 69

Shared Stories …… 70

Data Analysis ……... 70

Limitations …… 72

Transferability …….. 73

Credibility …… 74

Dependability ……... 74

Confidentiality and Ethical Considerations ……... 74

Conclusion……... 75

CHAPTER 4: PHASE 1…… 77

Activities……..……..…… 79

Phase 1 Overview……..…… 81

Data Collection and Analysis ……..…… 84

Classroom Observations and Post-Observation Conversations.. 84

Meetings, Field Notes, and Reflective Memos……... 85

Data Analysis ……..……. 86

Phase 1: Emerging Categories ……..……. 86

Uneven Partnership……..……. 89

Pronoun Usage: I and My……..……. 90

Roles: Lead and Assistant ……..…… 90

Decision-making ……..…… 92

Instructional Planning and Delivery…… 92

Assessment: Preparation and Delivery, Grading, and Feedback 94

Forms of Communication……..……... 96

Sharing Educational Life Journey Stories……... 97

Who Speaks, Who Listens ……. 99

Nonverbal Communication……. 99

Joint Reflection Learning…… 100

Conclusion ……... 105

CHAPTER 5: PHASE 2 ANALYSIS AND FINDINGS ……. 110

Phase 2 Activities…… 112

Phase 2 Themes …….. 113

Shared Responsibility ……... 116
Pronoun Usage: We and Our …….. 116
Communication with Students ……. 118
Communication with Each Other…….. 119
Communication with Parents and Colleagues …….. 120
Parent Communication with Us ……... 120
Roles …….. 120
Lead Role ……. 122
Assistant Role …….. 123
Collaborative Decision-Making ……... 123
Instructional Planning and Delivery ……..……. 125
Content to Students……..……. 125
Approaches To Learning (ATL) Skills Development ….. 126
Professional Learning ……..……. 126
Assessment: Design, Delivery, Grading, and Feedback …… 127
Assessment Design and Delivery……..…… 128
Grading and Feedback ……..…… 129
Strengthening Interpersonal Relationships as Co-Teachers……. 131
Sharing Professional Journey Stories ……..……... 131
Building Our Unique Co-Teaching Model …….. 131
Homeroom Partnership……..……... 132
Nonverbal Communication ……..…….. 133
Signals and Gestures……..……..…. 134
Interactions and Observations Outside the Classroom …. 135
Who Speaks, Who Listens ……..……... 136

Developing Trust ……..…… 136

Vulnerability to Empathy ……..……... 137

Shared Reflection ……..……..……... 139

Level of Collaboration……..…… 140

Reflection on Phase 2 Co-Teaching Process …… 142

Findings ……..……... 147

In situ Professional Learning in Co-teaching ……... 148

Shared Responsibility ……..... 151

Autonomy to Parity …….. 153

Reflection ……...…….. 153

Enhanced Communication ……. 154

Trust ……...…….. 155

Innovation ……...……. 155

Catalytic Moments in a Co-teaching Relationship …….. 157

Sacrificing Personal Time …….. 160

Language Shifts: From “I and My” to “We, Our and Us” ……. 160

Good Conflict ……...…….. 161

Co-Reflection ……...…….. 162

Shared Roles ……...…… 162

Expressions of Appreciation …….. 163

Conclusion……...…… 164

CHAPTER 6: DISCUSSION AND IMPLICATION …….. 166

Discussion of Findings ……...…… 168

Catalytic Moments ……...…… 169

Common Obstacles to Co-Teaching …….. 169

Recognizing Moments to Develop Parity ……. 170
Professional Learning to Support Co-Teaching ……. 172
Necessary Professional Learning …….. 172
How *In Situ* Professional Learning Supports Co-Teaching ….. 174
Re-Examining Research Questions …….. 177
Implications ……...……. 178
Practice ……...…….. 178
Policy ……...……. 180
Local Policy (Micro and Meso) ……. 181
International Schools' Policy ……. 183
Research…… 183
Research Process: Ethnographic/Autoethnographic Study …… 184
Recommendations for Future Research ……. 185
Limitations ……... 187
Leadership Development ……... 187
Leading When Not in Charge …….. 189
Leading During Crisis …….. 191
Relational Trust …… 192
Where There Is a Will, There Is a Way …… 193
REFERENCES ……..……..……..…….. 196
APPENDIX A: INSITUITIONAL REVIEW BOARD APPROVAL …… 219
APPENDIX B: CITI CERTIFICATE …….. 220
APPENDIX C: SITE APPROVAL LETTER …….. 221
APPENDIX D: ADULT CONSENT FORM …….. 222

LIST OF TABLES

1. Linking Data Collection Sources and Research Questions ……..... 71

2. Co-teacher Interactions in Phase 1(October - March 2021) ……..... 80

3. Phase 1. Emergent Categories and Codes ……..... 87

4. Co-teacher Interaction and Data Collection in Phase 2 (April 2021-June 2021, August 2022)…… 114

5. Phase 2: Emerging Themes and Categories …….. 115

6. Themes Across Two Phases …….. 149

LIST OF FIGURES

1. Fishbone diagram ……..... 14

2. Theory of action for an effective ecology of co-teaching model ……..... 56

3. Plan of activities and personnel ……. 67

4. Phase 1 data indicated that partnership and communication are necessary for co-teaching ……..... 88

5. My illustration depicting the state of our co-teaching partnership at the end of Phase 1……..... 106

6. David's illustration depicting the state of our co-teaching partnership in Phase 1 ……..... 108

7. Phase 2 data indicated that partnership through shared responsibility and strengthening our interpersonal relationship as co-teacher are necessary for teaching ……. 117

8. An email to parents where David speaks to both of us using "we" and "us"……..... 121

9. Sample of student assessment with David's note requesting me to moderate it …… 124

10. Sample of student assessment with David's comments and my thoughts……. 130

11. WhatsApp communication to me in which David was vulnerable about a situation ……. 138

12. David's WhatsApp message to me on asking students to reflect collaboratively…… 143

13. David's illustration depicting the process of our ecology of co-teaching in Phase 2 …….. 144

14. My illustration depicting the process that our ecology of co-teaching underwent in Phase 2 …… 145

15. The study findings as a result of two phases of inquiry……. 150

16. Shared responsibility and communication created space for in situ professional learning ……. 152

17. Catalytic moments arising from open communication and a strengthened interpersonal relationship …….. 158

18. Catalytic moments in our co-teaching relationship that caused shifts in our practice ……..... 159

CHAPTER 1: NAMING AND FRAMING FOCUS OF PRACTICE

For several decades, inclusion has been a contentious issue in education (Villa & Thousand, 1995). Inclusion is ensuring that students with disabilities fully participate in general education classrooms. Including "a higher proportion of students with disabilities, particularly those with major cognitive difficulties, in regular education classes has had a remarkable effect on the education of students with disabilities" (Hehir, 2006, p. 65). Despite the enactment in the United States of the Individuals with Disabilities Education Act (IDEA) of 1997, which updated the original IDEA of 1975, and despite the considerable amount of work that has been put on legislation focused on creating equitable spaces for children with disabilities, the complexities of effective inclusive practices continue to elude us (Militello et al., 2009). Researchers have discovered that an increasing number of international schools are embracing the opportunities and challenges of inclusion; nonetheless, anecdotal evidence suggests that the commitment to and practice of inclusion has not progressed at the same rate (ISC Research & Next Frontier Inclusion, 2016).

International schools are attempting to understand what it means to be inclusive, but they are falling behind when it comes to implementing policies and practices that achieve it. As an international educator who has taught in four international schools, I can attest to the schools' good intentions in providing special education services to their exceptional students. Leaders in these international schools frequently accepted the idea of inclusive practices and wanted to “acknowledge that everyone has different strengths and diversity is celebrated” (Delaney, 2016, p. 3). But these efforts all too often fell short. During the course of this ethnographic and autoethnographic study, I taught at the International School of Tanganyika (IST). At the time, the school had decided to be an inclusive school. When my study began, the school was in the early stages of defining the operational parameters of its inclusivity strategy and committing resources to carrying it out in classroom practice Based on its new

commitment to inclusion, IST admitted several students with a range of learning needs and thus found itself in a critical position. School leaders had to grapple with the realization that inclusion is not just guaranteeing the disabled students' physical access to school or their social integration with their non-disabled peers; rather, inclusion meant co-teaching in classrooms to support full inclusion (Friend & Bursuck, 1996; Hehir, 2006). Inclusion required the development of strategies to meet all students' needs for quality learning and participation.

The school needed to provide an inclusive academic program that catered to all students' cognitive levels and individual abilities. IST understood that the commitment to inclusion for special education students in general education classes would lead to changes in teacher relationships, structures, schedules, and professional learning. The school had to address a range of challenges as school leaders and teachers navigated the shift to full inclusion.

IST served as a springboard, propelling its students into the international arena via its International Baccalaureate (IB) program. The IB program promotes a teaching and learning experience that is rigorous and oriented toward high academic achievement and selective college admissions. Therefore, a timely co-teaching technique was required if we were to successfully provide equity and excellence to all students.

As a result, IST embraced co-teaching as a strategy to promote collaboration among all constituents, namely, parents, students, teachers, and administrators. Co-teaching is a specific special education service delivery model in which a general education and a special education teacher work together in planning, delivering, and evaluating instruction to a diverse group of students in primarily a single classroom setting (Cook & Friend, 1996). Co-teaching is considered a viable option for ensuring that students with learning needs have a "highly qualified" content teacher in the room while also ensuring that all students'

individualized education needs are met by an instructor who is highly qualified in differentiation strategies (Murawski, 2008).

In addition, the co-teaching model provides a quality learning environment not only for the students identified as having learning difficulties but for all students (Algozzine & Anderson, 2007; Gillespie, 2017; Sheehy, 2007). Because of the commitment to full inclusion as an equity premise, students in co-taught classes receive personalized learning environments that meet a range of learning abilities and needs even if students are not identified as students with disabilities. The school's adoption of the concept of collaboration that was best suited for a classroom setting that included students with mild to significant learning needs. However, teachers, who were supposed to use co-teaching as a key instructional method were not fully equipped to plan and implement it and had little prior knowledge of what makes it effective.

The school began the process of shifting to an inclusive culture in the school by raising teachers' awareness about inclusion and co-teaching; there was a general assumption that all teachers were fully aware of and motivated by the school's mission to provide inclusive education to all students. However, awareness is not the same as action in classrooms. Hence, this ethnographic and autoethnographic study of a co-taught classroom was an opportunity to investigate co-teaching by general education and special education teachers. The ethnographic study addresses a central organizational question: How does an espoused theory of action become a theory in use? (Argyris & Schön, 1992). In this case, how could the espoused theory of inclusion become fully realized in the teacher practices and student learning in the classroom?

The school could only achieve its mission of inclusion if it addressed both equity and excellence (Powell et al., 2011). Children with special learning needs were our most vulnerable learners and, therefore, required and deserved equitable learning opportunities.

Building community commitment was crucial in fostering empathy that was needed in an inclusive school because "equitable schools address the needs of the whole child [and] provide all students with an excellent education that allows them to collaborate with other learners" (Smith et al., 2017, p. 4). Teacher collaboration with a focus on fostering reflection on instructional practice and building empathy among all constituents was key to realizing the inclusive vision that the International School of Tanganyika hoped to embrace.

In this chapter, I present the Focus of Practice (FoP) and the rationale that informs the research. I describe the assets and challenges and display a fishbone graphic from the improvement sciences processes to summarize the assets and challenges (Bryk et al., 2015; Rosenthal, 2019). I then elaborate on the significance of the project and discuss the equity focus of the study by discussing the key economic and philosophical frameworks that inform the study. I conclude by briefly describing the study process, the limitations of the study, and confidentiality considerations.

Focus of Practice (FoP)

The International School of Tanganyika, in adopting an inclusion policy, required its teachers to engage in co-teaching partnerships to meet the needs of its growing special needs student population. But how would the teachers graduate from passively implementing a directive from the administration to being adopters who participated actively in customizing a co-teaching innovation to fit the school? How could they develop reflective practices for instructional planning and delivery to ensure equitable access to learning by all students? How could they develop and deepen the empathetic relationships among themselves that they would need to address the needs and concerns of students and parents?

The only way they would learn how to do this was by engaging with each other in the very environment in which they worked. Situated learning theory holds that effective education requires learning that is embedded in authentic contexts of practice wherein

students [co-teachers] engage in increasingly more complex tasks within social communities (Lave & Wenger, 1991). The reflective practice in which my co-teacher and I as a co-practitioner researcher (CPR) team engaged in in this process meant that we used iterative evidence to "learn by doing" (Dewey, 1938).

At IST, we were developing a consequential model of educational intervention (Gutiérrez, 2016). We used the terms *ecology* and *eco-system* interchangeably to describe the environment of inclusion we wanted to have at the school. Throughout this dissertation, I chose to use the term *ecology*. The term describes the nature of interactions we wanted to have among the parents, teachers, students, and administrators—an environment in which the schools' constituents experienced a range of conversations, developed relationships, asked questions, and even experienced moments of tension (Guajardo et al., 2016). The ethnographic study borrowed from the ecologies of knowing (Guajardo et al., 2016) and hoped to develop intentional engagement between the two co-teachers through classroom work to build a set of relationships among the teachers, parents, and students at IST (Guajardo et al., 2016; Gutiérrez, 2016) and be useful to other international schools.

The existing theories of the concept of ecology in human interactions provided a basis for the ecology of co-teaching (Bronfenbrenner, 1979; Darling, 2007). Bronfenbrenner's (1979) ecological systems theory includes five levels of personal knowing: individual, microsystem, mesosystem, exosystem, and the macrosystem. According to Bronfenbrenner's model, the microsystem refers to the relationships and interactions a child has with her immediate surroundings (Berk, 2000). Structures in the microsystem include but are not limited to the child's family and school.

The mesosystem is the connections between the structures of the child's microsystem (Berk, 2000). These may include the connection between the child's teacher and his parents as well as the larger social system in which the child does not function directly. The

structures in this layer impact the child's development by interacting with other structures in the microsystem (Berk, 2000); for example, this might include the parent's workplace schedules or community-based family resources. Although the child may not be directly involved at this level, he/she is bound to feel the positive or negative impact of interactions within the system, the exosystem.

The ecologies of knowing as designed by Guajardo et al. (2016) front the use of community learning exchanges as a way of coming to know as a community and to address the micro, meso, and macro systems. The microsystem represents the self as it interacts within the immediate family setting; the mesosystem represents the organization or institutions we work in; and the macrosystem is the wider community or structural levels in which we exist. While the Bronfenbrenner model is relevant to individual children with disabilities in inclusive classrooms, for the purposes of this study, I leaned more on the model presented by Guajardo et al. (2016). I worked with one other teacher to document over the course of 10 months how we developed a system for successful co-teaching. As a framework for understanding how to approach the ecology of inclusion and co-teaching, we utilized the ecologies of knowing oneself (Guajardo et al., 2016), the students and parents, and the larger school community. Co-teaching is a promising though challenging service delivery model for the education of students with disabilities (Sheehy, 2007).

In addition, while adapting a collaborative co-teaching model at IST was a school-wide decision, administrators had a key managerial role in making it work. The implementation of collaborative co-teaching requires that instructional leaders address the inherent challenges (Sheehy, 2007). These implementation considerations include: co-planning time, student caseload, student composition, relationships among co-teachers, and knowledge of content to be taught. However, by the time the study commenced, the school had not considered how to infuse reflective practices and build the relationships that could

facilitate the implementation of the co-teaching strategy (Crockett, 2002; Goor et al., 1997; Spillane et al., 2004). In this study, I examined how teachers develop reflective practices and build empathetic relationships with each other and how those translate to a co-teaching model that supports the teachers and students.

Institutions often rush into decision in an attempt to rapidly fix problems or make improvements instead of systematically unpacking the issue, reviewing the options, and involving all those who are closest to the issue and will implement the new practices (Militello et al., 2009). At the beginning of the project, we needed diagnostic information on what the school already had in place and what challenges it still faced in trying to implement an inclusion policy with co-teaching as an instructional requirement. The information from observations, policy documents, and conversations with administrators and colleagues was a preliminary step in identifying the assets and challenges at the micro, meso, and macro level. As IST looked to fully implement its inclusion policy, I expected this study would support schoolwide policy and practices for teachers and leaders.

Assets and Challenges for the Ethnographic Study

I used the assets and challenges that emerged in the preliminary analysis of the inclusion setting as a diagnostic step (Bryk et al., 2015). The fishbone model, as revised by Rosenthal (2019), included the assets and challenges at the micro (classroom of students and teachers), meso (IST's specific school-level improvement needs), and macro (local school and international schools' community) contexts. The aim of this study was to engage in a collaborative inquiry process with the math teacher (the general education teacher) to develop an ecology of co-teaching between him and myself, the special education teacher. I defined the ecology of co-teaching as the interactions of the teachers with the students and parents. In addition, administrative decisions and conversations influence the co-teaching ecology.

Next, I describe the assets and challenges in the micro, meso, and macro contexts and display a fishbone graphic that summarizes the assets and challenges.

Micro Context

Our sixth-grade math class comprised a diversity of students. Some were local students who had lived in Tanzania their whole life while others were children of expatiate diplomats. A small majority of the students were identified as having learning needs ranging from mild to severe. David and I were paired to co-teach because I was the learning support teacher for that grade. I went to David's classroom to co-teach. I had had more experience with co-teaching from my previous teaching engagements while David had little to none. While some teachers were not very keen on forming co-teaching partnerships, citing lack of adequate planning time to make it worthwhile, David and I were both willing to be part of a co-teaching partnership that would bring about inclusion of students in our classroom.

Meso Context

The preliminary research revealed that the school had more assets at the meso level than at the micro or macro levels. The assets included a diverse student population, a school policy that encouraged inclusion, teachers committed to learning, and internal organizational support. Some challenges the school faced were: lack of adequate teacher knowledge and skill on co-teaching, limited professional learning opportunities, economic pressure to admit more students, and the possibility of a policy shift after the accreditation team visit.

Diverse Student Population. The school possessed a diverse student population that would benefit from a robust co-teaching practice and had a few teachers who were willing to partner in a productive co-teaching partnership. Teachers participated in a whole-school professional development workshop on co-teaching as well as a stakeholder meeting on inclusion. Numerous educators expressed anticipation in participating in a collaborative teaching alliance. However, notwithstanding this enthusiasm during the professional

development workshop, there was a keen interest in understanding how the historical challenges related to scheduling and student allocation would be effectively resolved. Numerous individuals expressed a lack of confidence in their ability to adequately address the academic requirements of students with severe needs in their classroom without the assistance of a special education teacher.

The stakeholder gathering elicited a positive impression among the participants. The parents had a sense of optimism over the achievement of their children's needs, regardless of differences in learning. At this juncture, both the co-participant and I exhibited indifference, as we were cognizant of the imperative nature of our collaborative efforts to facilitate our students' academic achievement.

School Policy. First, the school adopted a five-year strategic plan that emphasized the promotion of inclusion and co-teaching as a service delivery model. The plan was supported by the School Board and initially implemented in the 2018–2019 academic year. IST was accredited by the Council of International Schools (CIS), which mandates inclusive practices among its policy recommendations. In November 2018, the entire teaching staff, students, some parents, and some board members participated in an inclusion-related conference. All participants worked on defining what inclusion meant at IST. During the group discussions at the meeting, the terms "ecology" and "eco-system" came up frequently. After the conference, the teachers attended a co-teaching professional development workshop facilitated by an external consultant. In addition, the school administrators promised that they would create enhanced structures that would allow schedule allocations that favored co-teaching partnerships in all core subject areas.

Commitment to Learning. IST's administrative personnel and a portion of its professional teaching faculty embraced the initial opportunities for support and professional development in inclusion and co-teaching. I designed and facilitated a workshop on

developing empathetic relationships with students with learning needs, which was crucial to advancing the vision of inclusion and providing teachers with the necessary tools for co-teaching. Subsequently, learning support teachers and their content area co-teachers were offered specialized training on co-teaching and personalized learning. An external consultant, in collaboration with learning support teachers, provided the professional development.

Internal Organizational Support. The administration was so intent on ensuring the successful implementation of the inclusion policy that it established two new administrative positions: a Student Support Services Coordinator and a Director of Teaching and Learning. These new hires supported co-teachers who were assigned to participate in the implementation of the school's inclusion and co-teaching model. In collaboration with the Director, they sought to create an inclusive school through the development of an "ecology of co-teaching" throughout the school. The school community, comprised primarily of parents, was also committed to the inclusion of their children. Parents whose children had not been identified as having learning needs embraced the opportunity for their children to learn alongside peers with disabilities, which was essential for fostering empathy among the constituents. However, despite the administration's support, the school still confronted obstacles in implementing the inclusion policy.

We had admitted students with significant learning needs, but we struggled to design structures, procedures, and practices to support their inclusion. As a school, we recognized that having an inclusive school was the correct course of action and had taken the necessary steps to create one. We had agreed on a definition of inclusion and were beginning to comprehend and embrace it as a mission of our school. We had begun working with the board, faculty, and parents to clarify some of the benefits of being an inclusive school, and the Director had reaffirmed his commitment to inclusion.

Similar to the process of identifying assets IST possessed at the time, the preliminary investigations revealed challenges for the FoP. The following section describes the challenges that the study participants, school, and community at IST faced: knowledge and skills of the teaching and support staff, professional learning needs, student admission changes, and possible policy shifts.

Teacher Knowledge and Skills. The major challenge the school faced was the full commitment of the teaching staff charged with implementing co-teaching instruction. Many teachers were new to the school, and those who had been there for a while were not fully confident or motivated to engage in a co-developed co-teaching model. They preferred the "pull-out" service model where they had only to support students in their resource classes. The new Student Support Services Coordinator met resistance from some teachers in implementing inclusion policies and structures. In addition, there was a general low level of trust, and professional relationships suffered. The lack of trust and personal-professional involvement and commitment was a significant challenge in establishing a highly collaborative instructional approach in the school.

Professional Learning Needs. There were limited opportunities to engage in or implement professional learning communities; however, there was action space for these to occur. The school did not restrict teachers from forming learning groups that learned from one another. Teachers also received professional development funds to engage in professional learning outside the school. Most of the professional development funds went towards individual and not group learning. As the participant observer, I was open to becoming a leader/coach on what I believed was good co-teaching practice. I focused on creating the conditions for collaborative reflection and action within a learning community of myself as special educator, the general educator, and the students. I hoped to be part of a learning experience as the study progressed and to share what I learned with my colleagues.

Student Admission. Apart from the usual expatriate community that come to Tanzania for various diplomatic or economic reasons and whose children attend IST for the international curriculum that it offers, more affluent local families also can afford to bring their children to IST. As the current political and economic situation in Tanzania shifted and a number of expatriate families left the country, the school opened its doors to the local community with the result that the school accepted a wider range of students, including students with significant learning needs. Our previous experience was limited to supporting students with only mild to moderate learning needs. As a result, we questioned whether our present practice met the needs of all of our students.

We analyzed and evaluated service delivery strategies that included: co-teaching, differentiation, use of student support learning plans, Response to Intervention (RTI), and small group instruction in the learning support classes. Despite all this, we were still at a loss as to how we should address the process of ensuring that the few students with significant learning needs received the educational programming that they needed without compromising the quality of education we gave the rest of the students.

The demographic shift raised the question: How do we ensure equitable, quality teaching and learning with our changing special needs population? This sparked innovation and imagination similar to what Gutiérrez (2016) describes as "[an] approach to design with a social imagination, especially the design of interventions for failing and inequitable systems, [which] involves a system's reorganization, with attention to all aspects of the ecology" (p. 188). In this specific case, IST needed an ecology of co-teaching that was "equitable, resilient, sustainable, and future oriented" (Gutiérrez, 2016, p. 188).

Possible Policy Shifts. The school was set to undergo a wholescale strategic planning exercise in preparation for the accreditation team. If for any reason collaborative and empathetic responsive practice did not stand out as an area of strategic focus, it would be

difficult to muster the resources necessary to keep it in the forefront of change efforts. It was one thing to articulate a vision for inclusion of all students and another to fully understand what it would take. To make meaningful strides toward becoming a school that promotes equity and excellence, IST needed to fully understand that "children with special learning needs were our most vulnerable learners and therefore required and deserve the finest learning opportunities that we could possibly provide" (Powell et al., 2013, p. 4).

Macro Context

The macro context is the International Baccalaureate (IB) organization, which supports inclusive education and supports inclusive education. They believe that schools should remove or reduce barriers to student participation in the IB curriculum. The organization states on the website:

When designing and developing the curriculum, the IB aims to meet the principles of equity and inclusive education through:

- designing and developing a universally designed curriculum that is inclusive, fair and accessible for all IB learners
- taking into consideration planned access and adaptations (inclusivity and accessibility for groups of students who would need specific access) and student well-being
- drawing upon the full range of ways of knowing and incorporating experiences, contribution and histories from across cultures, nationalities, backgrounds, identities and perspectives
- ensuring representation across cultures, nationalities, identities and experiences. (https://www.ibo.org/programmes/equity-and-inclusive-education-in-the-ib/).

Figure 1 summarizes the assets and challenges in the micro, meso, and macro levels.

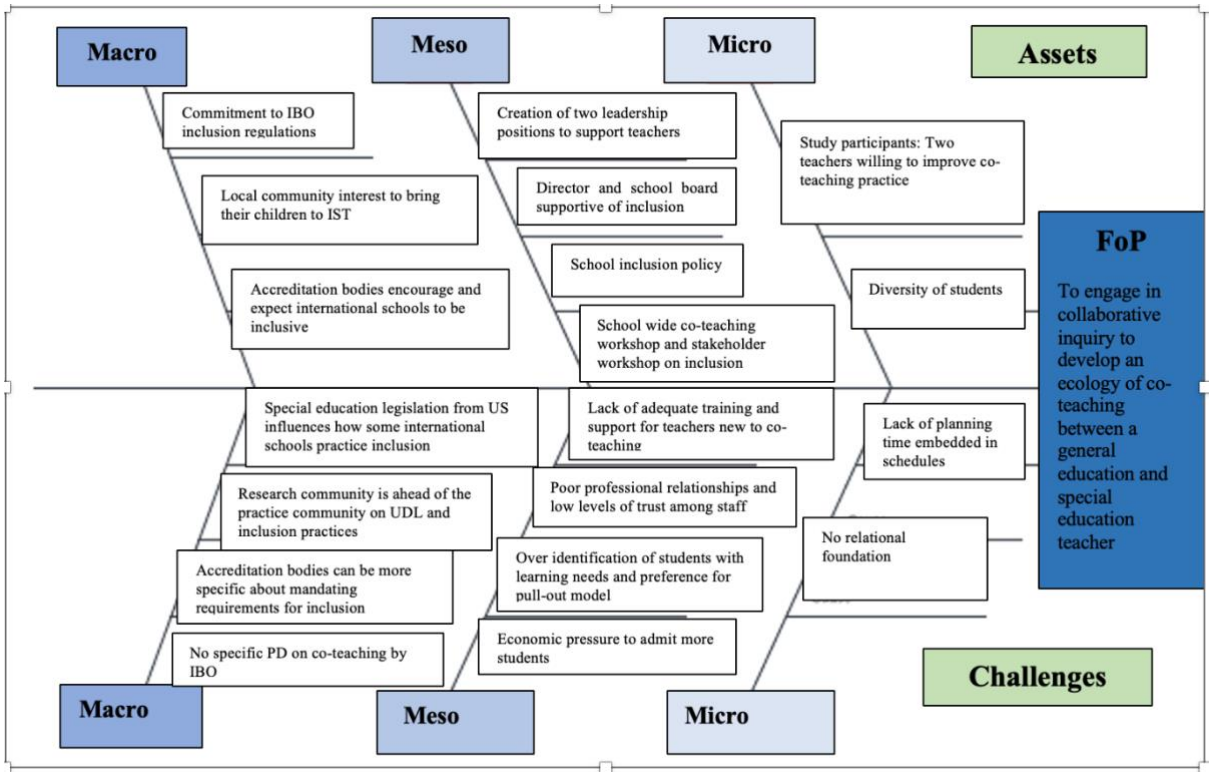


Figure 1. Fishbone diagram of assets and challenges.

As IST worked toward realizing its inclusion goal, the school started by systematically facilitating the creation of paired, grade-level special education teachers with content general education teachers in collaborative partnerships. In this ethnographic study, I examined how one general education teacher working with myself, the sixth-grade special education teacher, and how our collaborative interactions fostered or hindered an effective ecology of co-teaching by engaging in reflective instructional practice and developing empathy and relational trust with each other. I explore in detail how we worked together to re-design elements that were hindering our success.

Significance of the Study

Decision-makers in international schools, mainly consisting of the school boards and top management administrators, can influence decision-making at the meso and macro levels. They can act as equity advocates, or they can hinder the equity work happening in schools (Evans, 2013). However, on the micro level, teachers are the main influence in their classrooms. The study provided two teachers a chance to be at the center of work that would have implications on practice, policy, and research in co-teaching to achieve inclusion in international schools. We expected our study to inform changes within the practices of co-teachers at IST, the inclusive policies of international school institutions, and the research on equitable school reform.

Significance to Practice

Because the ethnographic and auto-ethnographic study was about the process of co-developing an ecology of co-teaching between a general education and special education teacher, the two teachers involved had to engage in reflective practices during their instructional planning and to develop relational trust. In this way, we could deepen our empathetic responses to each other and to our students and their families. The ethnographic study took place in a middle school sixth grade classroom with one general education math

teacher, and myself, the special education teacher. The study revealed the work and growth that we experienced as "equity warriors—people who, regardless of their role in a school or district, passionately lead and embrace the mission of high levels of achievement for all students, regardless of race, social class, ethnicity, culture, disability, or language proficiency" (Rigby & Tredway, 2015, p. 331). We made it our mission to overcome the challenges we faced with each other and the school leadership to create an inclusive environment for all their students.

The auto-ethnographic study supported me, as a special educator and participant researcher, to reflect on my leadership, to comprehend why I am engaged in equity work, and, most importantly, to conduct meaningful, accessible, and evocative research based on my own personal experience. In light of this, the study aimed to sensitize other co-teaching partners to increase their capacity for empathy by being mindful of how their personal experiences impact not only the research process but also their day-to-day practice (Ellis & Bochner, 2000).

The study was designed to help co-develop, albeit at small scale, an ecology of co-teaching that relied on the interaction of the most immediate members of the ecological system: teachers and students. We aimed to illustrate (1) how teachers' reflective practices during co-planning sessions informs how they teach; and (2) how they develop and deepen empathetic relationships with one another and their students. Apart from shedding light on the power of site-based professional learning, the study also revealed practices that addressed the cognitive, skill, and affective domains of the students and also provided an avenue for studying my own experience alongside that of my colleague to inform my own practice and leadership in equity.

Significance to Policy

Creating an inclusive school environment was essential to the vision of IST. The school sought to have an inclusive school environment that reflects its values and affirms academic, linguistic, ethnic, and cultural diversity. In addition, the International Baccalaureate Organization (IBO) recognizes the importance of school policies and procedures to promote the inclusion of all children. By adapting a co-teaching model as one method of providing an inclusive educational placement for all students, IST embarked on a journey similar to that of many international schools. A key aim of the study on policy was to provide practical guidance to teachers, parents, school leadership, and other interested parties about our co-teaching procedures and practices. The ethnographic study provides one possible blueprint that international schools can emulate on how to move from an espoused theory of inclusion to actionable realization of an inclusion policy through co-teaching.

Significance to Research

Since research on best practices for co-teaching is almost exclusively conducted in public school settings rather than international schools like IST, the study extends the knowledge base to a new setting. In addition, most research on school reform on inclusive practices involves mainly school professionals (administrators and policy makers) but often does not implicate teacher or parental input (Friend et al., 2010; Murawski & Lochner, 2011; Scruggs et al., 2007). The study adds to the growing body of research on including other constituents, particularly the teachers in classrooms who are expected to co-teach, as a way to develop inclusive school settings.

The study illuminated the opportunities involving all major constituent groups in the change-making process in an international school. The implications for small-scale reform in individual classrooms and systemic changes to the co-teaching practices at IST are discussed

more completely in Chapter 6. The study provided a process for reform that can be replicated in other co-taught classes of IST and perhaps in other international schools.

Connection to Equity

The study is rooted in equity. By presenting as an inclusive school, IST made a bold statement of promoting equity by ensuring that its processes and programs recognized diversity of student needs and provided equal possible outcomes for each of them. Co-teaching was the vehicle through which the school hoped to facilitate equitable instructional and assessment access to all its students. I examined two frameworks related to equitable practice: economic and psychological. The economic framework examined the influence of economic intentions that IST had when it made the decision to be an inclusive school on the meso level.

I used the psychological frame to investigate the place of the teachers' past experiences with inclusion, teaching students with learning needs, and co-teaching. The psychological frame provided an equity dimension that allowed me to examine the interpersonal relationship between the co-teacher and me and how our co-teaching partnership would affect our class and the entire school community.

Economic

While the emphasis on co-teaching reflects the school's genuine commitment to inclusion, the emphasis concurrently addressed an economic concern. As student numbers dwindled at IST between the 2016–18 academic years due to the host country's immigration policy changes, many expatriates left the country. As a result, the school needed to boost student numbers to meet financial obligations. Anderson et al. (2013) indicate that "the shifting economic and policy context of schools has radically reengineered the role of school administrators to being one of a private sector CEO, and this has impacted issues of equity and diversity" (p. 43). In the case of IST, the school's director and board both responded to a

decrease in student numbers by opening its doors to a wider range of students. However, the new students, whose families are from Tanzania or had long-term commitments to remain in Tanzania, had more significant learning needs. While the school's growth in numbers brought in more revenue to the school, the change also required more staffing to meet the students' needs. The FoP illuminated how a vision of creating an ecology of co-teaching served as a "magnet" to draw more families to the school as it marketed itself as an inclusive institution.

While the introduction of the inclusion policy was an economic decision, it also served as a leverage point for the provision of a strong model of co-teaching that served an important equity need in the school community for both new and returning students. The economic framework provided an emphasis for action that helped me look at the extent to which the broad recommendation by the school would affect the individuals [co-teacher and me] most affected by and charged with the implementation of the inclusive policy.

Psychological

The study aimed to bring individuals (the co-teacher and me) on the micro level to engage in an exercise of introspection and personal dialogue with the literature and our experience to discover if and how it applied to us. In addition, because the study involved a co-teacher, I extended my investigation to examine my unconscious beliefs and biases about what my co-teacher knew about co-teaching and inclusion. Furthermore, the study offered us an opportunity to undo any prior stereotypes we had about students with disabilities. "If asked to explain the academic difficulties of any student, I would, like most [teachers], have stressed what was in my observer's line of vision and in my psychologist's toolbox—the students themselves, their motivations, expectations, self-esteem, cultural orientation; the value they placed on education, their work habits; their academic skill and knowledge; their families' emphasis on school achievement; and so forth" (Steele, 2010, p. 17).

However, I was faced with the necessity to first understand not only my students' but my co-teacher's individual histories and conditions and how they influenced my instructional and reflective practices as well as how I empathized with them. Like Steele (2010), I chose to look beyond what I could see. "We emphasize the things we can see. We deemphasize, as causes of [their] behavior, the things we can't see very well, namely, the circumstances to which [they are] adapting" (p. 17). The psychological frame provided an emphasis for action that informed my FoP by examining how the co-teacher and I could change our mindset or actions through a lived experience and how we made informed choices to act due to our experiences. As individual teachers, we needed to change our mindsets before we changed our actions.

After reflection and introspection on how I viewed my students and co-teacher, I was able to deepen empathetic relationships between my co-teacher and me and with our students. The change in mindset enhanced the co-teacher's conversations with me so we could better understand our students and how to best support them holistically. Using a psychological lens, my co-teacher and I took great care and time to develop relationships with one another and our students. By cultivating and maintaining deeper relationships, we were able to recognize the strengths that each of us and our students brought to the classroom. As discussed in the results section, the relationships facilitated deeper learning for all participants.

The equity frameworks are related to the micro, macro, and meso contexts as highlighted in the structural analysis indicated in the fishbone diagram. The economic discussion is correlated to the meso and macro levels while the psychological analyses apply to the micro and meso levels.

Purpose Statement and Research Questions

The purpose of the ethnographic study was to discover ways of producing meaningful, accessible, and evocative research grounded in the personal experience (Ellis & Bochner, 2000) of two teachers co-developing an ecology of co-teaching. As we developed and implemented reflective practices during our planning sessions, I documented our conversations to help us make sense of our practice and to record how each of us came to the co-teaching partnership. During the study, I revisited the research goals with the co-teacher and consider them as the basis of the study. Maxwell (2005) as cited in Nganga (2011) emphasized that intellectual goals are about understanding whereas practical goals are about achieving. I therefore wanted to understand how the transition from having our own teaching classes to teaching as a unit of co-teachers in the same space would affect the co-teacher and me. Previous research has not adequately addressed the issue of the transition from private teaching practice to a co-teaching partnership among international school teachers. The findings may provide valuable insight into how international school instructors negotiate the personal and professional aspects of their identities to improve their teaching practices.

The overarching question for the ethnographic research project was: How do a general education and a special education teacher develop a co-teaching partnership? The key research questions are:

1. To what extent do effective reflective practices of co-teachers and empathetic understandings of each other contribute to the development of this partnership?
2. To what extent do co-educators work collaboratively by co-planning and co-teaching to enhance instructional practices?
3. How does engagement in an "ecology of co-teaching" inform my leadership?

The first question addressed the gap in the literature on the need for reflective practice and an empathetic relationship between co-teachers. The second question sought to extend the

literature on collaboration in co-planning and co-teaching in developing a co-teaching partnership; the third highlighted how engaging in an ecology of co-teaching affected my leadership for which I used data from the activities the co-teacher and I engaged in throughout the study.

Overview of the Ethnographic and Autoethnographic Study

Most school reform efforts have few results that transfer permanently (Cuban, 1990; Militello et al., 2009). Rather than collaborating across networks, thinking critically from all angles, and taking multiple equity perspectives into account, most reform efforts support top-down processes and tend to rely on outside experts to tell the faculty how to manage their classrooms (Richardson-Garcia, 2018).

Our efforts aimed to establish a counter-narrative to this reality. By using ethnographic research methodology, I collected and analyzed thick descriptions of participant experiences. As the participant observer in the day-to-day processes of a co-teaching team, I engaged in ethnographic and auto-ethnographic methods to determine how to best engage with the general educator and report the experiences (Creswell & Creswell, 2018). In a school like ours, a pre-packaged program of co-teaching like the one modelled by the administration in imitation of the International School of Brussels would not suffice because it neither included attention to the socio-cultural aspects of our context (Gutiérrez, 2016) nor involved the key players closest to the problem. As we found in the study, the co-teachers must partner and work through an approach to co-teaching that fits their relationship and the context. In describing the methodology that I used I present the theory of action and the proposed project design.

Ethnographic and Autoethnographic Research Methods

Those closest to the experience have wisdom necessary for restructuring the experience (Guajardo, et al., 2016). I chose a qualitative research method because it was best

suited to observing and/or interacting with my fellow co-teacher because I needed to collect and analyse evidence to enable us to make actionable change decisions (Creswell & Creswell, 2018). Involving the co-teacher with whom I interacted daily in the classroom was beneficial; he provided vital information to understand our co-teaching partnership and what elements of our practice to change or retain (Weis & Fine, 2004). By using the tenets of ethnography and autobiography, the co-participant and I engaged in an authentic process that created a viable product (Ellis et al., 2011).

The success of the study rested squarely on the precise way that the study participant, the co-teacher, and myself, the participant observer, engaged in finding responses to our conditions. The aim of the ethnographic study was to get "under the skin" of our current co-teaching model and any associated issues that it presented in the hope of understanding the problem and in turn designing a far better solution. Because the research was conducted within the "stubborn particulars" of our local context, I believed that an ethnographic study was the best method to ensure that the key player in the co-teaching partnership was a full partner with me in this study (Bryk et al., 2015; Militello et al., 2009; Spillane & Coldren, 2011). An ethnography would permit me to produce a rich and comprehensive account of our school and classroom setting from the perspective of the participants. In addition, I wanted to tell the untold stories of teachers in international schools who have the responsibility of promoting inclusion through co-teaching and whose narratives are scant in the current literature so that educational leaders in international schools can be aware of their professional needs.

I was purposeful about whom I chose to conduct the ethnographic study with. Purposeful sampling is one of the defining characteristics of qualitative research. I chose to engage in an in-depth qualitative inquiry with a single teacher. I wanted to have an

information-rich study from which the co-participant and I would learn what was of central importance to the collaborative inquiry (Patton, 2002).

In Chapter 6, I discuss my development as a leader. I chose to use auto-ethnography to produce a meaningful, accessible, and evocative study based on my personal experience, which I hope will sensitize readers to the challenges women of color encounter in leadership or in their pursuit of leadership positions in international schools. These experiences are occasionally shrouded in silence (Ellis & Bochner, 2000). Autoethnography permitted me to "[acknowledge and accommodate] subjectivity, emotionality, and [my] influence on the [study] rather than hiding from these matters or assuming they don't exist" (Ellis et al., 2011, p. 274). Autoethnography permitted me to narrate my lived experiences as I understood them, using hindsight (Denzin, 1989; Freeman, 2004). The qualitative method allowed me to put myself at the center of the study without denying my identity, something that traditional scientific approaches would not have permitted (Walls, 2006).

Theory of Action

The theory of action (ToA) was: If a co-teaching team engages in collaborative inquiry of co-teaching by co-planning, co-teaching, and co-reflecting, then they can develop an ecology of co-teaching that serves as a model for their co-teaching practice. It gave us guidelines about what we hoped to do by co-developing an ecology of co-teaching. To this end, I focused the ethnographic study on working closely with the general education teacher with whom I co-taught to incorporate regular data reviews.

The long-term goal of this study is to develop productive co-teaching partnerships that inform the development of the co-teaching model for IST. I accomplished this by engaging in co-planning, co-teaching, co-reflecting, co-assessing, co-grading, co-reporting, and giving feedback to the students in our math class. The study participant and I learned from one

another on how to develop our reflective practices for instructional planning and, by doing so, developed empathetic relationships with each other and with students.

The aim of this ethnographic study was to engage collaborative inquiry to develop an ecology of co-teaching between general education and special education teachers. The improvement goal aimed at co-developing a meaningful co-teaching model. Together, we generated dialogue and practices to reflect upon and to learn from each other as we addressed a common area of equity work. As we co-planned for instruction and practiced and engaged with each other, we developed an empathetic relationship and translated our understanding of each other and student needs into robust co-teaching in our classroom. Our experience potentially can renew, invigorate, and improve co-teaching practices at IST.

Project Design

The study took place in two distinct phases lasting 6 months and 4 months respectively. During both phases, I used the research questions to guide data collection and analysis. In collaboration with the study participant who was an experienced math teacher, I collected and analysed quotidian experiences and events of our co-teaching team. We expressed the perceptions and meaning attached to our experiences and used the information as data. The data collection and analysis process are reviewed in Chapter 4.

The study was conducted in a co-taught inclusive classroom with a diverse student population in which some students required special services. I actively participated in systematic data collection, which included recording of classroom observations using field notes; conducting informal interviews to gather additional insights; actively engaging in collaborative planning and reflective meetings; and composing reflective memos to chronicle personal reflections and insights. With a primary emphasis on data review and analysis, the process involved sifting through the data, followed by coding and categorizing the information that held the greatest relevance to the research questions of the study.

The main objective of this study was to assess the impact of the activities on our practices as co-teachers with a specific focus on promoting equitable access and success for students. Discussions about our co-teaching practice with the co-teacher served as a guiding force in determining the decisions and subsequent actions taken during the study's second phase. I used member checks and interviews with the study participant that set the stage for developing a diagnostic description of the context and the "stubborn problem." Consequently, I designed the initial goals and actions necessary to develop an ecology of co-teaching. We co-analysed the assets and challenges that we faced in our current co-teaching model and practices. By doing this, we were able to discuss the rationale for the selection of the specific goals we intended to meet and how we planned to review and monitor the effectiveness of our co-teaching practices over the course of this study. During this study, we paid particular attention to how the study participant and I worked collaboratively toward co-developing an ecology of co-teaching by initiating more effective instructional practices and building empathetic relationships with one another and our students. I provided leadership and vision on sound co-teaching practices. Reflective memos, co-planning meeting notes, field notes, classroom observation reflections, and other artifacts were collected as data and analysed qualitatively to determine emerging themes that developed.

We reviewed progress and established themes that emerged during the course of data collection. The findings served as evidence for the conclusion of the project and the development of a proposed co-teaching model for IST and other international schools.

Confidentiality and Ethical Considerations

The security of the data and the confidentiality of the participant was of the utmost importance in this study. I used a pseudonym for the participant in the study. In addition, I transcribed interviews and classroom observation recordings, planning and reflection meetings, and classroom observation notes and kept the data in a secure location. Finally,

none of the material co-generated with the study participant was replicated or disseminated in any way.

To conduct the study, I submitted a formal application to the Director at the International School of Tanganyika (see Appendix A), which was approved. The study also was approved by East Carolina University's Internal Review Board (IRB) (see Appendix B) and completed the Citi training for conducting the study (see Appendix C) Finally, a consent letter of participation was signed and filed for the participant of the study (see Appendix D). I discuss the details of confidentiality and ethics in Chapter 3.

Study Limitations

Lincoln and Guba (1985) posit trustworthiness as the measure of a qualitative study. Trustworthiness is the extent to which the conclusions make sense and are an accurate representation of the research. Professionals want to be assured that the results are trustworthy and that transferability, dependability, and credibility have been addressed throughout the study (Sheehy, 2007).

The ethnographic and autoethnographic study was limited by the sample size, which was one co-teaching relationship between one participant and myself. Consequently, despite the possible useful implications for a wider audience of practitioners and researchers, the findings and conclusions drawn in this study are specific to its context. Therefore, its generalization to other settings is limited. However, the processes we used could be replicated in another study whose findings could be of interest to our school.

In this study, I employed the following validity measures: interrogating my own practitioner researcher bias; examining my own reflexivity on the study (Maxwell, 2005); collecting a rich set of data in the observations and conversations; and member checking with the participant (Merriam, 1995). By following these validity measures, I verified the "correctness or credibility of the description[s], conclusion[s], explanation[s],

interpretation[s]" of the interactions I had with the co-teacher, students and parents (Maxwell, 2005, p. 106).

Due to the contextual nature of the study, it is difficult to generalize the findings of the study because of the small sample; however, the validity of the ethnographic and auto-ethnographic study rests on other factors. Hale (2008) indicates that the standard of validity for this type of research is usefulness to the participants; I expect this study to be useful to the co-teaching team and to other teachers at IST who were not participants. The study also provides a process for reform that can be replicated in the co-taught elementary classes of IST and perhaps in other IB international schools around the world. The implications for systemic changes to the co-teaching practices at IST are discussed in Chapter 6.

Lincoln and Guba (1985) and Creswell (2003) confirm peer review as a strategy to maintain quality. I conducted a peer review with the study participant during the data analysis process and discussed emerging themes and findings from the coding process with him. The co-teacher commented on my interpretation of the data, which helped to triangulate the accuracy of findings by allowing the participant to review and revise emergent understandings (Creswell & Creswell 2018).

Multiple sources of data collection allowed for continual opportunities to verify the data from one source to another. I analysed data from interviews, planning meetings, and classroom observations with the study participant. I wrote reflective memos and field notes that enabled me to engage in the process of internal reflection. Impromptu planning meetings that arose from co-reflecting after lessons provided more data for analysis.

Conclusion

By taking a bold step to be an inclusive school, IST can be a pacesetter in the international school community as a school that promotes equity and excellence. The school directors required teachers to use co-teaching to provide services to a student population that

they have not had prior experience working with students with significant disabilities. Preliminary conversations among the co-teachers who had been assigned this responsibility, the staff hired to support the implementation of the inclusion policy, and the parents of these students were key in the process of co-developing a co-teaching model that would serve IST. The school's stated concern to provide equitable access and student success in the classroom was addressed by the study participants who were the key constituents of this ethnographic and auto-ethnographic study. The success of the study ultimately depended on how it was enacted in our instructional planning and co-teaching practice (Spillane & Coldren, 2011).

In this chapter, I described the focus of practice for this ethnographic and auto-ethnographic study, which was designed to co-develop an ecology of co-teaching with the general education teacher to improve equitable access and student success in the classroom. One participant was selected as part of this study. The teacher expressed his willingness to improve his co-planning, co-teaching, and co-reflective practices. The project enabled us to co-develop a context-specific co-teaching practice.

The next chapter is a review of the literature that guides this study, and Chapter 3 provides the methodology for the study. Chapter 4 gives a detailed overview and analysis of Phase 1 of the study and discusses the activities and data collection during the two phases. Chapter 5 provides an analysis of Phase 2, and Chapter 6 is the discussion and implication of the findings.

CHAPTER 2: LITERATURE REVIEW

Like many international schools, IST encountered a series of challenges as it moved toward greater inclusivity (Powell et al., 2011; Chan & Yuen, 2015). For schools successfully to advance inclusion as their mission statement or philosophy, a first step is to raise awareness of all staff on its principles. But the commitment, knowledge, and skills of individual teaching staff are necessary to turn the vision into a concrete reality. At IST, the school encouraged every teaching staff member to embrace inclusive education.

For instance, during orientation, every new hire is required to attend an introductory talk about the concept of access for students on learning support. Special education teachers, known as "learning support" teachers at IST, inform all teachers of students' Individualized Education Plans and explain the details. During the year, outside experts occasionally offer in-house professional development sessions and workshops to differentiate the curriculum and planning for co-teaching. To some extent, the process has raised teachers' awareness of inclusion and created an inclusive culture in the school. Consequently, the school assumes that all teachers are fully aware of the school's mission to provide inclusive education to all students. However, it is not clear if all the teachers have the same understanding of what inclusion means and if they are aware of the school's commitment to co-teaching as the preferred instructional method to include all students in general education classes.

International schools face a particular problem in designing and implementing inclusive programs as little research has been done on special education in this setting. These schools face a number of paradoxes created by shifting socio-economic factors, conflicting cultural contexts, and their unique population demographic (Hall, 2019). In addition to informing international schools, research on this topic would provide a unique lens and wider comparative frame for understanding effective inclusive programs.

Historically, many international schools like IST, have had admissions policies that excluded students with special learning needs (Gillespie, 2017), but these policies are shifting to address changing demographics (Hayden, 2006). For example, when IST's admission policies shifted to include a broader range of students, the school concurrently changed its instructional approach to meet their needs. However, barriers still exist on how to best support these students despite the research evidence on the benefits of inclusion in mainstream classrooms and the actions of many national systems (such as those in North America) in the past 20 years to develop inclusive policies and practices (Gillespie, 2017; Grima-Farrell et al., 2011; Pijl & Frissen, 2009; Waitoller & Artiles, 2013).

While schools may promulgate inclusive policies, they often do not have the necessary supports in place (Shaklee, 2007). Despite their areas of expertise, general education and special education teachers need an inclusion framework adapted to their specific conditions to best support students in international school settings. Most international schools find themselves mainly adapting western inclusive practices or guidelines presented by the IBO or the foreign curriculum to which they adhere. To adequately provide inclusive environments for their students, international schools need to make resources available, create appropriate learning environments, and provide teachers with strategies to ensure the success of all students (Shaklee, 2007). One possible reason for the lack of contextual support for inclusion is that international school leaders lack the skills to create a culture of inclusion that is tailor-made for their schools (Gillespie, 2017).

In responding to the research question about co-developing an ecology of co-teaching model for general education and special education teachers to improve equitable access and student performance in the classroom, I investigated theoretical and empirical examples on inclusion and co-teaching. In the first section, I provided background information on special education in general and in international schools in particular and described the history of

special education with attention to key laws and legislation that drive contemporary practices related to inclusivity.

To illustrate how the theory of inclusive environments for students with disabilities plays out in the international school context, I then use the IBO definition of inclusion and the frameworks it advances for IB schools. I followed debates about inclusion and the challenges schools across the globe are experiencing in shifting from pull-out or special classrooms for students with disabilities to full inclusion.

As international schools move toward creating more inclusive classroom arrangements, the working relationships among the adults involved in the education of students with learning needs have become a crucial factor (Sheehy, 2007). Therefore, I explored in the third section the key topic of this research: co-teaching between a general education teacher and a special education teacher. I explored the theory and practice of co-teaching, a principle of collaboration for the people who specialize in working with students with disabilities, i.e., special education teachers, and their roles in working with the general education teachers. I analyzed the findings of research studies on co-teaching and discussed what this literature says about how these professionals should collaborate to meet the needs of students with disabilities. Studies for this discussion specifically addressed the following: co-teaching tasks and functions, roles and responsibilities of the general and special education teacher, and the social and situational context for co-teaching.

I conclude the chapter by presenting a theory of action for how co-teachers can engage in a collaborative process of inquiry. I anticipated that we would co-develop an ecology of co-teaching by working collaboratively to co-plan, co-teach, and co-reflect to improve equitable access and student success in the classroom.

Special Education as Field of Practice

Special education has been influenced by a set of complex factors. The place of special education in educational systems evolved rapidly only in the 20th century even though people with disabilities had been identified and treated for centuries (Kanner, 1964). In the United States of America, special education has been shaped by federal law, the civil rights movement, and related court cases as well as changing social and political beliefs (Friend & Bursuck, 1996). Professionals and students in public schools face challenges in an era of accountability that includes accessibility. The requirements of No Child Left Behind (NCLB) and Individuals with Disabilities Education Act (IDEA) legislation force school leaders to reflect, evaluate, and ensure a quality education for all students. In this section, I discuss the development of IDEA, the U.S. law that provides guidelines for implementing special education, and review the benefits and challenges of IDEA in public education. Then I explain how the benefits do not automatically trickle down to international schools that embrace inclusion as informed by IDEA.

The Individuals with Disabilities Education Act

The Individuals with Disabilities Education Act (IDEA) has been in place since 1975 and was reauthorized in 1970; it was originally entitled the "Education for All Handicapped Children Act." This legislation created guidelines for the education of children with disabilities. IDEA outlines standards, requirements, and protections. However, because the original legislation was based on what were considered deficiencies or handicaps, proponents of inclusion in the 1990s and, more specifically, the 1997 amendments to IDEA, have faced challenges to achieving full inclusion for students designated with disabilities. The amendments emphasized the need to provide services and support to students with disabilities in the general education setting whenever possible, a sharp contrast to the original legislation that promoted separate instruction.

At the same time, the language of IDEA let educators make choices about how to implement IDEA requirements in their classrooms. However, as the U.S. federal government loosened accountability for states' obligations to students with disabilities, IDEA provisions are at particular risk. For example, special education teachers in private schools do not have to meet the highly qualified teacher requirements of 34 CFR 300.18. as do their counterparts in public schools. In fact, private schools have minimal obligations under IDEA (Cowger, 2017). International schools fall squarely into this category of private schools with minimal obligations regardless of international attention to this issue. I discuss the general provisions of IDEA before highlighting the benefits and challenges of IDEA in the U.S. and the extent to which IDEA has been useful in promoting inclusion in international schools. I highlight the provisions and benefits and challenges of IDEA.

IDEA Provisions

IDEA is the U.S. law that guarantees students with disabilities the right to a public education and mandates that it be free, appropriate, and public in the least restrictive setting possible. The authors of IDEA endorsed the concept of children with disabilities learning with their age peers but did not define the concept of a Least Restrictive Environment (LRE) in the understanding that educators are best placed to do so. LRE requires that, to the extent appropriate, students with disabilities are educated with nondisabled students. Special classes, separate schooling, or other practices that involve removal of students with disabilities from the regular education environment can occur only when the nature or severity of the disability is such that education in the regular classes with the use of supplementary aids and services cannot be achieved satisfactorily (20 U.S.C. § 1412(a)(5)(A)).

Through IDEA, a large majority of children with disabilities are now being educated in neighborhood schools in regular classrooms with their peers who are considered non-disabled; as a result, high school graduation rates and employment rates among youth with

disabilities have increased dramatically. While there are benefits to inclusion, significant challenges can undermine the move toward inclusion.

Benefits and Challenges of Special Education under IDEA

Special education as a field developed from the idea of defining the special needs of certain children; originally, that led to specialized classrooms for these students. However, the field has since evolved to an understanding of and respect for the varied needs of all children with special attention to equitable practices in which students with disabilities and their peers share classrooms.

Benefits

Students with disabilities can learn alongside their peers without disabilities and have greater opportunities for communication and social interaction within the regular classroom setting. With support, all students, especially those for whom traditional academic requirements are not relevant, can benefit from education in inclusive settings. They can acquire social skills by observing their peers (Stainback & Stainback, 1988; Vandercook & York, 1989). This allows them to learn that they are full class members and not second-class citizens (Hahn, 1989).

IDEA also ensures the fulfilment of every child's fundamental human right to attend education with his or her peers. This is only feasible in schools where all students are members of the same learning community (Friend & Bursuck, 1996). When students with disabilities leave their general education classes to attend special education settings, they are often stigmatized (Lilly, 1992). By receiving instruction in a separate room usually referred to as "resource rooms" or "pull-out sessions" (Bickel & Bickel, 1986), they miss major topics covered in general education classes. By remaining in the general education classes and receiving support from within these classes, they avoid both these problems (Simpson & Myles, 1990). However, despite being in a general education setting with their peers, students

with learning needs may be stigmatized if the teachers do not demonstrate empathy towards them, in turn leading to their peers viewing them as "different" even as they learn in the same setting.

Challenges

To enjoy the benefits of IDEA, school districts have attempted to adhere to the obligations stipulated by IDEA, which require a sustained, coordinated, and comprehensive effort from school administrators, teachers, and support personnel. Yet, under the best of conditions, the challenge of meeting the requirements of the law is daunting both financially and structurally. IDEA has always been an unfunded mandate in which the school districts have had to expend considerable resources to meet its provisions; this budget allocation causes issues in U.S. school districts and in international school settings (Banks et al., 2015; Chartrand, 2019).

Creating an inclusive learning environment involves more than providing physical access and assistance to students with various disabilities. Rather, it refers to a radical transformation of the school system in which schools alter their organizational structures and practices to facilitate the active participation of all students as promulgated in the *Salamanca Statement on Special Needs Education* (UNESCO, 1994). Occasionally, extra resources, such as additional personnel, assistive devices, or accommodations are required to meet the requirements of every student. To support the participation of a diverse group of students, for instance, the presence of two instructors in one classroom can be crucial. Consequently, realizing an inclusive school for all students implies a considerable financial commitment.

Thus, supporting students requires a determined, pro-active leadership from all levels of the school or district structure—superintendent, central office staff, and school personnel involved in the delivery of exceptional education services—to achieve a quality education for all students. Leaders need to invest in building the necessary expertise within the educator

workforce. Theoharis (2007) suggests that school leaders consider "issues of race, class, gender, disability, sexual orientation, and other historically and currently marginalizing conditions" (p. 223) and view inclusion more widely than just including special education students in general education classrooms (Theoharis & Scanlan, 2015).

International schools have embraced special education programs recently (Graybill, 2020). In international schools, the debate is still at an elemental level about whether it is appropriate to include students with disabilities in general education classes. Facilitating inclusive schools "requires a rich appreciation of multiple perspectives and a greater understanding of specialized instruction. Skilled practitioners at work in an array of flexible instructional settings, including separate classes and schools, can ensure educational benefits to students with disabilities" (Crockett & Kauffman, 1998, p. 77).

IDEA mandated that students with disabilities be given access to, be involved in, and make progress in the general education curriculum (Brendle et al., 2017). However, general education classrooms and the teachers who work there often are not equipped to manage the learning needs of some students (Kauffman et al., 1998; Semmel et al., 1991). In some cases, teachers may lack skills for accommodating the needs of students with disabilities. In others, including some international schools that have adopted the IDEA regulations, pressures to meet rigorous academic standards like the IB diploma requirements can prevent teachers from assisting students with learning difficulties. In addition, the learner diversity in many schools is already enormous; adding students with disabilities and mandating that their educational needs be met may be detrimental to the education of other students especially if classroom teachers do not receive sufficient support (Gersten et al., 1988; Kauffman et al., 1988; Myles & Simpson, 1989).

In conclusion, international schools like IST are facing challenges as they attempt to provide special education services to the increasing numbers of students who are admitted

with special education needs. In addition, international schools outside of the United States, despite their intentions to provide special education, do not have the same legal mandates to ensure that they provide students with disabilities all the services as stipulated by IDEA. International schools are not compelled to abide by special education legislation like the Individuals with Disabilities Act because they are private, foreign institutions. Legislative frameworks in support of the inclusion agenda in some countries do apply to international schools (Hayden, 2016). However, these frameworks vary from country to country, and implementation is uneven. Some international schools like IST, have adopted inclusive policies that allow them to provide special education services to students with disabilities that they admit, but they still face the leadership and teacher readiness challenges I have identified. In the next section I review the varied definitions provided in special education literature and the definition and guidelines provided by the IBO. I also review current debates about inclusion in international schools.

Inclusion as a Key Practice for Improving Special Education Practices

The inclusive schools' movement is the pillar of modern educational reform (Artiles et al., 2007). Professionals in general education, administrators, and parents of kids with special needs must all be involved in the design and implementation of inclusion for it to be effective for all students (Snyder, 1999). The ability of administrators and teachers to create and implement inclusive educational models that cater to the social and academic needs of all students has received particular attention in recent literature on the inclusion of students with disabilities in settings for general education (Brownell & Pajares, 1999). The fundamental tenet of inclusive school communities is that regardless of disparities in class, gender, ability, culture, and ethnicity, schools must educate and nurture all children and youth (Ferguson et al., 2003; Saldaña & Waxman, 1997). Inclusive education in the United States and other countries focuses more on students identified with disabilities and special needs (Artiles et

al., 2007) than on how to cater to the learning needs of all students. Thus, inclusive education is a prominent area of policy, research, and practice in special education.

In our school, the adoption of an inclusion policy was informed by the need to cater to students with learning needs more than to meet the needs of all students, which is often a by-product of inclusion. In this section, I define inclusion, examine the inclusion frameworks, summarize the debate about inclusion as a useful practice, and conclude with a discussion of inclusion practices in international schools. Because of the nature of the ethnographic research, I addressed how these definitions and principles apply or might apply to our context at the International School of Tanganyika.

Defining Inclusion

Inclusion is founded on values of democracy, tolerance, and respect for differences. A key criterion of inclusion is to avoid any action of discrimination towards individuals or groups. Principles of inclusive education are rooted in the belief that education is a basic human right (UNESCO ICE, 2008) as stated in the 1948 Universal Declaration of Human Rights. This is carried out in "… schools [that] should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This should include disabled and gifted children" (UNESCO, 1994, p. 6).

In the United States, the term "inclusion," which first appeared in special education research literature in the 1980s, came to be associated with resistance to the growing segregation of pupils designated as needing special education (Skrtic, 1991; Skrtic et al., 1996). During this time, a number of inclusion implementation models emerged, some of which remain in use (Mitchiner et al., 2014). Almost all of these models place a strong emphasis on the educational setting.

The trend to redefine inclusion presented dilemmas related to allocating resources and professional labor to provide for all students and preparing all teachers to serve a diverse

student population. Yet, while this is a lofty goal, there were barriers for the education of students with disabilities to access mainstream instruction and schools (Artiles et al., 2007; Dukes & Lamar-Dukes, 2009). IST, like many international schools, was consequently faced with finding effective ways to teach all students in an inclusion model. However, because the models vary across different schools, we need an operational definition of inclusion (Qvortrup & Qvortrup, 2018).

The definition of inclusive education varies from the transformation of educational systems to placement in general education classrooms (Artiles et al., 2007). The placement definition is more commonly used in international schools like IST. In the United States, for example, educators, family members, and service providers have diverse opinions on the issue of placement of students with disabilities in the general education classroom. In international schools like IST, students are often placed in classes where they can get access to services they need. These services mainly include co-teaching and pull-out provisions. Student are given schedules that facilitate access to pull-out sessions. For example, at IST students with learning needs attended pull-out sessions during the time their peers had foreign language classes. In addition, students with learning needs were placed in two sections of the grade, leaving one section with no students with learning needs. The two sections had co-teachers for the main core subject areas. These two examples highlight the exclusion of students in an inclusive school setting. For the students with learning students to receive certain services and support, they had to be excluded from their peers and certain classes.

While originally the term *inclusion* applied to the special education movement because special education historically was a parallel program for students with learning needs and disabilities, the concept is now understood more broadly. “Put simply, [inclusion is] effective teaching for all students” to support and value diversity among all learners (Ainscow & Miles, 2008, p. 21). However, inclusion is defined in several different ways

(Artiles et al., 2007). "….there is a lack of reviews that map and analyse what is meant by inclusion in research in order to discern different definitions and patterns of use" (Nilholm & Göransson, 2017, p. 437).

According to a critical evaluation of the research on inclusive education, a clear operational definition of inclusion has been elusive. Nilholm and Göransson (2017) analyzed 30 journal articles and found few attempts to uncover any patterns in how the concept is applied. While some position pieces reviewed discussions and analyses of the meaning of inclusion, other empirical articles simply applied the term to the mainstream placement of children with impairments.

Not surprisingly, therefore, international schools adopt different definitions and models of inclusion. Indeed, since "inclusive education takes many forms, raising important questions about what constitutes good practice, what counts as evidence of such practice, and how it can be known," the discussion of what type of model a school such as IST adopts is critical (Florian, 2014, p. 286). This study was designed to capture evidence of inclusive education in action in an international school as an example of a tool based on a coherent theory that can be used in a variety of settings. The ethnographic research is intended to gain deeper understanding of the ways in which teachers enact inclusive pedagogical practices in international schools. The theory of action is premised on developing an ecology of co-teaching that provides equitable access and success for all students in the classroom.

Inclusion Frameworks

In reviewing the discussion on the concepts and principles of inclusion, I examine inclusion in international schools. International schools like IST need to develop appropriate working definitions of inclusion based on guidelines from the IBO (Powell et al,, 2013).

The *IB Guide to Inclusive Education* defines the terms "inclusion" and "inclusive education" as "a broad understanding that embraces the diversity of learners and all minority groups" (2015, pp. 1–2). The guide highlights two key concepts to achieve inclusion: increasing access and engagement and removing barriers to learning. These two key concepts are consistent with offering learners flexible options to access the curriculum and instruction. Students who have multiple ways to engage in their learning, whether identified as students with disabilities or not, are more motivated to learn (Garnett, 2010). According to the *IB Guide* (IB, 2015), equal access should be achieved by "affirming identity and building self-esteem, valuing prior knowledge, scaffolding, and extending learning" (p. 2).

Despite the lack of research on specific practices to direct international school leaders and teachers, the IB provides normative guidelines for schools to conduct a self-review of their inclusive practices. The statements on the self-review form could provide detailed and specific criteria that IB school teams can use to assess their current levels of inclusive practice and to define goals for the further development of inclusive communities. IB schools are encouraged to review philosophy, organization, and curriculum (Rao et al., 2016). Yet, normative principles and self-reviews do not fully address how to successfully implement inclusive practices in classrooms, and individual teachers continue to find inclusion a sound idea but without sufficient professional guidance on exactly how to achieve the desired outcomes (Gillespie, 2017).

Given that educating a diverse student population is consistently viewed as a core principle of international school education (Gillespie, 2017), many international schools, like IST, that have embraced inclusion have explicit mission statements that highlight this commitment. The IST mission statement is: *Challenging, inspiring and supporting* all our students to fulfil their potential and improve the world. However, living the mission statement requires that the school articulate clear goals for schoolwide understanding and

implementation of inclusive practices underscored in a schoolwide policy and collaborative effort. To support inclusion and elaborate clear goals and objectives for all stakeholders, IST hired a Director of Teaching and Learning and a Student Support Services Coordinator in the academic year 2018–2019. Each grade level at the middle school had a dedicated learning support teacher who co-taught in the core subject areas and five "pull-out" classes per 10-day cycle to meet with students identified as having learning needs.

Yet, in the international school context, "research in the area of inclusion has been lacking. A gap exists in specific strategies that school leaders can use to build a culture of inclusion in the context of a culturally diverse international school" (Gillespie, 2017, p, 23). The guidelines emphasize planning for individual students and team-based planning for inclusion. Curriculum collaborative planning notes in the guide point out that all teachers are responsible for students' language development and support. This guideline highlights the need to move from individual student difference to learner variability (Meyer et al., 2013) and to recognize that variability is the rule in the classroom. If all teachers recognize the need to design instruction with learner variability in mind, effectively supporting students will not be limited to special education teachers and other resource teachers only but will be a task for both the general education and special education teachers working collaboratively (Ainscow, 2005).

By developing an "ecology of co-teaching" between general and special education teachers to improve equitable student outcomes and enhancing reflective practices that inform this partnership, our ethnographic research project intended to maintain flexibility and adaptation to local conditions and to build a model that is useful to our school and potentially others.

Inclusion in International Schools

Inclusion and inclusive practices in national systems (Grima-Farrell et al., 2011; Pijl & Frissen, 2009; Waitoller & Artiles, 2013) are more comprehensive than that carried out in international schools, which have a unique history and set of challenges (Roberts, 2012; Shaklee, 2007). International schools grapple with different issues in their pursuit of maintaining their inclusive nature, becoming inclusive, or remaining exclusive (Gillespie, 2017); these issues include a commitment to equity, transnational demographics, and rapid growth that triggers admissions and financial considerations.

Equity dilemmas arise as educators grapple with the issues and struggle to implement inclusive education programs in different schools (Ferguson et al., 2003; Saldana & Waxman, 1997). Given the diversity of educators in international schools' nationalities, professional training in special education, and beliefs and practices on inclusion, the tension between a narrow inclusion focus (e.g., tracking only placement patterns in certain settings) and achieving systemic change is a real one. The complexities of geography, cultural historical practices, and interpretations of policy that maintain local customs and practices populate special education inclusion narratives and enculturate generations of educators (Artiles & Kozleski, 2007).

In addition, as transnational entities "growing in size and influence outside … the direct control of national systems" (Hayden, 2011, p. 211), international schools are not subjected to special education legislation of the host country or bound to local codes. Another notable feature of international schools is that there is no central international regulation body, resulting in inconsistent policies in different countries (Hayden, 2011). "There does not appear to be any legislative imperative or protocol for [international] schools to accept students with disabilities" (Brown & Bell, 2014, p. 154). Without legal pressures, the implementation of inclusion essentially is determined by the values, principles, and mission

of the school. This becomes even more complicated because “no school that calls itself ‘international’ can achieve its mission without addressing both equity and excellence” (Bartlett et al., 2013, p. 4).

The growth of international schools is bringing the sector into some prominence, and their well-respected history and prestige is fueling growth from the local population (Powell & Kusuma-Powell, 2015). Thus, the schools are reconsidering admissions policies and grappling with financial constraints. International schools that explicitly or implicitly do not allow learning differences and/or charge extra fees to leave students to sink or swim are enacting “exclusions [that] run counter to the values of international education” (Powell & Kusuma-Powell, 2015, p. 5). These schools purport to develop globally minded students with the emotional and moral intelligence acquired by sharing learning spaces and time with children whose needs arise from learning difficulties. How can these students develop empathy towards each other and towards their peers with learning needs if they do not see it modelled by their teachers in the classroom?

In addition, the growth of the schools accepting more national students with special education requirements (Hayden, 2006) has financial implications. “Special education is more expensive than general education … and costs … appear to be escalating” (Banks et al., 2015, pp. 926–927). The additional costs of staffing, materials, and facilities are challenges to schools (Pelletier, 2013). Financial considerations may be used as an excuse to exclude children with learning differences (Hayden, 2006). Funding models used in international schools suggest that parents who can pay any extra costs associated with provision of special education services are more accepted and have greater expectations about the learning needs of their children.

The ISC Research & Next Frontier Inclusion study (2016) provided evidence that a more comprehensive understanding of needs and challenges is required in international

schools. There is confusion over the merits and weaknesses of different delivery models. When there is no exact definition of special needs internationally, a school is always searching for a balance between typically agreed upon benchmarks or descriptors of learning differences and needs, available resources, and the willingness/capacity of educators at a particular site to collaborate to find solutions (ISR Member, 2011). The study found that a major challenge is the limited staff prepared to meet needs of students in international schools.

Among the many myths that hinder international schools from becoming inclusive is that accepting all students will lower academic standards (Pelletier, 2013). Additional challenges and barriers include: labelling students incorrectly, assessment practices, early identification of learning needs, resources, appropriate therapies, and influences from local culture that resist identification of learning needs or inclusive teaching practices (Brown & Bell, 2014).

The journey of inclusion for international schools requires that schools have an inclusion policy, an equal opportunities policy, admission procedures, supporting structures, parental involvement, differentiated curricula, professional development for all teachers, activities, resources, staff collaboration, and personalized assessments (Chan & Yuen, 2015; Pelletier, 2013). International schools may be more willing to embrace inclusion but confusion and myths are causing "some scratching of heads about what to do and a fear about getting it wrong" (Powell & Kusuma-Powell, 2015, p. 7).

Key Factors in Moving Toward Inclusion

If the inclusion movement is to be effective for all students, the general education and special education teachers, administrators, and parents of students with special needs need to be involved in conceptualizing and implementing inclusion (Snyder, 1999). In this process, a key factor is considering the perceptions of classroom teachers, students' self- perceptions

and those of their non-disabled peers, and parent perceptions. More specifically, recent literature on the inclusion of students with disabilities in general education settings has focused on the preparedness of administrators to develop and implement inclusive models of education that address the social and academic needs of all students served in general education (Brownell & Pajares, 1999; Gillespie, 2017; Sheehy, 2007).

Gamerous (1995) suggests that administrators' attitudes towards students with disabilities are especially critical for inclusion to succeed due to the administrators' leadership role in developing and operating educational programs in their schools. IST understood that the success of inclusion depends greatly on teachers' preparation, attitudes, and opportunity for collaboration. To that end, IST provided a few workshops, training, and support for its teachers on inclusion and co-teaching. The administration at IST embraced inclusion and was intent on creating an inclusive school where students with diverse learning needs would be admitted.

In summary, as the school administration strove to have an inclusive school, our intention as study participant and research practitioner was to realize that there is no clear and consistent dichotomy between "special" and "regular" students. The same students will not always be at the top or the bottom when they are evaluated on their intellectual, social, physical, and creative abilities. With the move from a divided general education/special education model to a unified inclusion system, the most successful educators will be those who work together and share resources and expertise to meet all students' needs (Stainback et al., 1989).

The IDEA legislation of 1990 and the 1997 amendments to IDEA emphasized the need to serve students with disabilities in the general education setting whenever possible. The new emphasis was based on the principle that students are best served in settings most like those of their nondisabled peers (Vaughn et al., 2000). However, for inclusion to work,

students need services and supports within the general education setting. One such delivery option for students is the use of co-teaching between general and special education teachers whereby the teachers not only share the physical space of the general education class but also the planning, organization, delivery, and assessment of instruction (Bacharach et al., 2004). This ethnographic study explored supporting structures between co-teachers for students and, to some extent, parents in a co-teaching classroom model.

Co-Teaching: Definition and Necessary Components

In this section, I define co-teaching before reviewing literature and then considering the key elements of best practice for successful co-teaching partnerships. I explore the place of reflection and relationship development as possible prerequisite best practices for a model IST inclusion policy that would enhance the ecology of co-teaching.

Defining Co-Teaching

Many administrators and other educational leaders have heard that they need to bring co-teaching to their school or district without ever getting any instruction on what co-teaching actually entails. In turn, they task their teachers to co-teach but are unable to provide clear details on how that would look and how it would differ among the range of grades and students in the school or district. However, co-teaching is not merely putting two adults in the same classroom; as with any new instructional technique, teachers need instruction and professional development to know how to work together (Murawski, 2003).

Co-teaching is an instructional delivery approach in which general and special educators share responsibility for planning, delivery, and evaluation of instructional techniques for a group of students (Sileo, 2003). The method has become a popular alternative to resource room and pull-out service delivery for special education students. In an inclusion classroom, the two teachers are typically a general education teacher who is often the content area specialist and a special education teacher. The two plan lessons and teach

together to a heterogenous class of students comprising both special and regular education students (Bacharach et al., 2004; Cook & Friend, 1996; Sheehy, 2007). Murawski (2003) defines the strategy of co-teaching as requiring "three specific things: co-planning, co-instructing, and co-assessing" (p. 10). Unless co-teachers engage in these three activities, they are not actually co-teaching. "They may be collaborating. They may be teaming. They may be communicating, consulting, monitoring, or supporting, but they are not truly co-teaching" (Murawski & Dieker, 2013, p. 2). Co-teaching as collaborative team-teaching is a partnership (Buckley, 2000). The collaborative practice is meant to support academic diversity in an inclusive class setting and to provide all students with access to the curriculum.

Co-teaching involves shared responsibility and joint ownership for collaborative teaching by educators with different fields of expertise (Sheehy, 2007). In this study, we examine how these educators can ensure that their expertise extends beyond their content knowledge. Secondly, the intervention strategies they choose should enhance their ability to reflect about their practice so that they perceive benefits from their co-teaching partnership.

Conceptual Framework of Co-Teaching

Co-teaching encompasses a variety of concepts and can be viewed in different perspectives. For this study, I reviewed literature on co-teaching as an inclusive and pedagogical practice. I explored how co-teaching can be used to promote relational pedagogies and as a locus of professional learning in an inclusive school.

The concept of co-teaching between general and special educators started more than 15 years ago and has only increased in use over the years. As a philosophy that has gathered strength since the early 1970s, schools adopt and adapt co-teaching as a teaching practice to reach students with learning needs (Murawski, 2009). Co-teaching experienced a huge boost after No Child Left Behind was enacted in 2001, followed by the 2004 reauthorization of the Individuals with Disabilities Education Improvement Act.

Currently, the focus of inclusion has moved beyond the early "special needs" of individual students with disabilities (UNESCO, 1994) towards recognizing and addressing issues of access and equity that apply to a range of students, including those from culturally, linguistically, and socio- economically diverse backgrounds as well (Thomas, 2013; UNESCO, 2015). Consequently, the focus in co-teaching should shift from *where* students with learning needs are educated to *how* inclusive pedagogies like co-teaching are used to support the diverse needs of *all* students in heterogeneous classrooms (Florian & Black-Hawkins, 2011).

The ethnographic study took as its point of departure a more inclusive approach in which all the professionals tasked in the implementation of the inclusion policy at IST shared responsibility for all students. This meant that all students were entitled to intensive support whether they had a disability or not (Sailor, 2015). IST currently follows a multi-tiered support model based on the Response to Intervention (RTI) model (Murwaski & Hughes, 2009). This approach, which formed the basis for our deliberations as a co-teaching team, arose from the need for a co-teaching model in which we worked flexibly to provide support for all the diverse learners in the classroom. We emphasized relational pedagogies that foster a sense of community and shared endeavor in the classroom by promoting reflection and empathy.

In this ethnographic study, I use the key perspective of co-teaching as the locus of professional learning, which makes teachers' thinking activities more explicit (Zwart et al., 2007) and encourages them to share their practical knowledge through everyday discussions (Mawhinney, 2010). Collaboration and reflection on practice are key elements in teachers' workplace learning (Bakkenes et al., 2010; Hoekstra et al., 2009). To share their knowledge, teachers first have to verbalize it (Oliver et al., 2017); three modes of sharing include "participation, which is directly experienced sharing (e.g., co-teaching); sharing through

discussing an experience; and indirect sharing via reification of (the shared) knowledge" (Rytivaara et al., 2019). Nilsson et al. (2010) analyzed practices in which an experienced teacher and a student teacher learn from each other through co-planning, co-teaching, and reflection; this model is useful for co-teaching because both teachers are learning new ways of teaching. Peer coaching, viewed as professional learning for experienced teachers, offers an effective way to learn through experimentation (Zwart et al., 2009).

However, the literature on co-teaching as a focus of learning is not as robust (Rytivaara et al., 2019). This study hoped to add to the literature on how experienced teachers jointly co-develop a co-teaching model and how this action affects the group of students they teach. We hope to find "narrative unity" (Connelly et al.,1997, p. 671) in our professional learning as we embrace inclusion as co-teachers. Because teachers' practical knowledge is implicit and deeply embedded in their classroom practices—and therefore challenging to communicate—it is difficult for them to find a common narrative in their co-teaching partnership (Connelly et al., 1997; van Driel et al., 2001). In addition, teachers' personal practical knowledge is relational as it develops and influences their professional working ecologies (Clandinin & Connelly, 1996; Connelly et al., 1997). With this knowledge, the research project hoped to explore teachers' relational interactions in their work as they co-plan, co-instruct, co-assess, and co-reflect.

Co-Teaching Requirements: Relationships and Reflection

Successful co-teaching relationships in inclusive schools devoted to inclusion do not just happen. They require sustained efforts in an environment where a significant number of teachers, administrators, and parents devote the necessary time, energy, and resources (Bartlett et al., 2013). Some basic requirements are nurturing professional relationships and reflecting on practice. Most definitions of co-teaching do not include the importance of a shared vision on the part of the co-teachers achieved through co-reflection. Co-teaching takes

place in diverse and dynamic environments that require not only clear understanding from co-teachers on the diversity of learners they are responsible for, but also knowledge about how they can sustain as a co-teaching team in such a dynamic field. Our ethnographic research project considers a shared vision and acting in a diverse and dynamic classroom as fundamental building blocks for teachers to forge a strong co-teaching model for our school.

Nurturing Relationships

According to Murawski (2008), co-teaching in inclusive classrooms requires that schools "know what co-teaching is and when it is needed" (p. 27). She recommends that administrators encourage self-selection of teaching partners as this is more likely to create lasting teams because the partnership is a professional marriage. She further endorses prioritizing schedules to facilitate the service of students with learning needs and common planning times for co-teachers. In addition, administrators need to monitor their teachers' success, give them feedback, and ensure that their practices are evidence-based.

Studies on co-teaching experiences have suggested that relationships take time and effort to fully develop (Rytivaara & Kershner, 2012). In a study of secondary school teachers, Pratt (2014) provided a detailed, three-stage symbiosis model for the development of a successful co-teaching relationship: (1) co-teaching started either voluntarily or because it is requested or expected by the school administration; (2) the symbiosis spin during which the teachers get to know each other, develop their collaboration through reflection, and build a partnership; and (3) co-teachers lean interdependently on each other's expertise. Of course, these phases occur over time and are dependent on partner relationships and reflection. Some of the teams in the Pratt (2014) study reached the fulfilment phase within a few months while others had still not reached it in their second year of co-teaching.

A strong component of the co-teaching relationship is building empathy with each other that can translate to empathetic relationships with students. An aide to understanding

how best to plan and teach children is attention to students' learning experiences from their formative years, what they enjoy, and the masteries they have achieved in their former schooling years (Buchheimer, 1963). "Given that empathy functions so effectively and intuitively in early language development, it is surprising that it is so often ignored in formal learning" (p. 52). This study examines how building empathetic relationships between one another as colleagues can enhance equitable access and student success. We envisioned that by building empathetic relationships, we will develop our ability to interpret situations in the classrooms and sense new paths to follow by means of reflection on our practice.

Reflection

Dewey (1910) explored reflection as a key to strong instructional practice. He defines reflection as "the questioning of reality, facts, and evidence which distinguishes reflection from any other type of thought" (p. 4). Later, Freire (1970) and Schön (1984) called for enhancing teachers' practice through the development of habits of reflection. Reflecting on practice involves sharing, and this requires trust and respect (Vangrieken et al., 2017), which take time to develop. Studies on student teachers' co-teaching underscore the significance of teachers agreeing on common objectives and responsibilities and their ability to integrate their differences in teacher thinking (Beaten & Simons, 2014; Shin et al., 2016). Why this call has not been as evident in literature on co-teaching provides the grounds for our ethnographic study to explore how reflection can enhance instructional planning and practices and to what extent reflective practices among co-educators result in empathetic relationships among students and teachers at IST.

In summary, literature on co-teaching is vast, but studies on how co-teachers can co-develop a culture of reflection of their practice and how they can surmount the challenges of their partnership and instruction by building empathy for each other and their students is still lacking. Our study explored these two key elements.

Conclusion and Conceptual Framework

The chapter has illustrated that IDEA (1990) emphasized the need to serve students with disabilities in an inclusive general education setting whenever possible. However, it is not enough for a school to state that it is inclusive; inclusive practices must be meaningful and responsible. For the inclusion movement to be effective for all students, the general education professionals, administrators, and parents of students with special needs all need to be involved in the conceptualization and implementation of inclusion (Snyder, 1999). The review of literature on co-teaching revealed that professional backgrounds and differences in a co-teaching partnership do not need to become an issue; the role of a special education teacher can be much more than one of focusing on the individual needs of specific students (Florian & Spratt, 2013). In co-constructing the frame for their collaboration, teachers are successful when they find ways of integrating their pedagogical thinking and classroom practices. Co-teaching can be an inclusive tool that enhances the individual learning of all pupils as it means that both teachers are working with all the pupils in the classroom. Thus, co-teaching does not concern special education teachers alone but all teachers, and the current aim of expanding inclusive education calls for including the basics of co-teaching in all professional development programs for schools that wish to embrace co-teaching as the instructional technique for inclusive instruction.

Co-developing an ecology of co-teaching that involves the stakeholders who are central to the students' education validates students' lived experiences. In this conceptual framework, I identified the key elements of the focus of this the ethnographic study. I worked closely with a general education teacher during the study that lasted for a period of 10 months, and we developed a co-teaching model that not only incorporated the key elements of best co-teaching practice but also integrated reflection and empathy in our co-teaching. The model goal is equitable access for all students, and the requires sufficient reflection (co-

planning, co-teaching, and co-accessing). The teachers need to develop empathetic relationships between themselves and with students to be successful co-teachers (see Figure 2).

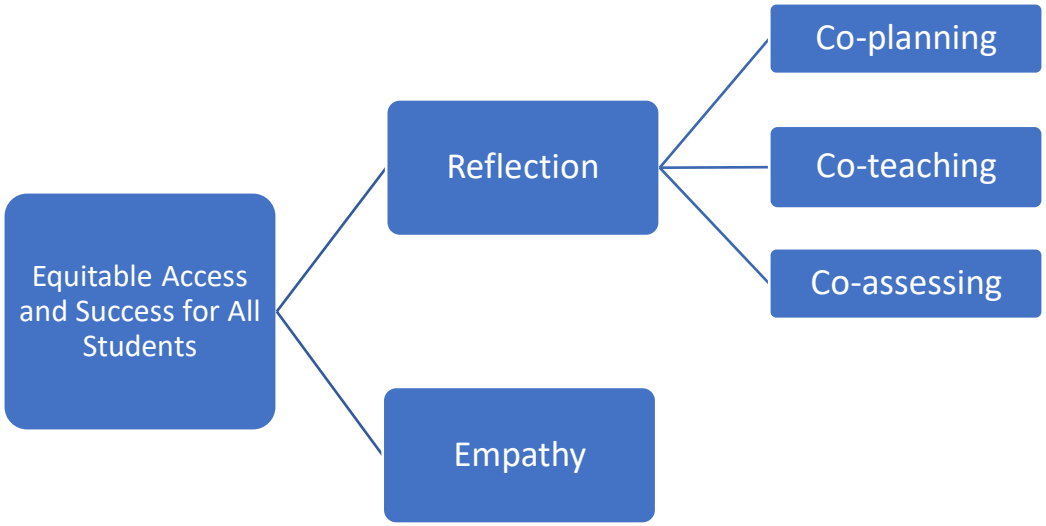


Figure 2. Theory of action for an effective ecology of co-teaching model.

CHAPTER 3: METHODOLOGY

The International School of Tanganyika (IST) made a policy decision in 2018 to fully embrace inclusive education. As a result, the special education teachers on staff are teaming with subject area teachers to develop co-teaching. I partnered directly with one teacher in math. We were also homeroom partners during the course of the study. As the special education teacher on the team, I co-planned and co-taught with the math teacher to develop a productive co-teaching partnership; the aim of our partnership was to infuse reflective practices between the co-educators as part of the development of a co-teaching model for IST.

The methodology for the study is an ethnography of two teachers who are co-constructing a planning and implementation process for co-teaching in an inclusive classroom. The teacher and I formed the research team with David, the math teacher, being the primary study participant and me as the participant observer. The primary data collection was to be classroom observations, check-in lesson sessions, planning meetings, field notes, and reflective memos; I analyzed and coded these data and shared them with the co-participant to use in our process of continuous reflection and discussion.

In the ethnographic study I investigated the use of the existing instructional structures and resources and our ability to increase the commitment and reflective practice of our teaching team. The theory of action was: If we engage in iterative cycles of inquiry to develop an ecology of co-teaching by working collaboratively to co-plan, co-teach, and co-assess, then teachers will engage in an ecology of co-teaching that improves equitable access and student success in the classroom. In particular, I wanted to learn how we would affect all domains of learning: cognitive, skills, creativity, and affective (Bloom, 1956).

To this end, I intended to work closely with the general education teacher to incorporate regular data reviews and reflections. The long-term purpose of this study was to

develop a productive co-teaching partnership that eventually could lead to the establishment of a co-teaching model for IST. The immediate goal was to examine the work of a special education teacher (myself as the participant observer and insider) in working with a content area teacher. I intended to accomplish this by engaging with one co-teacher in co-planning, co-teaching, and co-assessing as we learned from one another on how to develop our reflective practices for instructional planning and thereby deepen empathetic relationships between ourselves and with our students. In this chapter, I describe the research design and the rationale for an ethnographic study design. I also provide a detailed description of the procedures used for this study and discuss specific data collection methods and data analysis procedures.

Study Design

This section outlines the ethnography study plan. I describe how I conducted the study by engaging with the co-teacher to address the research questions. The overarching question for the study was: To what extent does an "ecology of co-teaching" improve equitable access and student success in the classrooms? The sub-questions are:

1. To what extent do effective reflective practices of co-teachers and empathetic understandings of each other contribute to the development of this partnership?
2. To what extent do co-educators work collaboratively by co-planning and co-teaching to enhance instructional practices?
3. How does engagement in an "ecology of co-teaching" inform my leadership?

First, I elaborate on the choice of ethnographic study as a methodology. I then discuss the role of the researcher and key factors in the study including the setting, the study participants, and the organizational supports.

Ethnographic Research

I selected ethnography, a qualitative research methodology, for the study because it is ideally suited to bringing into clear focus the challenges inherent in—and knowledge claims based on—the intimate perspective of those involved in the study and the process they undergo to create knowledge (Creswell, 2003; Creswell & Creswell, 2018; Denzin, 1997; Genzui, 2003; Saldaña, 2016; Wilson, 1977). Ethnography is a part of the larger field of qualitative research in which the researcher seeks to identify and categorize a phenomenon; the study constituted what Miles and Huberman (1994) term a *micro-ethnography* as I worked with one teacher. Because I am a co-participant in the study, the ethnography is an autoethnography as I tell the story of the co-teaching partnership from my point of view and experiences.

We needed to create knowledge about our current co-teaching service delivery model, and the ethnography method was best suited for that aim. Because I observed and interacted with the target audience (co-teacher and students) in their real-life environments, I closely followed the qualitative procedures of Creswell and Creswell (2018). In my role of participant observer, the methodology allowed me to see and pay careful attention to my role as an insider and co-teacher. I portrayed a whole picture by being part of how the participants describe and structure their environment. As a researcher taking on the role of an internal participant observer (Fraenkel & Wallen, 1990; Jacob, 1987), I had inside access and insider responsibility.

In ethnographic and autoethnographic research, developed from the fields of anthropology and sociology, the practitioner tracks everyday experiences of individuals by closely observing and interviewing them in depth with the aim of obtaining a holistic picture of the subject (Creswell, 2018; Genzuk, 2003). The methodology permitted me as the participant observer to gather information about human behavior that cannot be obtained by

quantitative methods. I proceeded from the assumption that human behavior is greatly influenced by the setting or the environment and therefore that I needed to engage in ongoing participant observation of the situation to obtain a holistic picture of the subject(s) of study (Jacob, 1987), including self-observation and reflection.

I believe that the issues that we faced at our school as co-teachers could only be addressed by involving those charged with the task of collaborating to meet the needs of all students (Fine, 2018; hunter et al., 2013; Weis & Fine, 2004). I captured a picture of how the we described and structured in our co-teaching world (Creswell, 2018). As the general and special education teachers in the study, we participated in the process of developing and implementing change and incorporating reflective practices during their instructional planning time. We were an essential part of the innovative idea of co-teaching that was place-based and responded to the specific context of the school (Guajardo et al., 2015). As a result, I expected that the general education teacher and I would develop an identity as co-teachers rather be passive participants implementing a directive from the administration; he was an active study participant who participated in customizing this innovation to fit our particular situation at IST (Creswell, 2018).

The ethnographic/autoethnographic study aimed to get "under the skin" of our co-teaching practice to truly understand the issue/s and consequently co-design a far better solution. It involved the teachers in a collaborative process that required concerted effort and creativity. The process influenced our practice; regardless of the ultimate outcome of the specific goal, it was a way for us to be active participants in the doing and learning (Freire, 1970; Stringer, 2013).

Since the school was still new to co-teaching, it took time to develop our effective co-teaching model. As a school, we needed to do a deeper co-analysis of the assets and challenges I presented in Chapter 1 to understand how far we had come in our pursuit of

inclusive practices through co-teaching (Gawande, 2017). The CLE axiom of honoring the voices of people closest to the problem suggested that we engage the general education and special education teachers as co-practitioner researchers in this project (Guajardo et al., 2016).

Ethnographic research fits Freire's (1970) iterative process of exploratory analysis to develop generative themes by which study participants discuss and contribute their ideas. Our intention was that the co-teacher would be the primary study participant while I was the participant observer; in this way we were able to meaningfully document our processes and content so that we contributed to developing a researched-based site-specific model of co-teaching.

Furthermore, the success of a particular reform ultimately depends on how it is enacted in practice and performed on the ground (Argyris & Schön, 1974; Spillane & Coldren, 2011). The research team engaged in *in situ* research that involves the identification and analysis of unexpected issues**,** which are easily missed when conducting other types of studies either because respondents do not ask the right questions or neglect to mention relevant details. The on-site presence of the participant observer mitigated the risk because the issues became directly apparent (Fraenkel & Wallen, 1990). In addition, the diagnostic work that defined our goals and strategies was best done through the delivery of a detailed and faithful representation of the study participants' behaviors and attitudes. For these reasons, I believe that an ethnographic research methodology was the best suited to ensure that the key players in the co-teaching partnership were full partners in the research.

The Researcher's Role

As primary researcher, I set out to model to the co-teacher what being an equity warrior looked like when devoted to inclusive classrooms that provide accommodations to all students, including students identified with special needs. During the process of the study, I

sought to be the one who "passionately led and embraced the mission of high levels of achievement for all students, regardless of race, social class, ethnicity, culture, disability, or language proficiency" (Rigby & Tredway, 2015, p. 331).

My positionality, awareness, knowledge, and sensitivity to many of the challenges, decisions, and issues encountered as an insider assisted me in working with the primary study participant in this study. However, my previous experience as a co-teacher meant that I brought certain biases to the study (Creswell, 2018). My expertise in special education and my experience in co-teaching may have inadvertently put me in the key role of leadership in the co-teaching partnership. I had the responsibility to guide the co-teacher to understand that "each participant holds expertise that is valuable in solving a given problem, but each also recognizes that he or she must join together with others to solve it" (Bryk et al., 2015, p. 17). Consequently, as a participant observer and the main data collector, I remained objective so that the biases I had did not jeopardize the way I understood and processed the data I collected. In collaboration with the co-teacher in the Math class, we undertook a process of continuous reflection and discussion during different sessions that were used as data collection points.

Setting of the Study

I conducted the study at the International School of Tanganyika (IST) in Dar es Salaam, Tanzania. IST offers the IB curriculum and had been in operation for 55 years by the time the study was conducted. IST had committed itself to becoming an inclusive school serving children with diverse learning needs. Therefore, the general education and special education teachers were required to co-teach in the core subject areas: English, Math, Individuals and Societies, and Science. The internal term used for the co-teaching process was an *ecology of co-teaching*, which emphasized the interactions among the teachers, students, and parents as well the support from the administrative personnel to create an

inclusive setting where all students regardless of their needs could succeed. The project took place in a venue in which inclusion and collaboration were expected and supported by a commitment to improve co-teaching practices. To demonstrate its commitment to inclusive education, the school had introduced two administrative positions to support the vision beginning with the 2018–19 academic year. In the next section, I describe the organizational supports for the study and the teachers who took part.

Study Participants

The reflexive nature of qualitative research means that the backgrounds and experiences of participants and the principal research practitioner contribute to the interpretation of the data (Creswell & Creswell, 2018). I used purposeful sampling to decide on the participant who would be used to tell a thick story (Creswell & Plano-Clark, 2011).

> Purposeful sampling is one of the core distinguishing elements of qualitative inquiry.… Qualitative inquiry typically focuses in depth on relatively small samples; even single cases (n=1) are selected purposefully…. The logic and the power of purposeful sampling lies in selecting *information-rich* cases for study in depth. Information-rich cases are ones in which one can learn a great deal about issues of central importance to the purpose of the inquiry, thus the term *purposeful* sampling (Patton, 2002, pp. 272–273).

The study only had one participant -- a sixth-grade general education math teacher. I was the participant observer and principal researcher. Together, we co-taught math to two separate classes. We were homeroom co-teachers for one of the classes we co-taught. The key participant was interested in developing a strong co-teaching partnership. He was well suited to participate in the study as he was closest to the issue being examined and taught a core subject. Together, we engaged in conversations about the assets and challenges at the school and the issues we faced in our co-teaching practice.

I conducted classroom observations of students in which they remained an anonymous part of the study. In addition, as a consequence of making learning accessible to the students through a co-teaching model, I hoped the ethnographic study would promote the success of all students. Two sixth-grade math classes were the focus of the study as they were the only classes I was able to co-teach. The students with learning needs were strategically placed in homerooms to facilitate co-teaching partnerships between the math teacher and me. The classes were heterogenous, and all the students learned together in one class and were taught by the co-participant and me. One of the classes was also our homeroom class, which meant that we were both responsible for pastoral duties in the homeroom.

Organizational Supports

According to its strategic plan, IST was committed to becoming an inclusive school. To ensure that it fully enacted its espoused values, the school leadership ensured there was one special education teacher for every grade level (Argyris & Schön, 1974). Given that the co-teaching partnerships were not voluntary but mandated by the administration, as the co-teachers, we had the freedom to choose which subjects they would teach together. The special education teachers were mainly in the classroom to support the general education teachers and the students with learning needs.

However, for the purposes of the study, I had preliminary conversations with the core subject area teachers with whom I might co-teach to determine their interest, motivation, attitude, and commitment to co-teaching. They communicated that although they lacked experience in co-teaching, because of the severity of some of our students' needs, they were eager to co-teach with a special education teacher to support their students. However, due to scheduling constraints, I conducted the study only with the math teacher. I completed the CITI Research Ethics and Compliance Training on Social/Behavioral Research Investigators and Key Personnel certification (see Appendix B) and received approval of the ECU

Institutional Review Board approval (see Appendix A). The school's administration approved the study (see Appendix C). After the study was approved, the math teacher consented to participate and signed a consent form (see Appendix D).

Activities and Data Collection

The focus of this study was the everyday experiences and events of one general education teacher and one special education teacher in a co-teaching partnership. The perceptions and meaning attached to the experiences and events were expressed by the study participants. We attempted to make sense of critical events and important issues that arose during the course of the study. Using ethnographic research methodology, I elaborated a thick description of the co-teaching partnership by exploring its multiple realities and how they impacted equitable access and student success in the classroom. I immersed myself as the participant observer into the day-to-day undertakings of the general educator and, in doing so, managed my own biases and subjectivities.

During this study, we paid particular attention to how the study participant and the participant observer worked collaboratively to co-develop an ecology of co-teaching by initiating more effective instructional practices and building empathetic relationships with one another and their students. The participant observer provided leadership and vision on sound co-teaching practices. I used several methods for eliciting and collecting data, including the observation of the co-teacher and his interactions with the students, unstructured interviews, documentary analysis, reflective memos, and field notes. The observations of teaching and planning meetings were audio recorded and transcribed for analysis. Next, I highlight the research activities and the data collection and data analysis procedures that were used.

Research Activities

In Figure 3, I outline the plan of study activities and personnel, which was predicated on the theory of action: If we engage in collaborative phases of inquiry to co-develop an ecology of co-teaching by learning from one another on how to develop reflective practices for instructional planning and deepening empathetic relationships among ourselves and our students, then teachers will fully engage in an ecology of co-teaching that improves equitable access and student success in the classroom.

Data Collection and Instrumentation

We started the co-teaching arrangements in the 2019–2020 school year, and I collected data over approximately six months starting in the Fall of 2020. I used formal informal interviews and classroom observations to examine the participants' experiences with and perceptions of co-teaching especially on reflective practices used during instructional co-planning. I collected artifacts from the co-planning and co-assessing meetings. Co-planning meetings are collaborative events in which an eclectic and diverse group of constituents come together to share their expertise and perspectives on a given issue while working together to create equitable change within a specific context (Guajardo et al., 2016).

Due to their dynamic and iterative nature, co-planning meetings were well-suited as a data collection tool for the ethnographic study. By providing a gracious space, a community learning exchange requirement, for the co-teacher and me to work, the co-planning meetings – often informal -- offered ways of learning in collaboration and in public (relationships with research study member) and context (IST inclusive setting) (Hughes & Grace, 2010). In our gracious space, we made mistakes, challenged each other, and made decisions to work differently. The co-planning process helped to solicit and elicit an organic participation and information sharing and gathering in an invitational manner (Militello et al., 2009).

Figure 3. Plan of activities and personnel.

I used a variety of data collection instruments, including artifacts gathered from semi-structured interviews with the co-teacher, shared stories, and data from classroom observations and co-planning meetings. I kept field notes on a routine basis after the co-teaching experiences and periodically wrote reflective memos (Saldaña, 2016). I describe each instrument in the next section.

Semi-Structured Interviews

I conducted both formal semi-structured and informal face-to-face interviews at the site with the co-teacher. According to Merriam (1998), interviews are a strong technique when conducting ethnographic research of a select few individuals. Interviews afford access to information that is not easily drawn from observations or documents (Merriam, 1998). In the present case, interviews were informal and scheduled at the convenience of the co-teacher. The interview protocol was open-ended to allow for the emergence of topics. The interviews provided the participant an opportunity to share his experiences, perceptions, and perspectives and were a rich source of data. Each interview was recorded, transcribed, and coded for data analysis by the main researcher. Codes helped make sense of a vast amount of data supplied by the participant (Saldaña, 2016). I used the recommendations of Taylor and Bogdan (1984) to guide the interviews.

Observations

Observations are a valuable source of data in research as they occur in the natural field and provide a first-hand encounter with the phenomena of interest (Merriam, 1998). I conducted observations of co-taught lessons as well as co-planning meetings. Both in the classroom and co-planning meetings, I paid particular attention to issues of equity and the use of reflective practices.

Reflective Memos

Critical social theory involves understanding and theoretical explanation through self-reflective knowledge. As in Freire's *praxis*, this level of reflection, which is needed to prepare future action, challenges the researcher to critique and change society rather than to merely observe, understand, or explain an issue (Freire, 1970; hunter et al., 2013). I ensured continuous and deliberate reflection by the use of reflective and analytical memos. Reflection enabled us to see how particular possibilities identified during interviews, observations, and co-planning meetings could be translated into practice and support data triangulation (Blumenreich, 2016; Freeman, 1998; Saldaña, 2016).

I used reflective memos to record in detail my experience with the research project. Memos allowed me to reflect on and record "coding processes and code choices; how the process of inquiry was taking shape; and the emergent patterns, categories and subcategories, themes, and concepts in the data ... possibly leading toward theory" (Saldaña, 2016, p. 44). The reflective memos contained insights, questions, ideas, and decisions made during the study. I used them to audit the study and they allowed me to write about data analysis and articulate my thinking, but with the very particular goal of enhancing the study's dependability and eliminating any bias (Lincoln et Guba, 1985). The reflective memos were also instrumental in collecting data pertinent to the third research question, which addressed my growth as a leader and research practitioner. The data gathered from experiences for the reflective memos were either audio recorded and then transcribed or typed out. I re-transcribed segments of the original transcriptions to facilitate the development of the rich story told by the study (Riessman, 1993). I wrote memos after each interview and observation and coded them for analysis.

Shared Stories

Because an ethnographic/autoethnographic study tells a thick story of the study participants, the co-participant and I engaged in regular conversations in which we shared stories and experiences. These stories provided us rich reflections, real-time analysis of our work together, and information on how our students were affected by our co-teaching partnership. The stories made us understand each other as educators and how our own learning shaped our teaching.

Data Analysis

Consistent with standard practice in qualitative research, I conducted data collection and analysis simultaneously. Merriam (1998) affirms the interactive nature of data collection, analysis, and reporting. I interviewed the study participant based on the key research questions and also provided opportunities for open-ended reflection (Merriam, 1998).

Data analysis proceeded mainly through iterative coding. The coding process began with open coding of the data, followed by more selective coding as the co-participant and I gathered more data and perceived more nuanced themes (Strauss & Corbin, 1990). Data was also analyzed inductively, working from particulars to more general perspectives to derive categories and themes (Creswell, 1998; Saldaña, 2016). I initially identified categories from codes and then identified emerging themes before narrowing them down to the findings.

One way to conduct an inductive analysis of qualitative data is to use the constant comparative method (Glaser & Strauss, 1967; Lincoln & Guba, 1985). In this approach, each new category of meaning selected for analysis is compared to all other categories of meaning and grouped (Maykut & Morehouse, 1994). Because the study was a continually evolving process, I used the constant comparative method for refining codes and categories and deriving themes (see Table 1). Next, I examine study limitations.

Table 1

Linking Data Collection Sources and Research Questions

Research Question (sub-question)	Data Source (Metrics)	Triangulated With
To what extent do co-educators work collaboratively to enhance instructional practices that promote student learning?	• Observations • Conversations • Field Notes	• Reflective Memos • Analytical Memos
To what extent do co-educators develop relationships that result in empathetic relationships with students?	• Observations • Interviews • Shared stories • Conversations • Field Notes • Reflective Memos	• Reflective Memos • Analytical Memos
How does engagement in an ecology of co-teaching inform and change my leadership?	• Shared Stories • Field Notes • Reflective memos	• Observations • Conversations

Limitations

As an experienced learning support teacher with prior experience in a number of successful co-teaching schools, I was bound by an uncompromising pursuit of equity and excellence for all students but especially for students with learning needs. In this study, I was the principal researcher and a participant observer. My positionality as an insider with significant experience that spans more than 15 years in the field of special education, my passion for equity and excellence for students with learning needs, and my knowledge of inclusion and co-teaching limited my ability to be unbiased and impartial in decision-making.

However, in my position as special education teacher, I did not have administrative power or position as I had held in my previous assignments. Therefore, I needed to take particular care to refrain from bias and comparison with the former successful experiences. Keeping reflective memos of my experiences helped me document instances of potential bias as they arose.

Despite being an insider working with fellow insiders in this study, power relations may have still operated even as we thought we are being collaborative (Herr & Anderson, 2015). According to hunter et al. (2013), "it is through action that particular possibilities come into practice or not. In other words, analysing, deconstructing, and even reconstructing possibilities for change needed to be actualized through practice" (p. 36). As I was not in a formal leadership position, I had to respond to key administrators—namely, the Principal and the Student Support Services Coordinator—to ensure that we actualized what we had collaboratively developed with the co-teacher.

To control for potential bias, I scheduled regular check-ins with my cohort members and professors through East Carolina University, who were further removed from the study. I ensured that the reflective memos detailing my insights, questions, ideas, and decisions made

during the study guided me in self-reflection. The actions I took to control for potential bias had important consequences for study trustworthiness and the ethical conduct of the research (Herr & Anderson, 2015).

Lincoln and Guba (1985) cite particular limitations that I may have encountered. I provided the concept of "trustworthiness" as the measure of the case study's truth. Trustworthiness is the extent to which the conclusions make sense and are an accurate representation of the research. Professionals want to be assured that the results are trustworthy and that the transferability, dependability, and credibility of the findings have been addressed throughout the study (Sheehy, 2007). The next section describes the procedures I used in the study to establish the trustworthiness of the results: transferability, credibility, and dependability.

Transferability

Validity in research ensures that a study is measuring what it purports to measure. This was ensured through the strategy of triangulation of data. I used multiple sources to collect data that included interviews, classroom observations, co-planning meeting notes, field notes, and reflective and analytical memos. Reliability ensures that the research methodology could be replicated and that it is consistent throughout the study (Merriam, 1998). However, transferability is critical in a qualitative study since it is the reader who determines whether the results can be applied to a particular situation by reflecting on the setting, participants, procedures, and analytic strategies. Readers of this study will be able to determine the extent to which findings can be applied to their own context based on the detailed descriptions of the process and findings, which provide a solid framework for comparison (Merriam, 1988).

Credibility

Lincoln and Guba (1985) and Creswell (2003) confirm peer review as a strategy to maintain quality. Peer review by the study participant during the data analysis process helped with testing emerging themes and findings from the coding process. Additionally, the study participant had access to the data and made suggestions and/or corrections. The study participant commented on his interpretation of the data, which supported the accuracy of findings by allowing him to review and revise emergent understandings. In both Phase 1 and 2 of the study, I engaged in ongoing dialogue regarding interpretations of the study participant's reality and meanings, which ensured the truth value of the data (Creswell, 2018, p. 208). This process was useful for addressing biases that appeared in the data analysis.

Dependability

Repeated observations of the study site ensured dependability of the information collected. The observations were regular and were of similar phenomena and settings. These observations occurred on-site over the entire 10-month period of the study. Multiple sources of data collection allowed for continual opportunities to verify the data among sources. Data from interviews with the one study participant was analyzed as well as coding from the classroom observation and co-planning meeting artifacts. Data from interviews corroborated data from observations. I triangulated all data by use of field notes and reflective memos.

Confidentiality and Ethical Considerations

I protected the confidentiality of the study participant. The data that I collected from interviews and observations was secured. All of the data, including transcriptions and audio recordings of interviews, reflective memos, and field notes, was kept in a secure location. Nothing was copied for distribution or shared with any third parties.

Upon IRB approval to proceed with the study, I formally asked the study participant to sign a consent form (see Appendix D) indicating that his participation was voluntary; any

data collected would be used solely for the purpose of co-developing our co-teaching model at IST and would not be shared with any other person outside of the research study group. When the consent form was discussed with the study participant, adequate time was provided for any questions, clarifications, or concerns. The study participant had the option to withdraw from the research study group at any time without risk of reprisal from either the key research practitioner or the school administration.

Conclusion

As an educator, David had a philosophy of allowing students to fail and providing them challenge by choice. He experienced this as a student with his own teachers when engaged in outdoor education when younger and in science class. When he took American Sign Language (ASL) classes as a grad student, he was behind the rest of his class but the opportunity to rise up to that despite the few challenges taught him the power of perseverance. Throughout his schooling he valued developing connections with his classmates and more meaningfully with his instructors and coaches. When he became an educator, his coaching and experiences in the outdoor with sports impacted him and opened his mind to co-teaching. He did a lot with a group of instructors or coaches. They planned together, instructed, problem solved situations for example search and rescue in water rapids. His experiences in the outdoor activities he engaged in were a collaborative endeavor. He took this approach to co-teach when we were worked together. For me, because it was just me and him in the class, I was able to track our everyday experiences by closely observing and conversing with him in depth with the aim of obtaining a holistic picture of him as an educator and co-participant in the research.

Like Militello et al. (2009), I believe that learning is a result of teaching that is engaging, empowering, challenging, inspiring, and applicable. That is, learning must proceed from data (raw and unfiltered) to information (filtered data through some mediating source,

e.g., a teacher or the media), then to knowledge (contextualized information), and finally to application (knowledge to action). Through engaging in the iterative collection and analysis of data, the co-teacher and I supported the development of the ecology of co-teaching by developing reflective practices during instructional co-planning sessions to improve learning outcomes for all students in our classroom in particular and at IST at large. Knowing that I do not possess exclusive access to the "truth" of the research setting (Herr & Anderson, 2015), I used a variety of data collection and analysis tools, including interviews, observations, meeting notes, field notes, and reflective memos to create an authentic and voluntary space for collaborative inquiry at IST. The ethnographic research project helped answer the key research question: "How does the ecology of co-teaching improve equitable student outcomes?" I addressed the research questions in this study, during which I, as the participant observer and principal researcher, engaged in coding and analysis of all data collected from various sources. This process was primarily interpretive and exploratory that required problem-solving and synthesis of the data. This synthesis of the interviews, observations, meeting notes, field notes and, reflective memos occurred in two iterative phases of inquiry. I identified the biases, subjectivities, and predispositions I had during the research process. In addition, I was cognizant of my positionality as an insider and mindful of how my previous experiences with co-teaching might have shaped my analytic lens. The ethnographic research study helped demonstrate whether and how an inclusive learning environment might foster academic success for all students.

CHAPTER 4: PHASE 1

Due to the fact that I had more co-teaching experience than my co-teacher David, I believed I would have a significant impact on our co-teaching partnership and that my views on inclusion and co-teaching would be instrumental in establishing a co-teaching ecosystem. After all, David's content knowledge and my special education expertise offered a perfect recipe for an exemplary co-teaching partnership, one that IST needed to further its inclusion policy. I was wrong. Much more was needed for us to succeed than expertise and experience. Working with David gave me insight into the various encounters, experiences, challenges, and successes present in a co-teaching partnership.

David's teachers had instilled in him accountability, independence, and rewards for hard work. In high school and college, he gained confidence as a leader and coach. He attributes these accomplishments to one professor who, according to David, supported him despite his "epic failures" as a student under the professor's tutelage. As a result of listening to David's stories about his educational experiences, I better understood his dispositions toward me as a co-teacher and toward our students.

In Chapter 1, I described the school ecology teaching framework that we had developed at the IST to create an inclusive instructional environment that would challenge, inspire, and support all students. When I joined IST in the 2018–2019 school year, the administration facilitated a schoolwide stakeholder conference on defining inclusion and hired consultants to provide all teachers with in-service training in co-teaching. As a result of the school-wide training, the administration took important steps to make the school's vision of inclusion a reality by admitting students with more diverse needs. They supported co-teaching as the best instructional strategy to make the school more inclusive and meet the needs of all students.

As David came from a background in which the provision for special education services are legal requirements, he understood that he had to provide his students with the support they needed to succeed. He had no difficulty differentiating work by providing levelled tasks and assignments for his students even though this meant extra work on his part, and he went above and beyond the standard requirements of teaching lessons and grading assignments and assessments; he demonstrated the ability to motivate students and to encourage them to follow through. Concerning co-teaching, David was an avid supporter of having another adult in the room; however, he initially viewed the other adult as an assistant. We had to contend with an initial tension in our classroom roles as we built an ecology of co-teaching.

Co-teaching requires co-planning; however, despite a schoolwide commitment to co-teaching, the school administrators did not schedule formal opportunities for co-planning during the two consecutive semesters of the study. Although the administration knew we were co-teachers, they did not allot us time during the school day. Originally, we thought that challenge would compromise our success; however, as we proceeded, we found ways to support our dialogue and manage limited co-planning. The steps we took to support our work will be discussed later in the chapter.

The context of the study afforded supports and challenges to fully enact the espoused school vision of inclusion and co-teaching (Argyris & Schön, 1974). As a content subject teacher (David) and a special education teacher (myself) worked together to implement the school's vision of inclusion, we intended to use the attributes of effective co-teaching in our design. I engaged in an ethnographic and auto-ethnographic study and in the process made real-time adjustments to the systems that were in place. While David and I did not have common planning time, we did accomplish other goals of co-teaching, including serving students. I posit our situation as an equity dilemma and that we became a co-teaching team of

equity warriors who used all available resources to meet substantial challenges (Leverett, 2002; Mitchell, 2018).

In this chapter, I provide a detailed overview and analysis of Phase 1 of the study and discuss the activities and data collection during the two phases. I report and represent the codes and categories that surfaced from the preliminary analysis of data by analysing the patterns in the coding (Saldaña, 2016).

Activities

The study took place in two distinct phases of six months and four months (see Table 2 for Phase 1). During both phases, I used the research questions to guide data collection and analysis. The co-participant was an experienced math teacher with whom I had co-taught math to sixth-grade students for two years by the study's conclusion. I conducted the study in a co-taught inclusive classroom with a diverse student population in which some students were identified as requiring special services. In addition to the co-taught Math class, we used a pull-out design service delivery model for them.

The process was not entirely conducive to a co-teaching model; I could not co-teach a different group of students because I had to meet with these students in a self-contained classroom. As a result, one group of sixth graders did not experience our co-teaching. Pull-out classes for students with learning needs and in-class support for co-taught math classes occurred five times per 10-day cycle at the beginning of Phase 1 and four times per 8-day cycle during Phase 2 of the study, depending on my schedule.

During the first phase of the study, I established a safe space for dialogue between the co-teacher and myself to validate the knowledge and skills he brought to the co-teaching partnership. We established and nurtured a collaborative relationship that enhanced our working partnership and that, in turn, influenced the quality of planning, co-teaching, and co-reflection. Because a critical factor for the co-teaching process is the relationship of the

Table 2

Co-Teacher Interactions in Phase 1 (October 2020–March 2021)

Interaction	October	November	December	January	February	March
Classroom Observations (n=4)	●		●		●	●
Post-Observations Conversations	●		●		●	●
Informal Planning and Debriefing Conversations (n=6)	●	●	●	●	●	●
Sharing stories	●					

co-teachers, we developed empathy through our day-to-day practice. We sought out opportunities during our personal preparation time to plan and have brief discussions to compensate for the lack of formal planning meetings.

I engaged in regular data collection that included using field notes to document classroom observations; conducting informal interviews; engaging in co-planning and co-reflection meetings; and writing reflective memos. As I focused on data review and analysis, I sifted through the data; then, I coded and categorized information that was most relevant to the study research questions. My primary intention was to determine to what extent the activities during the study influenced our practices as co-teachers and made possible equitable access and success for students. Conversations on our co-teaching practice with the co-teacher guided the decisions and next steps in the second phase of the study.

Phase 1 Overview

David and I had been in a basic form of a co-teaching relationship for two years before the study began. However, we had not completely understood each of our teaching journeys and how our experience influenced our current teaching practices until we had what can be termed our "State of our Union" conversation (Olaly, reflective memo, October 30, 2020). According to Guajardo et al. (2016), building community and trust relies on understanding and knowing each other's stories. Hence, we began by actively narrating and listening to our stories as learners and teachers. I had been alert to the setbacks to our co-teaching partnership; my role in the classroom was unclear, and we did not know how we would sustain our co-teaching model during the pandemic. However, by sharing stories about each other's educational journeys, we revealed the philosophical stances on education that we brought to teaching and learning, which helped us to reset our expectations.

In the original design, we scheduled ending each phase by having regular check-in meetings to discuss our growth as co-teachers. However, we realized after receiving our

schedules from the administration that the timing of these meetings would be problematic for David and me. As a result, we had only one meeting in Phase 1. We substituted informal conversations that were more frequent as the project and study developed.

The first phase of the study was not without hiccups. Despite our conflicting schedules, we managed to have short but valuable, informal planning time—which I term corridor planning—and reflective sessions before or after class. This type of planning constituted an important use of time in the school setting as the informal conversations became a critical point of data collection (Roxå et al., 2021).

Another potential setback during the first phase was the COVID-19 pandemic, which forced our school to switch to distance learning, a class pod, face-to-face instructional model followed by a hybrid model, which was a mix of virtual learning and face-to-face. This development changed the dynamics of our planning, teaching, and reflection; our adaptations to COVID actually supported our collaboration. We had to rely on emails, Zoom conference calls, and WhatsApp communications to keep up with our classroom responsibilities because we could not plan in person. During this unprecedented period of teaching and learning, we had to be more innovative with how we grouped students, and we devised lessons to ensure that they were fully engaged.

The initial goal of the research project was for the co-teacher to be part of an innovative idea of co-teaching that responded to the specific context of the school (Guajardo et al., 2015). IST had in the past admitted students with mild to moderate learning needs but was now opening its doors to students with greater cognitive, academic, and behavioral needs. The move was welcomed by the parents of these children who now would have a chance to learn with their non-disabled peers. For that reason, we had a range of students with diverse learning needs in our math class. Some teachers were anxious about their abilities to teach and support students with significant learning needs citing lack of adequate

professional development to serve this student population. As much as we were guided by what the literature said about good co-teaching practices, we were conscious that we were operating in a unique setting of an international school in which service delivery for students with learning needs was not a legal requirement. We wanted to co-create an ecology of co-teaching that was relevant for IST and one that was workable for us.

Consequently, I anticipated that David would develop an identity as a co-teacher and not as an isolated content instructor within a "co-taught" class and would be an active participant in creating our co-teaching ecosystem. I wanted him to do more than implement a directive from the administration; I was hopeful that we could customize the innovation to fit our particular situation at the school (Creswell & Creswell, 2018). By conducting classroom observations and post-observation interviews, I better understood his readiness and willingness to co-develop an ecology of co-teaching at IST In addition, we had six structured conversations that enabled me to understand the "how" and "why" of our respective classroom practices and his understanding and expectations of my role as co-teacher in the overall picture.

During the first phase, I took a backbench role in the classroom. I waited for cues from David on when I could be more involved in the classroom. Generally, he facilitated the direction and teaching of the class. I made formal (scheduled) and informal (unscheduled) observations of instructional practice and student participation and offered suggestions on reaching particular students and ensuring that the students were engaged in the classroom. I analyzed and coded the meeting and classroom observation field notes. The discussions I had with the co-teacher about my observations and suggestions during the first phase contributed to his gradual shift in practice during the study.

Data Collection and Analysis

In both phases, I utilized open-ended and semi-structured formats to capture data from observations and post-observation conversations. Using field notes and reflective memos, I documented the informal co-planning and co-reflection meetings. Due to distance learning, class pod structures, and hybrid learning during the COVID-19 outbreak in Phase 1 and a portion of Phase 2 of the study, I collected data virtually and on-site.

After collecting data, I organized and prepared the data by generating a description of the data, coded it, and identified patterns and themes that emerged from the coding. I first used open coding to understand and make meaning of all the data collected and then reconfigured the data using axial coding to create links between the codes (Saldaña, 2016). I analyzed the data and refined codes through two coding cycles to determine categories. I linked data sources to each research question and triangulated them using reflective memos. I generated categories based on conceptual ideas from the study process. I recorded this process in a codebook in which I listed definitions of codes, categories, and themes. I grouped the high-frequency codes in categories and later identified themes. I analyzed the data in order to answer the primary research question: *How can a focus on an ecology of co-teaching improve equitable access and student success in the classroom?*

Classroom Observations and Post-Observation Conversations

I used several data collection instruments. Observations provided valuable data and provided a first-hand encounter with the phenomenon of interest (Merriam, 1998). I conducted a total of six classroom observations throughout the study. I then held post-observation conversations with the co-teacher. These conversations provided my co-participant with an opportunity to voice his opinions. Starting with a clear statement of purpose and an outline of expectations, I asked David about his co-teaching experience for the particular class. I asked questions about the facilitation of co-teaching with emphasis on

co-planning, co-reflecting time, and support for himself and the students. I used meeting notes from the post-observation conversations to have insight into the effectiveness of the conversations.

Meetings, Field Notes, and Reflective Memos

The teaching schedules of the co-participant and me were not conducive to co-planning, which meant that we did not have official planning time. However, we know that adults learn from frequent informal conversations, and they were a crucial vehicle for reflection and decisions (Drago-Severson, 2012; Roxå et al., 2021). After class, we reflected and planned for the next lesson. I coded these co-planning and co-reflection sessions for analysis.

Two other data sources—field notes and reflective memos—provided vital evidence and an ongoing planning and co-reflection tool. I recorded reflections and impressions as well as data about specific classroom events that I shared with David to help guide us in improving instructional planning. I wrote reflective memos throughout the study to document my response to experiences, opinions, events, and new information. According to Freire's (1970) concept of praxis ("reflection and action on the world in order to transform it," p. 43), action and reflection are indissolubly united. Therefore, my reflection as the lead researcher was central to this ethnographic and auto-ethnographic study; the memos communicated my response to thoughts and feelings and offered a way of exploring my learning. They also provided evidence to reflect on my growth as a leader and how David and I developed our co-teaching partnership through empathy and trust. The memos served as a tool for triangulating data from observations, post-observation conversations, co-planning, and co-reflecting sessions (Creswell & Creswell, 2018).

Data Analysis

To analyze the data, I marked the codebook each time a code appeared in the collection instrument to signify the code's frequency. As I began to make sense of the findings, I completed a second round of data coding, searching for emerging patterns. I continued to add marks to establish which codes appeared most frequently. As I transcribed evidence, I identified patterns and entered them into an Excel spreadsheet that served as a codebook with categories. As I completed the second round of coding and understood the codes, categories began to emerge related to uneven partnership, decision making, and forms of communication. In Table 3 and Figure 4, I detail the codes and categories that emerged from Phase 1 of the study and discuss them in the next section.

Phase 1: Emerging Categories

In most schools, co-teaching is often ineffective as a method for two teachers to share instructional time in the same classroom with a heterogeneous group of learners because of the relationship between the teachers. Instead of a partnership, the teachers become a lead teacher and a support teacher (Bacharach et al., 2004). According to Soudmand and Ahour (2020), "the classes are teacher-centered" (p. 25), meaning that the focus is on how the teachers work together rather than on student learning. In most cases, the subject area teacher of the inclusive classroom becomes the lead teacher, and the special education teacher does not have parity of decision-making or classroom responsibility. Too often, the special education teacher acts as an aide to the teacher. That scenario was the case in a number of classrooms at the IST before the school decided to adapt co-teaching as a service delivery model to implement the inclusion policy.

We tried to counter the lead teacher/assistant paradigm, but in the first phase of the study, an uneven partnership was characteristic of our collaboration. The pull-out sessions exacerbated the pattern because I was responsible for a group of students in a separate room

Table 3

Phase 1: Emergent Categories and Codes

Categories (Percentage)	Codes	Instances David	Instances Norah	Percentage
Uneven Partnership 63%	I	32	21	14%
	My	25	19	12%
	Lead Role	56	4	16%
	Assistant	6	66	21%
	Subtotal	119	110	63%
Decision Making 17%	Instruction	10	8	5%
	Assessment	14	4	5%
	Grading	13	3	4%
	Feedback	10	1	3%
	Subtotal	47	16	17%
Forms of Communication 20%	Sharing Educational Journey Stories	1	2	NA
	Who Speaks, Who Listens	46	8	15%
	Nonverbal Communication	0	18	5%
	Joint Reflection Learning		20*	
	Subtotal	47	27	20%

Note. * Combined number of instances. Individual instance data was not recorded/ not counted in total data.

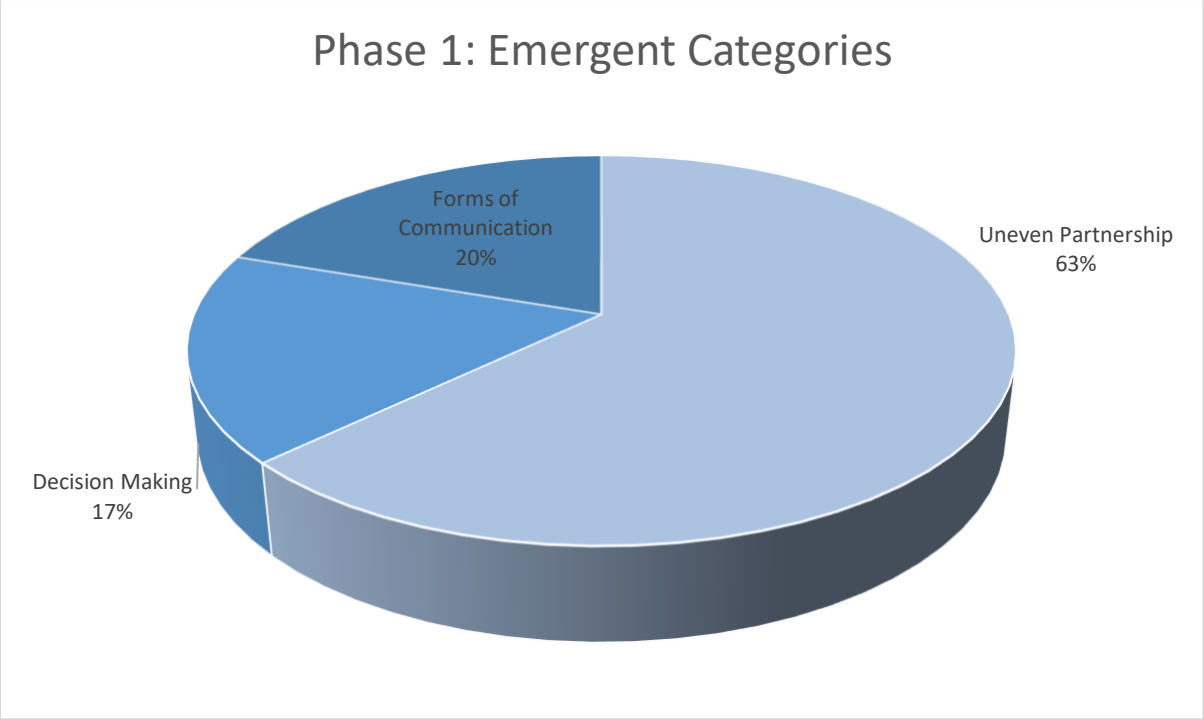


Figure 4. Phase 1 data indicated that partnership and communication are necessary for co-teaching.

several times during an 8- or 10-day cycle. However, during the post-observation conversations, David and I gradually determined that we were eager to establish a more robust level of collaboration and joint responsibility. The three emergent categories were:

1. Uneven partnership, a situation in which the content teacher had primary responsible for most classroom instruction and responsibilities;
2. Decision-making about instructional responsibilities; and
3. Forms of communication that facilitate a different level of collaboration.

Uneven Partnership

The preliminary evidence from Phase 1 of the study provided a strong indication that we had an uneven distribution of planning, teaching, and assessment responsibilities in the math class; thus, we were falling into the pattern of most co-teaching partnerships in which the special education teacher is primarily an assistant (Friend, 2008). With 63% of the data for phase 1 on this emergent theme, we attempted to employ two co-teaching models -- one teach-one observe in which one teacher teaches and the other one observes specific characteristics of students to gather data for future instructional practices; or one teach-one assist, in which one teacher teaches the lesson while and the other circulates through the class, monitors students, and helps them (Cook & Friend, 1996). However, during the first phase of the study, David was the leading actor in the classroom, and I was a passive participant. I assumed this role for two reasons -- I wanted to observe and understand how David taught and handled the students; and David had not formally given me any active role in the classroom. But I wondered if I would get "permission" from him to be a full co-teacher.

While I was responsible for identifying students with whom to work directly, I observed students and noted a range of diverse student learning needs. In coding the data from the classroom observations and post-observation conversations, a key indicator of the

uneven partnership was our use of particular language elements to discuss our work. We used the pronoun “I” and “my” when talking about the work we did in the class or when we spoke to and about the students.

Pronoun Usage: I and My

When I coded data from field notes and reflective memos on classroom observations and post-observation conversations, we had a high frequency of particular pronoun usage. When David spoke to me about the students or lesson planning, assessments, and feedback, he repeatedly used the pronouns "I" and "my", constitute 26% of the total data for phase 1. When he addressed the students with me assuming the role of support, he used the personal pronoun "I" rather than "we" to describe the instructional tasks and materials. The pronouns denoted a sense of classroom ownership (my classroom) and autonomy as a teacher (I will prepare). For example, he said the following: (1) "I will show you how to create a table using Excel"; (2) "I will prepare the assessment for next class”; or (3) "I will give you feedback on the assessment after the break" (Olaly, reflective memos, February 17, 2021, February 22, 2021, and March 12, 2021). When he talked about classroom expectations, he said, "In my classroom, I expect you to be on time to class and bell-ready" (Olaly, reflective memo, February 12, 2021).

I, in turn, referred to the students with learning needs in the classroom as "my students." For example, I said: "I will come for my L.S. students during the Criteria A assessment"; or "My students may need to have fewer questions…" (Olaly, field notes, March 2, 2021, and October 3, 2021).

Roles: Lead and Assistant

In the initial phase of our co-teaching partnership, David and I had to construct our respective positions based on the spaces we occupied in the classroom and our access to the students. Consequently, our role identification was based on four aspects: the physical space

we each occupied in the classroom, the instructional role we each assumed, the discipline role, and the classroom management role. The number of times I took a lead role was minimal compared to the times I played the role of teacher assistant. Of the 60 instances (or 16% of the data) I recorded for roles, David took the lead 56 tunes, I only took the lead role four times.

David's desk was situated in the front of the classroom where he kept his instructional materials. I did not have a specific work station in the classroom, so I would either sit with the students or stand on the side and move around the room to provide assistance wherever my presence was required. David was the primary instructor for the entire class, and I was the primary instructor for individual students with learning difficulties. He instructed the class, gave directions, and presented the content while I restated the directions, read instructions and texts, and responded to specific queries from individual students. David took charge of discipline for the entire class by discussing behavior challenges and expectations with everyone in the class. I handled individual students who received learning support by discussing their behavior challenges and expectations in private or when we were in the learning support class. David assumed primary responsibility for managing classroom activities. He took roll, granted restroom breaks, granted permission to visit the nurse, and permitted students to depart class early. As David's assistant, I was the go-to person for students who required assurance with regard to their academic difficulties and sometimes personal issues.

In these cases, contrary to my beliefs and my knowledge about effective co-teaching, I was acting like a typical special education teacher. I was protecting the needs of the L.S. students and inserting myself only when their needs might be compromised (Scruggs et al., 2007). I was not claiming any part of the joint responsibility in the classroom except for noticing other learning needs of all students and supporting those students as I could while

the lesson was proceeding. Thus, we both had some responsibility for the uneven nature of the relationship.

Decision-making

“Decision-making involves giving consideration to a matter, identifying the desired end result, determining the options to get to the end result, and then selecting the most suitable option to achieve the desired purpose” (Fuller, 2011, p. 2).). Decision-making (17% of the data for phase 1) included these areas of teacher work -- instruction (planning and delivery) and assessment (preparation, delivery, grading, and feedback).

Data collected from observations and post-observation conversations indicated that I only participated or shared in making 16 decisions about instruction, assessments, grading, and giving feedback to the students compared to a total of 47 instances in which David made decisions on the same. I was responsible for making decisions in assessments for students with learning needs, organizing where and how they completed their assessments, and making sure they received the required access arrangements.

My role in the first phase of the study was mainly observing and monitoring students who needed help. David did the lesson planning, prepared the assessments, graded them, and gave students feedback on their performance. He made most of the instructional and assessment decisions despite his heavy workload. He sought my opinion mainly about assessment accommodations for students on the learning support roster.

Instructional Planning and Delivery

The school required all classes with co-teachers to use a variety of co-teaching models for instructional delivery. Instructional planning was left to the decision of the teachers. In the area of lesson planning and delivery, despite our shared beliefs about co-teaching, I played a secondary role while David assumed the primary teaching role. During the first phase of the

study, I was directly involved in decisions about instructional planning and delivery in eight instances. I mainly instructed small groups of students with learning needs.

The co-teaching model that dominated our practice was “one-teach, one-assist,” which is the most common model of co-teaching in primary and secondary schools (Scruggs et al., 2007). David was the content specialist and took full charge of planning and delivering instruction during the first phase. I arrived in class with the students and followed the lesson. During Phase 1 of the study, David and I did not supplement each other’s contributions in either instructional planning or delivery. The absence of “co-ness” in our purported co-teaching was evident (King, 2022). We understood that we were not on the path of meeting our goal of co-creating an ecology of co-teaching. We did not plan for and deliver instruction together, leading to instances in which I was the first responder to behavior problems because David was not fully equipped to handle some of the students with high learning and behavior needs. We were working independently in the same space, not co-teaching.

My primary role was to ensure that students receiving learning support followed the lesson. Like placement of the physical space and desk, David consistently stood and taught from the front of the class while I walked around checking on "my" students or dealing with minor discipline issues during the lesson. Often, I stood at the back and observed David teaching. Sometimes, I would write notes on the board as David spoke to provide a visual cue for "my" students who had difficulty following oral instructions. At first, we did not question this model even though I knew that this form of co-teaching is not the most successful for the teachers or students.

Occasionally, I asked clarifying questions when I felt that some of "my" students did not understand. I made these decisions on the spot during the dynamic interactions with students while David was facilitating a lesson. For example, after the lesson when David explained the homework assignment, I could see some students were confused about which

of the three sections they needed to do. Some students could not understand that they needed to choose only one level and complete all questions in that level. They misunderstood the designation "question 1–4" as meaning they needed to complete questions 1 and 4 only. I intervened to explain to them that they needed to complete questions 1, 2, 3, and 4. For two particular students with high needs, I directed them to open their diaries and jot down exactly which questions they were going to complete. What we thought was obvious to the students was not, and eventually the whole class wrote their homework in their diaries. They developed the Approaches To Learning (A.T.L.) skill of organization through this exercise.

Another incident happened during a lesson. David was writing examples on the board and required the students to copy the notes in their notebooks. I noticed that many students were struggling with organizing their notes. I asked David if I could share with the whole class a better way of taking notes without wasting pages on their notebooks. I demonstrated the method to all students, and we started using this method. The method better ensured that the students' work was neat and legible. David consistently reminded the class of the expectation and displayed student work that reflected the note-taking approach I had presented.

Despite these examples of shared instruction, we lacked a collaborative dynamic and did not equitably share instructional planning and delivery. Subsequently, we both knew that we were not enhancing students learning or even our teaching experience. We needed to achieve a level of equitable, interactional practice.

Assessment: Preparation and Delivery, Grading, and Feedback

Assessment preparation and delivery, grading, and feedback are essential teaching functions. Teachers need to know not only how to implement them, but they must also take ownership of them for the innovation to succeed (Fuller, 2011). Teachers must be responsible for identifying the skills that must be assessed to provide themselves with the most accurate

data on student learning and the learning deficits that must be addressed. Teachers must create assessments that are inclusive of all student abilities, administer them in an environment conducive to the majority of students, grade them fairly using the established rubric, and provide expeditious feedback. According to Gallo-Fox & Scantlebury (2016), “co-teaching provides opportunities for teachers to collectively share responsibility for student learning” (p. 219). However, in the first phase of the study, David was solely involved in the preparation of assessments and giving students feedback. I was involved in the delivery and, to some degree, the grading of the assessments. During the six-month duration of the first phase, I was involved with assessment delivery and grading seven out of 34 instances in which the two codes appeared in the data.

Once David completed preparing the assessments, I reviewed them to ensure that the formatting was not cumbersome for "my" students. I was responsible for changing the format of an assessment to make it more accessible to the learning support students. I was then responsible for delivering the assessment to "my" students in the pull-out room. In the pull-out class, I mainly provided accommodations, including, for example, a separate setting away from distractions, frequent breaks, and scribing.

Concerning grading, I was part of the exercise when I looked at the students’ papers after David had graded them and gave my opinion about the grades. David requested that I do this to have a moderated grade for the students. He felt that I would be a better judge of their performance levels, especially for the students receiving learning support. David's comments were the only feedback the students received on the assessments. I was not involved in giving students feedback for assessments except for once when I gave general feedback to the whole class.

What became clear as we proceeded was that both David and, to some degree, myself were operating from the prior models we had in our schooling or observed in other situations.

He viewed me as a support person in the class, the only model of a teacher in a classroom he had. Although he was committed to the general concept of co-teaching, he did not fully understand the co-teaching principles or model. And while I understood them, I had not had many opportunities to practice them during my career. Despite our belief in co-teaching and our combined expertise, David and I were staying in our comfort zones by taking care of our immediate responsibilities: David taught the content to the students, and I handled the learning support students. We were not equitably providing our services to all our students.

Forms of Communication

I took a background role in the classroom during the first phase of the study. Consequently, David did most of the talking to the students as well as formal communication to the parents and colleagues. He was mainly responsible for the instruction, and I mostly listened. I knew that, as co-teachers, David and I needed to communicate with one another to meet the learning needs of all our students. However, we never discussed who should adopt which role in the classroom until toward the end of the first phase. Upon reviewing my data (20% of the total data for Phase 1), I identified four key areas that highlighted our communications -- sharing our educational journey stories; who speaks, who listens; nonverbal communication; and joint reflection learning.

As this phase of the study progressed, we read about co-teaching practices and how to meet the requirements of students most effectively. Our reflections were predominantly private although we occasionally shared our thoughts in passing. David and I also shared our educational journeys and the various learning experiences we had encountered during our school years. Through this exercise we were able to comprehend each other's background with co-teaching. As we reflected on the lessons, we gained a deeper understanding of who spoke and who listened (54 instances), as well as how our nonverbal communication (18 instances) affected our communication as a whole.

Sharing Educational Life Journey Stories

David and I agreed at the outset of the study to compare our educational backgrounds. We had intended to have multiple scheduled opportunities to share, but due to scheduling conflicts, we were only able to share during one scheduled meeting. The remaining stories were shared at unscheduled intervals throughout the study. We believed that knowing our journey line of educational experiences was a necessary practice for achieving the relational trust and knowledge about each other crucial for sharing instruction (Bryk & Schneider, 2002). In preparation for these conversations, I proposed to David that we agree to discuss any topic with honesty, open minds, and respect for each other's opinions.

We spoke about our skills, interests, and educational philosophies. This activity was eye-opening with regard to each other's motivations and beliefs concerning inclusion and co-teaching. We shared our struggles as students, how we overcame these struggles, and how these experiences have influenced our teaching. "In college, I had a professor that supported me through my struggles, and that stayed with me. I wanted to be that kind of a teacher to my students," narrated David (Olaly, field notes, August 26, 2020). In turn, I shared how I had struggled tremendously in math throughout most of my school life. "I used to earn a strong E in math exams. I remember once I got 15% on paper 1 and 5% on paper 2. My average was 10%. A strong E!" I spoke of how I eventually overcame my fear and failure in math. "On the last break just before my O level exams, my mum got me a tutor who made the light bulb light in my head. I went back to school in the last term, and I was the one helping my peers in math. I was completely transformed thanks to the teacher who found a way of addressing my unique needs" (Olaly, field notes, August 26, 2020).

I continued to tell David how I ended up teaching math in a French Immersion School and how my students presented the best results in the Maryland State Assessment that year. "From a strong E student to a stellar math teacher!" I said with pride (Olaly, field notes,

August 26, 2020). "I am now able to support students in math because I have been through some of the struggles they have in the subject. I understand their fears of the subject, and I can empathize with their struggles" (Olaly, field notes, August 26, 2020). David acknowledged that he wanted the math class to be more inclusive for our students and for each other. He hoped for continued sharing of experiences in our day-to-day teaching and what I experienced in other co-teaching partnerships in the school.

According Walter-Thomas et al. (1996), "Co-teachers must become familiar with each other's professional skills, including instructional strengths, weaknesses, interests, and attitudes. It is important to spend time talking and getting better acquainted with each other's interests and educational philosophies" (p. 260). David and I understood that by having candid conversations about our professional skills, we would work out how to equally share roles and responsibilities. By sharing our stories, we began to build relational trust and connection. David wanted our co-teaching partnership to benefit the students and strengthen our professional development. I expressed my belief in forging a strong interpersonal relationship with students and to know each one as a person first. In my experience, I had been more successful in meeting the academic needs of some students by getting to know their interests and passions outside the classroom. David acknowledged the need to develop a "supporting environment" in our classroom. We agreed to develop this environment in both our homeroom and math classroom (Olaly, reflective memo, August 28, 2020).

By sharing our stories, David and I were able to lay the foundation of a relational connection that would develop in the second phase. The information that we gathered from the shared stories was instrumental in affirming that shared knowledge from each of us was key to breaking down silos of individual competencies and expertise (Yung, 2021) and make the co-teaching partnership work.

Who Speaks, Who Listens

As is evident in the Phase 1 data**,** David was the lead teacher in the math classroom. He took the leading role in giving instructions and delivery of the lesson. He was the primary speaker, and the students and I listened to him. However, being a listener in the class allowed me to be more aware of the areas in which David and I needed to reach and challenge all students. I did not take the listening role negatively but as an avenue and opportunity to simulate the role of the students. The role of the listener helped me better articulate the students' needs to David in the latter part of Phase 1 and in Phase 2. When I got to speak to the students, I spoke after David had spoken first. I followed his lead and either added to, clarified, or paraphrased what he had said. I shared the homework with the students and reminded them of the tasks they needed to complete.

As a result of this dynamic in the classroom, David and I continued to use the co-teaching model "one-teach, one-assist" and "one-teach, one-support" throughout the first phase of the study. However, we were not actively engaged in the co-development of an ecology of co-teaching in which each of us taught all students. Even though I willingly assumed the listener role, our co-teaching partnership was not equitable. The co-teaching model we used, even in the way we communicated in which David was the main communicator and I the listener, was not supporting an equal partnership with thoughtful partnering and support. We were not building a productive relationship and classroom culture of collaboration and were not modelling the inclusive practices that we in theory supported.

Nonverbal Communication

Eye contact, facial gestures, movement, and proxemics were forms of nonverbal expression that I used to communicate with David in the classroom. The data indicated that I was the one who mostly used nonverbal cues (n=18) to communicate with David. The code

speaks to how I had to resort to nonverbal communication when David was teaching the class.

Because I was not the lead teacher and mostly listened in the classroom, I often utilized nonverbal gestures to get David's attention; however, at this point in the co-teaching process, he did not employ nonverbal cues to communicate with me. Nonetheless, he responded to my gestures. For example, I raised my hand to get David's attention whenever I wanted to ask a question or add a comment. I used nonverbal communication with David when I wanted to alert him of a student who needed his direct attention—often due to behavior issues. I would discreetly move closer to the student and use facial gestures to get David's attention. If I wanted to leave the room, I would gesture the "time-out" hand signal, and he would in turn nod his head in approval or show me his index finger to indicate that I needed to give him a little more time to finish what he was doing.

David was often in front of the class as I moved around in the room looking at the students' work. By moving closer to the board or to the front of the class, I indicated that I needed to speak or comment, and David would call on me. An observer looking at how David and I communicated would know that we were not co-teachers; instead, each of us played distinct, separate roles in the classroom—one was the lead and the other an assistant. We did not create an environment where we could feel connected as a team, and the inequitable nature of our co-teaching partnership was evident.

Joint Reflection Learning

What David and I did not learn during our co-teaching experience, we learned from reflecting about it. While our initial daily practice was occasionally punctuated with reflection, we took the reflection to a deeper level during the switch from face-to-face to virtual learning and the hybrid model where different groups of students came to school on different days. The pandemic launched us on an unprecedented need to collaborate in the

delivery of instruction for all students. The school administration had plunged us into rapidly changing policies related to online teaching, and students exhibited exacerbated learning gaps. Some students did not appear for virtual classes, and there was excessive social pressure from parents who wanted their children to be instructed at all costs. Both David and I quickly had to find a way to ensure all the students had adequate instruction.

During this time, we had to be innovative in planning and delivering instruction. We found ourselves regularly reflecting about each virtual experience and how we could improve our delivery without too much stress to the students and ourselves. For example, we had no physical space for me to move around and check on students with learning needs. As a result, we had to develop strategies on timely communication and collaborative inquiry that would best serve us and our students during the pandemic.

David and I had to utilize contextual resources. These were the school information system SEQTA where we posted lessons and assignments for students and parents to access and learning groups that we established for students to virtually collaborate and consult with one another. We had to be flexible and assume collective responsibility for all students. The pandemic increased our capacity to undertake more shared work.

During Phase 1, as I reviewed the data and developed codes that provided me with insights into what was occurring within our classroom and between us as co-teachers, it became clear that David and I were engaged in an individual and collective sense-making process. We sought to comprehend and transform our relationship and practice. The process helped us explain our underlying thoughts and ideas, which led to the emergence of the code, "joint reflective learning."

This new code emerged from data in only 20 instances of intentional collective reflection. The reflections took the form of conversations, short after-class talks, emails and WhatsApp chats, and sometimes longer discussions during planning time that we created

within our tight schedules. The reflections were about what went right or wrong in our lessons, what we could do better, what we could try with our students, and different ways of providing access to all students and not just students with learning needs.

We also reflected about our personal and professional growth as a result of our co-teaching partnership. David and I developed a culture of reflection in our classroom and modelled it to our students so that they too would reflect on their learning. Through reflection, David and I developed a co-teaching ecology in which the two of us took more equitable roles in the classroom at the end of the first phase and throughout the second phase of the study.

David and I realized that reflecting on our daily online lessons had become an integral part of our practice and, with time, helped us build trust with each other. An unexpected but welcome outcome of the reflection was that he became open to giving me more responsibility in the virtual classroom. I was responsible for groups of students who were in different breakout rooms without his presence. He took into account and acted upon my contributions during our reflection conversations. For example, he consulted me on the group composition of students for each breakout room. I had more freedom going in and out of breakout rooms with different students, even those not assigned to me. As a result, I ended up working with students who were not on learning support. During the virtual lessons when the students engaged in independent practice and on Wednesdays when the students were off timetable, David and I analyzed the lessons for pace and complexity and discussed student groupings, work, and levels of achievement. Since distance learning was new and taxing to our students, we needed time to plan for their adjustment to the new mode of teaching and learning; our reflective exercise allowed us to change the lessons in real time.

As a result, I took more responsibility for lesson delivery and assessment preparation. The process was not always smooth, but we were taking a step in the right direction. We had

to agree on the essential skills we wanted to assess. David was focused on the content while I was more intent on academic adjustments and behavior monitoring to reduce barriers in the classroom. The composition of one class was more challenging because I had to spend more time assisting the many students who needed one-on-one attention.

Despite the strides we had made, David and I did not achieve the ideal goal of a desired equitable lesson delivery that we had hoped for. Apart from these few challenges, David said that he found the post-observation conversations (n=3) beneficial in charting how the class would evolve as an inclusive setting with us as co-teachers. David expressed that collaboration would help break up the monotony of one person doing all instruction and hoped that we could cooperate during the teaching process.

For example, he once said, "Norah, how do you feel about us breaking up the students into groups, and you take the purple group while I work with the rest?" (Olaly, field notes, October 7, 2020). The purple group consisted of the higher-level students and not my usual students needing support. He opted to work with the students needing support to implement the strategies we had discussed in our post-observation conversations.

David gradually gave me more responsibility in the classroom. He shared some tasks that he had handled exclusively at the beginning of the study. During one pre-observation conference towards the end of the first phase, he suggested, "What about you review the warm-up as I check the homework or whichever one you prefer" (Olaly, field notes, March 12, 2020). After a classroom observation on March 3, 2021, I realized that some students were not keeping up with notetaking. I asked David if it was okay for me to write down essential facts on the whiteboard for the students to copy as notes. David agreed, and it was then that we started using the verbal prompt "Monkey See, Monkey Do!" to signal to students that whatever we wrote on the whiteboard needed to go into their notebooks. We observed that sometimes the class was too fast-paced for most students, including those who did not

receive learning support. A pre-observation conference held on March 28, 2021, yielded the following conversation: "David, today I noticed that Peter, Mary, and Aisha were having difficulty keeping up with the class. After some time, they stopped taking notes. What about we continue incorporating more brain breaks during the lesson? I think it will help them focus better." David responded by saying, "Of course, let's do it for everyone; we can work in a 3-minute break for them to use the bathroom or drink some water."

In the course of the first phase, I felt more comfortable giving suggestions on assessments and how best to support the students needing learning support. After proctoring several assessments for students with learning needs, it came to my attention that I could contribute to the editing of the assessments to make them more accessible to the L.S. students. I suggested to David that we needed to reflect more on how best to write the assessments so that they were accessible to all students and not just the students receiving learning support. David wrote the end-of-year assessment as usual, and I reviewed it. However, this time around, I completed the assessment to get a first-hand feel for what David was asking them to do and made edits after understanding which questions might be difficult to understand. I edited the questions and shared the changes with David. He appreciated my contribution. "It is important that you are putting yourself in the kids' place and can highlight the areas I need to change. I know it would help if most teachers did what you are doing before giving students assessments" (Olaly, field notes, March 30, 2021).

Sometimes, the pressure to cover important content outweighs thoughtful dialogue (Boaler, 2000). For example, on one occasion David expressed his frustration about the direction I took the class by asking a clarifying question that engendered a discussion from the students that he had not envisaged. David had wanted to teach the students about expanded notation. He was about to move on in the lesson when I intervened with a question and proceeded to ask him if I could write on the whiteboard to explain what I meant.

The question created much discussion and participation from the students, and this used the lesson time he had counted on for other activities. After the class, he spoke to me about it. "Norah, I do not know how to say this, but what happened in class today with the problem was good, but I must say that it was not where I wanted to go with the lesson. I had planned to close that lesson today, but that was not possible" (Olaly, field notes, November 4, 2021). David was clearly upset but remained calm. He had allowed himself to be vulnerable, and that was a major step in the progress of our co-teaching partnership. I apologized by saying, "I am so glad you let me know. I am sorry that the lesson took a tangent. I did not plan for it to go that way. Please, next time, if you see me going outside of how you want the lesson to go, give me a cue so that we can keep to the course of the lesson as you planned it. Also, I am pleased that you felt open enough to let me know. It is better than holding it in. I appreciate the openness" (Olaly, field notes, November 4, 2021). In this incident, my choice to elaborate on a concept may have increased student engagement but conflicted with David's prioritization of class time. The moment marked a point of conflict in our co-teaching partnership. We needed a more in-depth discussion of the issues to avoid conflict and allow for more student exploration.

Nevertheless, during the next class, David informed me that he had reflected upon the incident and had used the discussion points that emerged to challenge some of his students in another class. I was relieved that my contribution, albeit disruptive, was not in vain. The conflict and pivotal discussion we had after the incident marked the birth of our ecology of co-teaching as we moved through Phase 2 and the end of the study. We had reached a critical turning point in what had been an inequitable co-teaching partnership.

Conclusion

Despite our progress, issues of relational connection and inequitable partnerships surfaced during the Phase 1 of the study. In Figure 5, I depict my perspectives on the status.

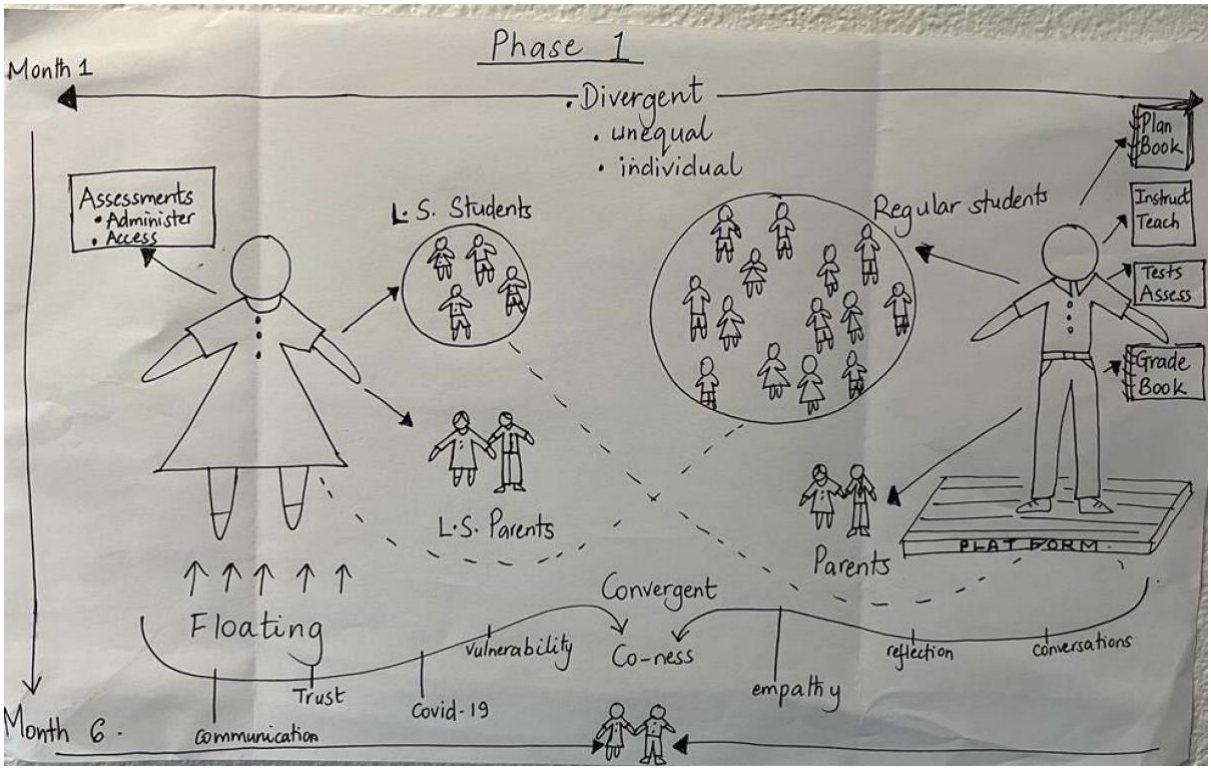


Figure 5. Illustration depicting the state of our co-teaching partnership at the end of Phase 1.

of our co-teaching partnership at the conclusion of Phase 1 of the study, and I summarize my observations. The images indicate that our co-teaching collaboration changed significantly during the 6th month when David and I spent more time talking, reflecting, and preparing.

The COVID-19 epidemic pushed us toward greater collaboration in planning. We became more vulnerable with one another during our regular discussions. We built trust, which meant I had more access to typical pupils rather than just learning support students. By the end of the first phase, David and I had taken on additional responsibility for all kids. The image clearly shows the areas of responsibility that we each had. I was primarily responsible for ensuring that the L.S. students' tests were accessible and that their access arrangements were provided in a separate environment. David, on the other hand, was in charge of planning, instruction, assessment writing, and grading. I mostly talked with the parents of students with special needs while David communicated with the other parents. The picture depicts how, at the start of the study, David and I were working in opposite directions as individuals rather than as a team. By the end of Phase 1, though, we had formed a "co-ness" and were progressively advancing toward co-creating an ecosystem of co-teaching.

In Figure 6, David depicts our co-teaching relationship in the first phase of the study as several rafts paddling down two distinct rivers. Different groups of students occupied the rafts. The L.S. students are in the smaller rafts while the regular students are in the larger rafts. River L.S. Teacher A refers to my river, and David's river is River MX Teacher B. Between the two rivers lies a bridge that David defined as the co-teaching workshop held at the start of the 2018–2019 academic school year. The workshop began to bridge the gap between the two rivers, but as the school year progressed, the river's tides became stronger than the bridge's ability to connect the two rivers. David demonstrates that there was disparity in terms of resources, time, and student needs. David's artwork depicts the rivers and rafts colliding with rocks labelled "administration" as they flowed and as the students proceeded

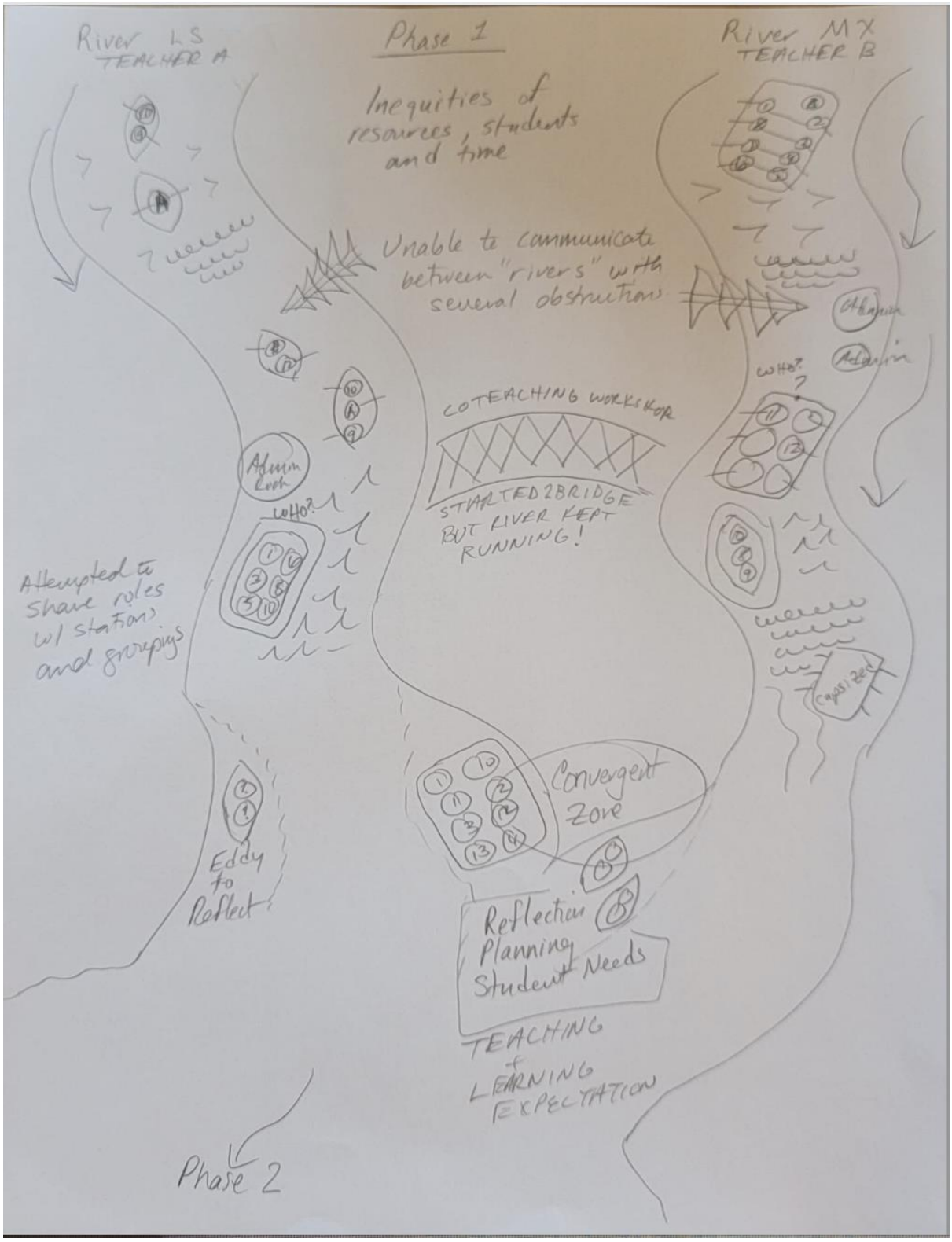


Figure 6. David's illustration depicting the state of our co-teaching partnership in Phase 1.

along the various paths. One student raft capsized. David explained that the victims of the capsized raft were students with special needs in L.S. and some typical students who were unable to meet the virtual learning standards during the COVID-19 pandemic. He demonstrated how we attempted to share roles by working in stations and small groups.

However, when we reached an eddy in the river, we stopped to rest and reflect before continuing our journey. The eddy appears toward the end of the first phase. Furthermore, David demonstrates that when we established our teaching and learning standards and began reflecting, planning, and developing a greater awareness of our students' needs, both rivers began to converge. According to David's image, by the time we reached Phase 2 of the study, the two rivers had merged into a single stream moving in the same direction.

In summary, the categories of uneven partnerships, decision making, and communication served as starting points in charting the path toward our co-teaching ecology in the second phase of the study. The interaction of students and between the two co-teachers was a critical force for shifting instruction. Not only do we believe that the students benefited from the joint efforts of two adults, but they had the benefit of watching us collaborate as we worked through the co-teaching dance steps.

We made small gains in the nature of our communication and reflective practices. The small gains paved the way for David to accord me some responsibility in the classroom. David and I felt that we were on the path of strengthening our practice and improving student learning. In the next chapter, I review themes and findings that emerged from the analysis of Phase 2 of the study.

CHAPTER 5: PHASE 2 ANALYSIS AND FINDINGS

David and I were finally starting to develop an ecology of co-teaching in our classroom, a term that the school developed but did not fully enact. We understood this concept as comprising the interactions of the teachers with the students and parents with the support of the administrative personnel to create an inclusive setting where all students can succeed regardless of their needs. When we began our co-teaching partnership, we relied on our professional expertise and experiences from our personal educational backgrounds. However, while we had shared conceptions of co-teaching, clearly our educational backgrounds influenced our ways of working together. We needed to step into the co-teaching role differently. We navigated the second part of the study demonstrating more empathy and respect for what each of us was going through—David had a huge teaching load, and I was going through a difficult time in my department and with the administration. We deliberately forged interpersonal relationships with our students to create a connection with them that allowed us to easily express our expectations and support for all of them.

As a result, David started listening to me more, and I become a warm demander on what I thought was best for meeting the needs for all students in our classroom. David and I found ourselves in a co-teaching haven; a safe place where we could each share our knowledge and skills, be vulnerable about our challenges and fears, and grow professionally by finding new methods to reach all of our students. David appreciated the moments when our thoughts aligned and we would express it with a giggle, head nod, or eye contact. He appreciated these moments because he valued my perspective, opinion, approaches, and experience. He found that these moments helped him believe in himself when we would have otherwise doubted or second guessed himself. We desperately wished we could share our story and experiences with the rest of our colleagues through demonstration and not just mere interviews in small groups during professional development sessions or staff meetings. The

strength of our partnership resided in our daily conversations and reflections about our day-to-day work, our successes and failures, and how we refocused after facing challenges. We watched, in real time, the co-development of a purposeful and effective co-teaching partnership centered on and guided by the needs of our students. We were exultant during the second phase of the study, which will have an effect on our professional perspectives for the remainder of our careers.

I conducted part of the second phase of the study at a time when the school was recovering from the disruptions caused by the COVID-19 pandemic. The school put in place health and safety restrictions that necessitated that we alter the entire setting of the classrooms, teacher interactions with students, and our ability to co-plan and co-teach. We responded to these restrictions by starting the school year using a hybrid model. Students remained in homeroom pods, but the co-teacher and I could not be in the same space because of the social distancing protocol. During the second phase of the study, despite the disruptions the school had experienced from low and late student enrolment, teachers sometimes stuck in their home countries after leaving due to the pandemic, and many students choosing to stay at home for fear of contracting the virus, the school attempted to put in effect three different instructional models in a bid to get around the effects of COVID-19. The teachers and students used health and safety instructional protocols that the school administration enforced. As a result of this development, we provided innovative instruction to students who were participating in online, face-to-face, or hybrid model lessons.

During both phases of the study, David and I had conversations about classroom observations and our day-to-day reflections; these data provided opportunities to discuss student work, assignments, assessments, and projects. As the study progressed, we found that we depended on and valued the regular reflection; we learned from each other and discussed how reflection had impacted our individual and collaborative practices. Our final meeting

focused on how our co-teaching partnership had changed and grown and the benefits we perceived our students had experienced through our partnership. Together, we reviewed the research questions to find out to what extent we had been able to answer them and what data we had that supported the findings.

Phase 2 Activities

Phase 2 of the study occurred over four months (April–June 2021, August 2022). I followed the same procedures I had used in Phase 1; I conducted classroom observations, post-observation conversations, informal planning, and debriefing conversations before and after class that I documented with field notes. We shared stories about our professional journey, and I wrote reflective memos to document my thoughts about the process and stories we shared. Due to the COVID-19 pandemic, the school had virtual lessons before moving on to a face-to-face pod system.

Therefore, we spent part of the second phase of the study instructing in a pod system format. The format was not ideal because the students were simultaneously in two different classrooms. Students who would have once been in one homeroom were split into two pods and had to remain in their pods for instruction and breaks, never mixing under any circumstance. This was done as part of the health and safety protocol that was intended to reduce student contact and facilitate the tracing of infections if a member of a pod got the virus. David and I moved back and forth to the adjacent classrooms to keep the students on task. The students had either one of us at any given time. However, given the experiences that David and I had in the first phase, I focused on building upon our progress in establishing a functional way of communication that saw me taking a more participant rather than observer role in the math class.

During this phase, I collected data using class observations and post-observation conferences, mainly in short conversations, reflective memos, and field notes. Since I was in

the classroom with David, I scheduled observations so that the students' learning was not disrupted. I conducted post-observation conferences with David after lessons or during agreed-upon times for the co-teacher interaction and data collection) and wrote reflective memos.

I present Phase 2 data in tables, figures, and other visuals (Creswell & Creswell, 2018; Saldaña, 2016). In Table 4, I present our co-teacher interactions. In Table 5, I display the categories and themes that emerged from Phase 2 of the study. Then I discuss how the categories and themes emerged. Finally, I present the study's findings. Because of the methodology of ethnography and autoethnography, I detail the findings based on the stories and interchanges that we had during Phase 2 of the study.

Phase 2 Themes

Transitioning from isolated to shared and equitable teaching practices and establishing relationships among our pupils, their parents, David, and myself, were crucial changes from Phase I to Phase II. We created an ecology of co-teaching through a shared investigation of our instructional practices that would benefit all of our students as a result of regular and effective communication. Together, we shared responsibility and made decisions regarding the best way to improve collaboration, invest time in planning and reflection, and provide a safe environment for our students to thrive. We increased transparency and established clear structures that made our complex work more empowering and rewarding for our students and us. We established a mutually beneficial relationship based on the transmission and exchange of knowledge in our respective fields of expertise.

David and I continued to develop a strong personal and professional relationship through open communication, a consequence of the trust we established, which became apparent at the conclusion of Phase 1. Table 5 shows the data collected in Phase 2 and

Table 4

Co-Teacher Interaction and Data Collection in Phase 2 (April 2021-June2021, August 2022)

Activity	April	May	June	August
Classroom Observations (n=4)	●	●	●	●
Post- Observation Conversations (n=4)	●	●	●	●
Informal planning and debriefing conversations (n=3)	●	●	●	●
Sharing stories (n= N/A).			●	
Reflective Memos (n=8)	●●	●●	●●●	●

Table 5

Phase 2: Emerging Themes and Categories

Themes	Categories	Frequency			
		David	Norah	Together	Total
Shared Responsibility 48%	Pronoun Usage: We	60	35		95
	Pronoun Usage: Our	57	48		105
	Lead Role	73	42		115
	Assistant Role	14	23		37
Subtotal		204	148		352
Collaborative Decision-making 25%	Instructional Planning and Delivery	5	2	40	47
	Assessment Design and Delivery	8	1	23	32
	Grading	8	6	30	44
	Feedback	5	3	55	63
Subtotal		26	12	148	186
Strengthening Interpersonal Relationships as Co-Teachers 27%	Sharing professional journeys	1	1		2
	Nonverbal communication	14	16		30
	Who speaks, Who Listens	51	32		83
	Shared Reflection			80	80
Subtotal		66	49	80	195

highlights the themes and categories that surfaced. Figure 7 represents the data in Table 5, which shows that shared responsibility and communication contributed to enhancing our co-teaching. As a consequence, we made collaborative decisions in instruction, assessment, grading, and feedback.

In the second phase of the study, we shifted from the traditional paradigm of a lead teacher and a supporting teacher to a co-teaching model with shared responsibility for debating the work, planning, delivering instruction, grading students, and providing feedback. Our enhanced communication with students and each other fostered the shifts in practice, which included shared responsibility, collaborative decision-making, and communication.

Shared Responsibility

Evidence from Phase 2 of the study provided a strong indication that we had moved from an uneven distribution of planning, teaching, and assessment responsibilities in the math class to more shared practice (48% of the data). We employed a wider range of co-teaching models: station, parallel, teaming, and alternative or supplemental teaching models (Friend, 2003). During the first phase, the co-participant was the leading actor in the classroom, and I was primarily a passive participant; however, I assumed the lead role in the classroom more often in Phase 2 of the study. In the data from the classroom observations, post-observation conversations, and reflective memos, a key indicator of the shared leadership was the use of particular language elements to discuss our work and to talk to our students, their parents, and our colleagues. I analyzed the use of pronouns and provided evidence of how the codes "I" and "my" changed to "we" and "our," as the roles of lead and assistant shifted.

Pronoun Usage: We and Our

David and I transitioned from isolation to collaboration and recognized each other as equal classroom contributors. We had a high frequency of "we" and "our" pronoun usage (200 instances). When David spoke to me about our work—lesson planning, instruction,

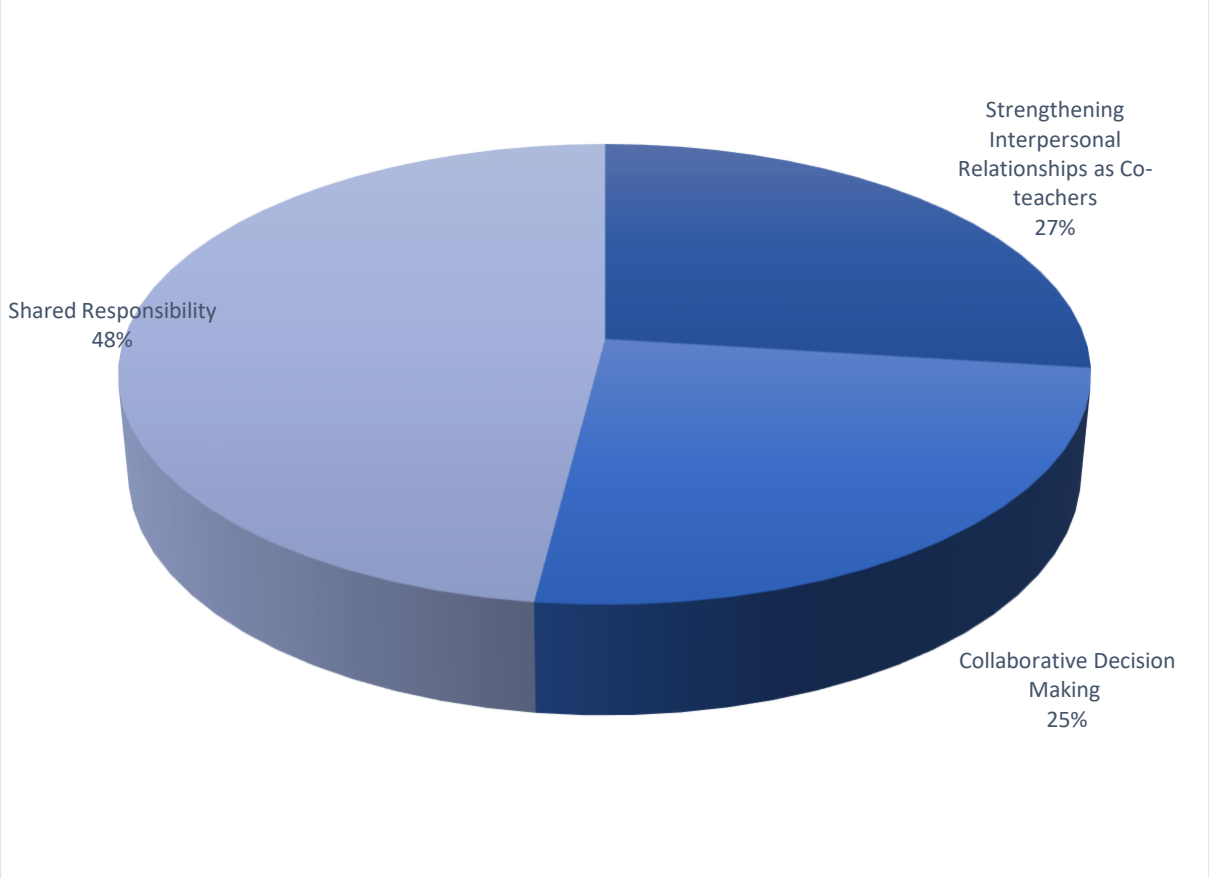


Figure 7. Phase 2 data indicated that partnership through shared responsibility and strengthening our interpersonal relationship as co-teachers are necessary for teaching.

assessments, grading, and feedback—he used the pronouns "we" and "our." When he addressed the students, their parents, and our colleagues (with me now assuming the role of co-teacher), he used the personal pronoun "we," not "I" as he had done in Phase 1. The pronouns denoted a sense of shared classroom ownership (our classroom) and parity as co-teachers. By the change of pronoun usage in Phase 2, David and I demonstrated that we had co-responsibility for our classroom and the pupils. As a result, our students, their parents, and our colleagues began referring to us as a unit rather than as individual teachers.

Communication with Students. David referred to me as a co-teacher when addressing the students. He utilized the pronoun "we" to describe the instructional tasks, for example, "We will both check your ATL diaries and then your homework"; "When we graded your assessments..."; or "Please look at your papers carefully, consider the feedback we gave you, and make the necessary changes" (Olaly, field notes, April 17, 2021, May 13, 2021, & May 20, 2021). We altered our communication with our pupils. When he discussed class expectations, he stated, "We expect you to first check in with your group members before you ask either Ms. Norah or me" or "Ms. Norah and I have decided to split you into groups based on your levels of achievement, so we will now have the green, blue, and purple groups" (Olaly, reflective memo, June 8, 2021).

I used the words "we" and "us" when speaking to the pupils and David. For example, "When you are finished with your work, please bring it to either of us"; and "Mr. D. and I have been discussing how to make the Get Cooking Project more interactive and depicting a real-life experience" (Olaly, field notes, June 19, 2021 and August 24, 2021). In Phase 2 of the study, we complemented each other as homeroom teachers in communicating with homeroom students. Our shared pastoral role helped us build empathy for our students and understand them in a more personal way. We carved out time during homeroom to share our classroom values, and our students benefitted from having us as both homeroom and math

teachers. For example, I greeted one student in an email, “We hope you are doing well. Our homeroom is checking on you to find out if all is ok because we have not seen you in homeroom today. Please let us know if there is anything Mr. D. or I can do” (Olaly, email, August 22, 2021). David thanked me for my effort.

As David and I communicated with students using “we” language, students began sending us joint emails. They sought our advice regarding a problem they encountered in math class, such as homework or neglecting to have an assessment signed and addressed that email to both of us. The students comprehended our instruction that all communications must be addressed to both David and me. David created this expectation to demonstrate to the students that we were both their instructors, and he intentionally shared classroom responsibility with me. At times, we required students to resend emails if they were not addressed to both of us or if one of us was not copied on the email.

Communication with Each Other. We frequently sought one another's guidance on how and what to communicate with parents and co-workers. We wanted to ensure that we were sending consistent information to parents. David demonstrated his commitment to our co-teaching partnership by explicitly involving me. For example, he requested that I review his emails before he sent them or asked my opinion on the email content. In turn, I sought David's assistance in addressing difficulties raised by a student in our math class. In one instance, a student failed to return a signed probe. Before approaching the student or his parents, I emailed David and told him, “We need to reply to the parent’s email. Let’s see if he will have the probe signed” (Olaly, email, May 11, 2021). David responded, “…No news from parents in regards to the Probe and its opportunities. Per Judy’s opinion, no need to reply, but I still think I want to reply, and I will mention basically what you wrote on WhatsApp” (David, email, May 11, 2021).

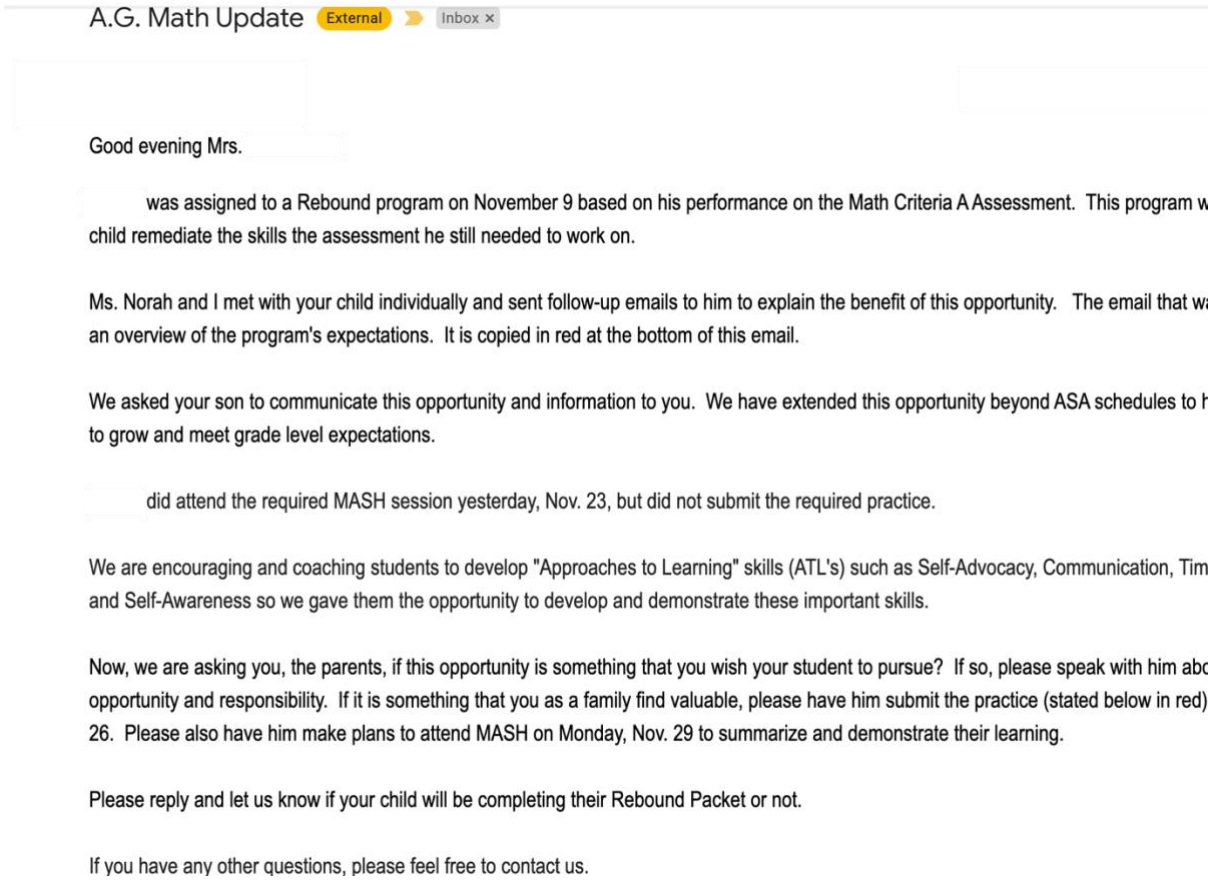
Communication with Parents and Colleagues. In Phase 1, David was the main communicator with parents and colleagues. I communicated with parents of students with learning needs and colleagues about matters directly linked to the students' support plans. However, in Phase 2, David's conversations, emails, and instructions always included me as his co-teacher, including a message that was sent to the parents of one of our students and contained the pronouns "we" and "us" (see Figure 8). The wording in communication was a distinct change and represented unity of voice by using the pronouns "we" and "us" or, in some instances, "Ms. Norah and I." As stated earlier, David and I collaborated to compose emails, agreeing on the content we wanted to communicate beforehand. Whenever we composed one independently, we asked the other for input before we sent it.

Evidence of the use of "we" and "us" and the fact that David and I were operating as a team surfaced when the homeroom teachers of the other Grade 6 class invited us to a sock hockey competition during homeroom. David's response to the invite read, "If it's ok with Ms. Norah, I'm in and will be there!" (David, email, August 30, 2021). He demonstrated to our colleagues that the decisions we made related not only to our math class but also to our shared homeroom.

Parent Communication with Us. Furthermore, parents began to realize and accept our co-teaching ecology and engage with David and me about their children. For example, a parent contacted both of us regarding a math tutorial lesson for their daughter and addressed the email to both of us, indicating that they were fully aware of the ways we shared responsibility.

Roles

David and I knew that an ecology of co-teaching would exist in our classroom when we shared instructional responsibility for our joint class and taught the required curriculum



A.G. Math Update External Inbox ×

Good evening Mrs.

was assigned to a Rebound program on November 9 based on his performance on the Math Criteria A Assessment. This program w child remediate the skills the assessment he still needed to work on.

Ms. Norah and I met with your child individually and sent follow-up emails to him to explain the benefit of this opportunity. The email that wa an overview of the program's expectations. It is copied in red at the bottom of this email.

We asked your son to communicate this opportunity and information to you. We have extended this opportunity beyond ASA schedules to h to grow and meet grade level expectations.

did attend the required MASH session yesterday, Nov. 23, but did not submit the required practice.

We are encouraging and coaching students to develop "Approaches to Learning" skills (ATL's) such as Self-Advocacy, Communication, Tim and Self-Awareness so we gave them the opportunity to develop and demonstrate these important skills.

Now, we are asking you, the parents, if this opportunity is something that you wish your student to pursue? If so, please speak with him abo opportunity and responsibility. If it is something that you as a family find valuable, please have him submit the practice (stated below in red) 26. Please also have him make plans to attend MASH on Monday, Nov. 29 to summarize and demonstrate their learning.

Please reply and let us know if your child will be completing their Rebound Packet or not.

If you have any other questions, please feel free to contact us.

Figure 8. An email to parents where David speaks of both of us using “we” and “us”.

with shared ownership, pooled resources, and shared responsibility. Data collected after classroom observations and reflection memos indicate that, compared to Phase 1, I played the lead teacher role in Phase 2. I was responsible for instruction, taking attendance, providing students with feedback, and communicating with parents. I assumed an assistant role in lesson planning, assessment development, and grading. Depending on the situation or our availability in class, we alternated between the roles of lead and assistant.

Lead Role. During Phase 1, David assumed the lead role 56 times while I only did so four times. However, in Phase 2 the role , I assumed the lead teacher role in 42 instances, and David did so 56 times. David and I took the lead role in class when we used station, parallel, teaming, and alternative or supplemental teaching models of co-teaching. During these lessons, when we engaged in a variety of instructional techniques, David and I divided content and students. Each of us instructed a portion of the content to a group, and then the groups either rotated or David and I taught half of the students simultaneously. We then divided the students into two groups, and each teacher taught the same content using a range of instructional strategies. Sometimes we collaborated to instruct the students using team-teaching. We enjoyed this co-teaching model the most as we easily bounced ideas off each other and clarified or expounded on ideas or concepts simultaneously. We took lead instructional roles when either one of us pulled a group of students aside for pre-teaching, enrichment, tiered intervention, and/or a special content project. David entrusted me to teach the class when he was away as evidenced by a message he sent me saying, “Thank you for teaching the class solo” (David, email, May 13, 2021). When David was absent or busy with another task in class, I took the roll and informed him of who was absent.

Unlike Phase 1 in which I did not participate in the grading or feedback process, during Phase 2 we both graded and provided students with both oral and written feedback. For instance, I told the students, "Mr. D and I are very concerned about your improper use of

notebooks. I will demonstrate how to divide your page and write your class notes when I visit your table" (Olaly, field notes, June 8, 2021).

Assistant Role. Due to the lack of planning time in our schedules, David and I sometimes did not collaborate on lesson planning. Despite the hiccup, we alternately adopted assistant roles. I assumed the role of assistant 66 times during Phase 1 but only 23 times during Phase 2. David, who only assumed the role of assistant in six instances during Phase 1, did so 14 times during Phase 2. David planned lessons, and I typically reviewed them. He created the majority of the assessments, and I provided feedback. On some occasions, we worked to ensure that the level of difficulty was accessible to all students. My work on assessment design and refinement was typically secondary. My role in grading examinations was occasionally that of an assistant. David would initially grade the papers and then ask me to moderate or revise his grades (see Figure 9).

By sharing classroom responsibilities, we demonstrated our interdependence. We showed the students, parents, and colleagues that we were unified partners by validating each other's ideas and by supporting one another's decisions. The nuances of our word selection were significant. We substituted “we” and “our” for “I” and “my” whenever practicable. Our students, their parents, and our colleagues, embraced and strengthened our unity.

Collaborative Decision-making

Our roles shifted in Phase 2 toward collaborative decision-making; I moved away from only observing and monitoring to making crucial decisions with David. Our collaborative work served as an effective catalyst for instructional change in our math classroom and homeroom. In Phase 1, David made most decisions concerning instruction, assessments, grading, and feedback (17%). In Phase 2, we collectively made 148 decisions or 80% of all decisions in that category.

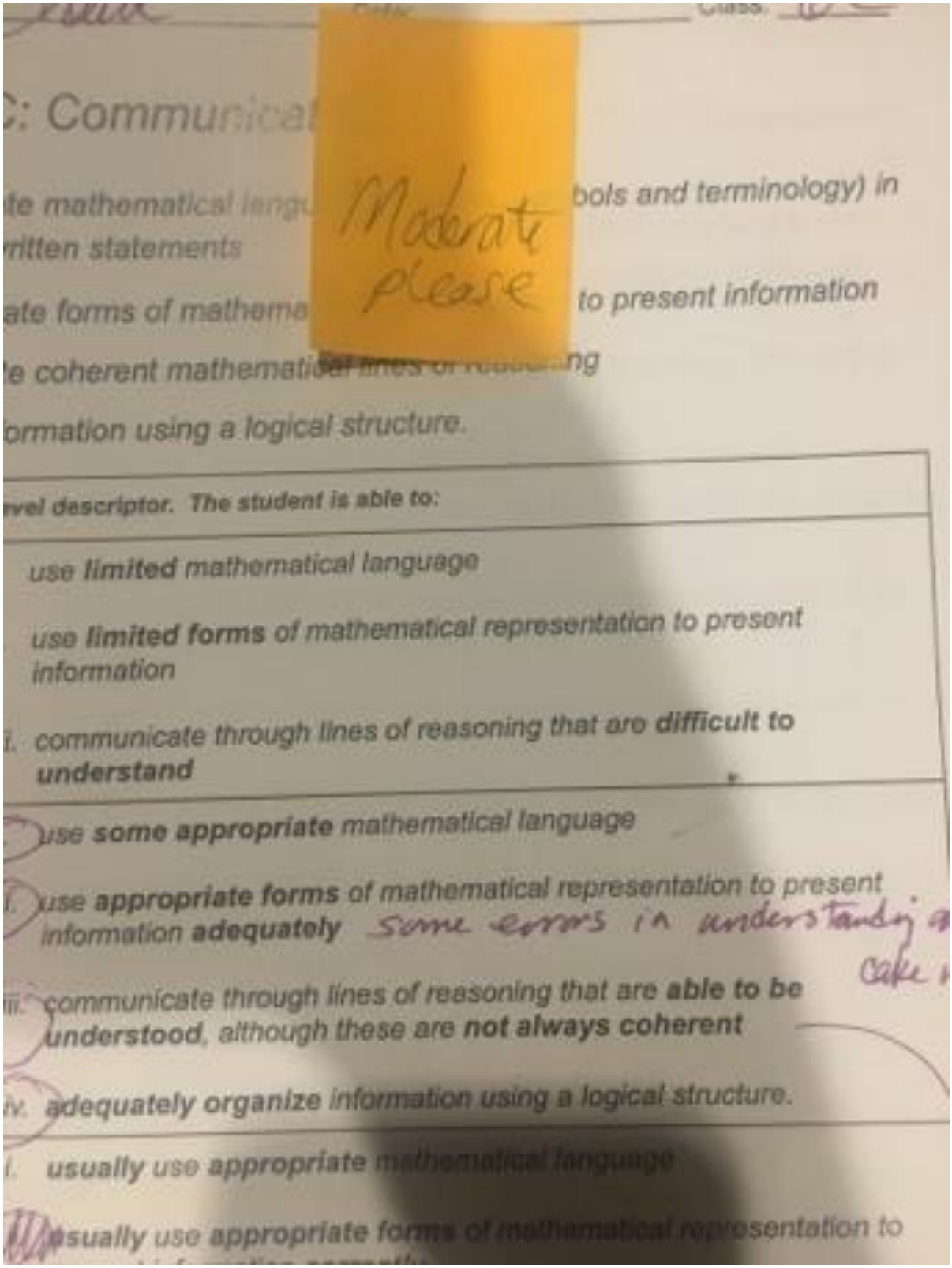


Figure 9. Sample of student assessment with David's note requesting me to moderate it.

As indicated previously, my role in the first phase of the study consisted primarily of observation and monitoring students who required assistance. David mainly solicited my opinion regarding testing accommodations for students on the learning support roster. In Phase 2, however, David and I not only shared responsibility for the classroom roles but also made decisions collectively that informed these roles. Even for the after-school program, Math Lab, we decided who would work with which group of students. The data that support this category in the first phase reappeared in the second phase as categories for the emergent theme of collaborative decision-making: instruction (planning and delivery) and assessment (design, delivery, grading, and feedback).

Instructional Planning and Delivery

David and I agreed that the reason our instructional planning and delivery were more collaborative in the second phase than in the first was because we established the objectives and expectations for our collaboration and worked to meet them. We shared the platform for planning and delivering instruction and distanced ourselves from the individualism that plagued us during the study's initial phase. We utilized a variety of co-teaching models and shared resources, expertise, and responsibilities equitably (Olaly, field notes, April 1, 2021). By making collaborative decisions about planning and sharing instructional roles, we provided students with rich content, developed our professional understanding of co-teaching strategies, and enhanced approaches to learning (ATL) skills of our students.

Content to Students. David and I collaborated on when to plan and on delivering instruction 40 times out of 47 instances for which I collected data on instructional planning and delivery (6% of total data). David shared unit plans, and we discussed the essential material that students should learn and the significance of these topics or skills. For example, David sent this email before the first day of school: “Hi Norah, Looking forward to seeing you tomorrow! Here is a plan of what we can do. The following class we will jump into

content. If there is anything you'd like to do different, please let, me know. You rock, d" (David, email, August 8, 2021). Before we taught a lesson, David sought my input for the lesson plan. I contributed my thoughts regularly.

For example, in an email early in Phase 2, this general tone continued from Day 1 of classes: "Here is the plan [google doc]…. If there is anything you want to do differently, please let me know. You rock" (David, email, August 11, 2021). As a result, I felt included even when we did not plan every aspect of the lesson together.

We increased our collaborative practice and strengthened our professional learning of content and its delivery. When David was unable to come to work, I taught the lessons without a substitute teacher. During part of the COVID-19 pandemic, David was out of the country and sometimes requested that I manage the distance learning classes. I had the freedom to make decisions about content and process of the lessons.

Approaches To Learning (ATL) Skills Development. We had made a collaborative decision to explicitly teach our pupils ATL skills, values, and ways of thinking that they could apply in other classes, at home, and in school social interactions. By establishing interpersonal connections with them, we not only held and communicated high expectations for all students, but we also assisted them in meeting expectations. David and I then met with students who needed more support. Throughout Phase 2, we saw an increase in students' use of and proficiency with their ATL diaries, note-taking abilities, collaboration, reflection, and organization. David was especially curious about how our students performed in other courses because we felt obligated to "extend learning beyond our classroom"; however, the transfer to other classes was limited.

Professional Learning. As our work became more collaborative in Phase 2, we improved our instructional practices by providing each other with ad hoc professional development. We defined our mission of professional learning as fostering an inclusive

learning environment for ourselves and our students. After the school-wide co-teaching workshop in November 2018, David and I decided not to wait for the school to offer a workshop on how to manage our co-teaching partnership in our own math class. Throughout the duration of the study, I shared with David pertinent information, and we sought to share and improve co-teaching strategies.

The composition of the two classes we taught was distinct in terms of the students' learning needs and behaviors. As a result, planning for each required numerous discussions and revisions of our teachings and delivery strategies. To make decisions in the best interest of the pupils, we consulted after every lesson and sometimes even during the lesson. For instance, David once asked me, "What do you think about the homework today?" I responded, "How about we only give them parts B and C? Today they did a lot of work in class, so B and C should be sufficient practice" (Olaly, field notes, May 12, 2021). On another occasion, when David suggested that we let the students give each other feedback in a show-and-tell format instead of collecting and grading their papers ourselves, I responded, "I think that's a fantastic suggestion. It will also encourage typically quiet students to speak up (Olaly, field notes, April 15, 2021). As a result of collaborative decision making, we improved our professional capacity in co-teaching by relying on each other’s expertise, insight, and learning as we engaged more with the work and our students.

Assessment: Design, Delivery, Grading, and Feedback

Due to the absence of formal planning time, we convened during our free periods. We reviewed the upcoming student assessments during these times. As mutual trust and respect for each other's teaching skills grew, David and I shared responsibility in assessment preparation, delivery, grading, and feedback. We shared the conviction that assessments drive instruction and that our teaching and learning objectives must be aligned accordingly. We realized that we had to be intentional in our preparation, presentation, grading, and feedback.

During the second phase of the study, we devised a nearly seamless mechanism to ensure that we arrived at decisions on assessments, grading, and feedback as a team. Our ability to compose differentiated and sufficiently challenging assessments improved. We identified students who were not mastering the intended skills or concepts and shifted to immediate and structured intervention.

Assessment Design and Delivery. David and I collaborated 23 times out of the total 32 occasions on which I collected data on assessment design and delivery. At the outset of each unit, we discussed the unit assessment and determined the formative assessments for student learning, including entry and exit tickets, homework, and short quizzes or unit probes for formative assessments. David and I engaged in lengthy discussions regarding the questions for the assessments. I completed the assessment to ensure that the questions were well-written and non-ambiguous.

In an email response to me, David said, “Indeed my hope was to return their feedback yesterday, but the class did not make it to the finish line. Yes, let’s work through the Criteria A during our planning” (David, email, August 20, 2021). If David composed the assessment, I evaluated it prior to distributing it to the students. He emailed me: “Here is the Criteria B that we will give on Monday/Tuesday. I would really appreciate any feedback on this summative. I apologize for the lateness. I will send it to the printer at 8 a.m. on Monday. Thank you” (David, email, August 30, 2021).

We discussed how to administer assessments and included students in the decision-making process. The access provisions for students with learning needs required that they take their exams in a separate location. However, because David and I made accommodations for good test-taking environments in the classroom for all students, some students opted to take their assessments in the regular classroom with their peers rather than in the pull-out room. David inquired, "What do you think about requiring all students to utilize cardboard

dividers during the math assessment? You will be able to remain and assist all the students and then provide extra time during your L.S. class" (Olaly, field notes, May 3, 2021). Designing assessments that challenged all student levels and providing a conducive testing environment for students to remain with their peers enabled to us to ensure equity and success for our students.

Grading and Feedback. David and I co-designed and decided on the grading rubric. We shared taking the lead to grade student formative and summative assessments. Whenever David graded papers for the class we did not co-teach, he would ask me to take a second look at a few papers, usually for students with very high and low grades, and give my input. In one instance he said, "what do you think of these students' responses? " (Olaly, field notes, May 31, 2021). At times, David would request that I moderate the students' work, or we would discuss a student response so that we could give a balanced grade. He wanted us to moderate student work to ensure consistency and thoroughness of designating levels and quality of student work. David wanted us to confirm and agree with each other's grades, observations, and comments. Through the process of moderation, we assured uniformity of grading, and our students knew that that we were both involved in giving them grades and feedback, which demonstrated equitable responsibility in our co-teaching partnership.

In Phase 2 of the study, David and I agreed on a feedback system for students. We provided students with oral feedback during instruction, homeroom, or during after school Math Lab. If we had not consulted about an issue before the lesson, we found time to calibrate before we gave collective feedback. If I graded a student's paper before David did, I would leave him a note on the proposed grade for his reference or highlight my thoughts on the student's work (see Figure 10). The students saw both our comments on their formative and summative assessments. The students understood that a joint decision by both teachers had gone into awarding them their grade.

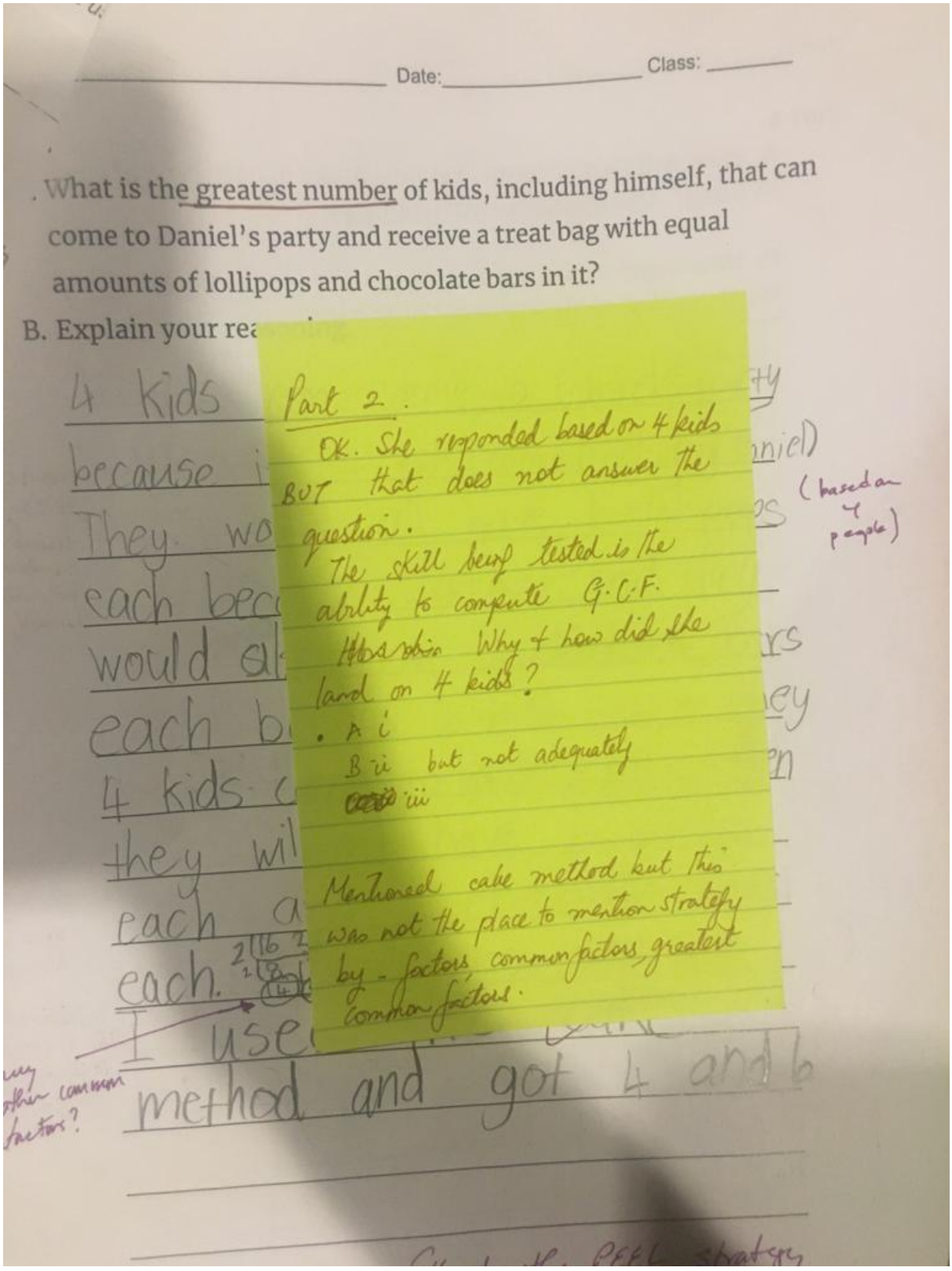


Figure 10. Sample student assessment with David's comments and my thoughts.

Strengthening Interpersonal Relationships as Co-Teachers

David and I increasingly exhibited benevolence, dependability, honesty, and candor toward each other and our pupils. As a result, we took risks and were more vulnerable with one another by extending trust (Tschannen-Moran & Hoy, 2000). We accomplished this by sharing stories about our professional journey together. David and I utilized what we had heard during the story-sharing session in Phase 1 to improve our communication. We utilized nonverbal communication more positively, balanced who spoke and who listened, and engaged in reflection on our work with each other and our students. Next, I explain how the data revealed our capacity to navigate and strengthen our interpersonal relationship as co-teachers.

Sharing Professional Journey Stories

Apart from our day-to-day sharing of stories, reflections, and thoughts, I had one last scheduled conversation with David toward the end of the second phase (June 2021) to discuss our professional journey during the study. We shared the several benefits we had reaped, including the areas of growth he had experienced from our co-teaching partnership. As we shared our daily lived experience and conversations about our professional growth, we managed to build our unique co-teaching model, and our homeroom partnership promoted our work as co-teachers in the math class.

Building Our Unique Co-Teaching Model. David and I knew that we had to create a unique ecology of co-teaching that applied to our classroom. We encountered the barriers of scheduling and David's teaching load to make decisions in our co-teaching practice that benefited all students. I shared the CLE axiom about how those closest to the problems are the best placed to find answers to their problems. According to David, our co-teaching partnership was unique because "we team-build, praise, hold students accountable, and live by example by modelling the right behavior" (David, field notes, August 9, 2021). In

addition, he felt that he experienced authentic co-teaching in our relationship. He added that he was assigned to co-teach with two other teachers, but those relationships were quite different:

> The keyword would be "different." I do not want to use the word "better," but because we have had time, we have had history, and we have been very honest with one another, we are higher functioning. We can get to where we want to go and see where the other person is leading. I do not know if what I do with other teachers is co-teaching. I think it is fine how we do what we do with the others, but if I am being candid, it is not co-teaching. What you and I do is co-teaching. We both take the lead whereas I am the leader, and the other person is support in the other situations. (Olaly, field notes, June 2, 2021)

David and I entered the co-teaching relationship with diverse individual and cultural mores, which we had to mesh to form a harmonious, co-taught classroom. We identified, stated, and combined our dissimilar personal and professional values in an effort to co-create a positive academic and social climate for all our students.

Homeroom Partnership. Another advantage that David mentioned as a positive impact on our relationship was that we were homeroom partners. He articulated his idea as follows:

> One good thing is that we have been fortunate that we have been homeroom partners, and that gives us just a little more time, especially when we are not talking about the curriculum stuff but the ATL, character development, and team building. I think those things go hand and glove with the curriculum. It also gives us better insight into each other's priorities and philosophies of education. So being homeroom partners has been advantageous. (Olaly, field notes, June 9, 2021)

As homeroom partners, we saw each other and one group of students every morning. The opportunity created another way to offer a different kind of connection for our students and each other. During homeroom, we made it a priority to develop ATL skills and a strong relationship with our students by making them know how they were our number one priority. We explicitly taught them the value of class unity, looking out for each other, and empathizing with each other especially when a member in their group was struggling with a concept or skill. We developed our professional learning in pastoral leadership and saw our students thrive in and out of the classroom.

As a result of sharing our professional journey stories, David and I realized that our day-to-day sharing of our growth was more supportive of effective professional learning than isolated workshops that are disconnected from our classroom environment (Bruce et al., 2010). Through frequent conversations, we developed an understanding of our pedagogical philosophies and how to contextualize the ecology of co-teaching. Consequently, our sustained professional learning was collaborative and classroom-embedded.

Nonverbal Communication

We acknowledged that effective communication is key to navigating and strengthening interpersonal and professional relationships, whether teachers are assigned to work together or have time to get to know each other (Honigsfeld & Dove, 2010). In our case, the school administration assigned us to teach together, but we had to make time to know each other. In the study's first phase, I communicated nonverbally, using gesture and signals to get David's attention. In Phase 2 of the study, both David and I used nonverbal communication regularly to express accord, surprise, contentment, and to show empathy and understanding to our students. We used facial expression, tone of voice, posture or movement, eye contact, gesture, touch, and signals. We observed how each of us interacted with students outside the classroom and learned from each other.

Signals and Gestures. In the first phase, I raised my hand to contribute to the class discussion or ask a clarifying question. The action would signal that I had something to say, and he would give me time to do so. If I needed to leave the room, I would use a "time-out" sign to communicate my intention. I used these nonverbal signs whenever I had something to communicate because I knew that the classroom was not “mine” and that I needed to signal to David who was the lead teacher. In addition, having a system of communication whereby we did not speak over or interrupt each other was essential.

In Phase 2, David and I communicated nonverbally nearly as often --14 and 16 times respectively. In reaction to a student's remark, we sometimes locked eyes to indicate agreement, make a split-second decision about our next move, or just expressed our shock and awe. When we realized we were thinking along the same lines, we nodded to each other and shared a chuckle. We often remarked in unison: "Great minds think alike!" much to the amusement of our students.

During the second phase of the study, I paid more attention to evidence for this category. Subsequently, I coded nods, smiles, laughs, posture, and movement. For example, David directed a student toward my desk. David came to my desk and stooped low to be on the same eye level as the student. He proceeded to say, "We waited for you to come for Math help yesterday, but we did not see you. We are providing these opportunities for you to improve your skills. Take the opportunity!" I added, "I even announced it at the end of English class so that all those invited to M.A.S.H. could remember and come" (Olaly, field notes, May 10, 2021). At first, I did not understand why David was stooping and why the student was coming up to my desk. Nonetheless, as soon as David spoke, I understood that he demonstrated a unified front through an understated nonverbal gesture and created a welcoming atmosphere for the student (Olaly, reflective memo, May 13, 2021).

We made smooth transitions during the session using only nonverbal signs, saving valuable class time. As we observed that some students needed to slow down to understand the information while others were catching on quickly during instruction of new content, David and I would look at each other, nod, and signal who would move to which small group of students (parallel co-teaching model) where we would take different groups and ensure that we met the needs of all students (Olaly, field notes, June 8, 2021).

Using nonverbal communication, we conveyed our feelings or expectations to our students. We used high-fives and smiles to show approval and appreciation for a job well done; smooth taps on the shoulder and close proximity to help students refocus; and direct, prolonged eye contact to convey disapproval of disruptive behavior and the importance of paying attention. We found that using nonverbal cues to send positive signals to our students strengthened learning and became an excellent technique for building relationships with them, which in turn improved our classroom management.

Interactions and Observations Outside the Classroom. David talked about his observations outside the math classroom. Some of what we did outside the classroom influenced how we cultivated our ecology of co-teaching. Observing how I interacted with students with challenging behaviors or allowing each other into the other's spaces for consultation or observation improved our mutual understanding. He mentioned that:

> During the Grade 6 trip to Zanzibar with students that were extremely challenging, hearing and watching how you not only interacted with them but how you guided them helped me to be more empathetic to your style and where you were coming from and your goals. So that helped me see how you managed to transfer all you did to the day-to-day learning of these students. (Olaly, field notes, June 9, 2021)

David highlighted another aspect of actions that enhanced our co-teaching ecology:

> I think we are super-efficient with our interactions outside of class as well. I know that we both felt comfortable stepping into each other's classrooms, for example, during each other's teaching schedules. Our doors are open to each other. You know, even in common things I am not a big WhatsApp user, but we have used WhatsApp for informal checks and reminders and bouncing ideas. (Olaly, field notes, June 9, 2021)

From nonverbal communication that represented lack of freedom in the class in Phase 1 to nonverbal communication that was more positive and extended to the students, David and I managed to make our classroom environment a safe space where even when words were not spoken, we knew what each other meant.

Who Speaks, Who Listens

As a result of shared responsibility in Phase 2, we shifted who spoke and who listened. In Phase 1, David took the lead role in speaking to the class and to the parents. I did much of the listening and only interjected when I was asking a question or needed clarification for particular students. However, in Phase 2, David and I had an almost equitable exchange of who spoke and who listened. As a result, we strengthened our interpersonal relationship as co-teachers as we recognized the value of sharing the discourse space. We developed trust and became more vulnerable and empathetic with one another.

Developing Trust. David believed our successful co-teaching pairing depended on developing a sense of trust. He summarized the importance of planning time for a successful co-teaching partnership as follows: "There is the trust factor, the collaboration factor, and taking the time to bounce ideas off each other" (Olaly, field notes, June 9, 2021). He elaborated:

> For us, all those things have evolved because we have had the good fortune of having and making the time; even though we have not had a lot of co-planning time set aside

> by the administration, we have made time over the years to develop that relationship of how we can best meet the needs of the kids by listening to and respecting each other's ideas. (Olaly, field notes, June 9, 2021)

David trusted me with teaching the class, assessment design, grading student work, and giving feedback. He valued my input on the composition of student groups and how we communicated with parents. That all takes time and vulnerability.

Vulnerability to Empathy. In Phase 2 of the study, David and I shared moments of vulnerability which made us empathize with each other and made room for having difficult conversations. At times, these conversations inevitably caused discomfort. In one instance, David expressed his displeasure with me when I referenced him in an email to a parent. I apologized right away as I realized my misstep. We resolved any threats to our interpersonal and co-teaching relationship by being honest and open with one another in times of vulnerability (see Figure 11).

David and I recalled defining moments during the study. I shared with him was how distraught I was about what I had experienced in one classroom. I found myself tearfully telling David that as I was going through the negative experience, all I could think about was that an incident like that one would never happen in his classroom. I stated that "the ability to be vulnerable with you is an indicator of the level of cohesion we have, and I think it helps with our teaching too." David exclaimed, "Totally!" (Olaly, reflective memo, June 11, 2021).

In turn, David shared a defining moment for him: "I was having a hard time transitioning into the co-teaching situation for a variety of reasons. I remember I took it out on you one day because of how the lesson turned out" (Olaly, reflective memo, June 11, 2021). Despite my reassurance that the issue was over, he continued,

> At the time, I took out my frustration on you, and it was not due to anything you had done wrong. I just wanted to be in control, and I felt that I had very little control in the

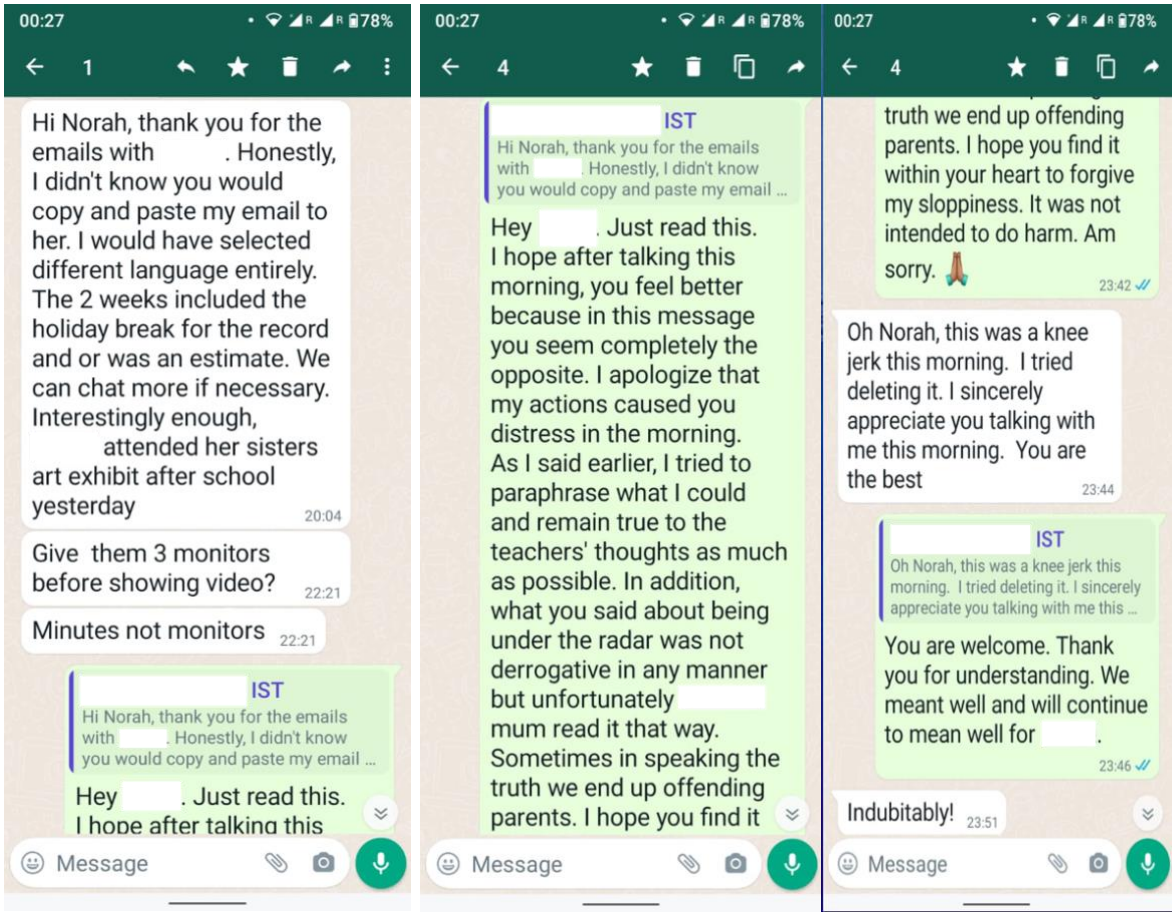


Figure 11. WhatsApp communication to me in which David was vulnerable about a situation.

> class and far less direction about what they expected us to do with the whole co-teaching. That does not excuse the behavior. But I did reflect on that, and it stuck with me, and I do not dwell on it. The second it came out of my mouth, it felt wrong. It made me realize that I am not the only one going through this. (Olaly, reflective memo, June 11, 2021)

David expressed that the interchange was the turning point in our co-teaching partnership because he became more conscious of it. He said that it was at that point that he started listening to me. His reflection was that interaction allowed him to learn and understand and develop a more open mind.

> Once you have the crack in the dam, you begin to listen to many things and keep your mind open to learn a lot of different ways. Furthermore, going back to our previous conversation, learning how to assess learning better, how to question better—I have become much better at them because of developing that open mind. I think sometimes going through a rough patch allows you to develop a sense of a team when you go through it together. (Olaly, reflective memo, June 11, 2021)

Our candid conversation supported the CLE axiom that conversations are critical and central pedagogical processes. David and I shared stories of our work, which helped us better understand each other. After talking to David that day, I understood the importance of genuine human connection and communication in shaping both our lessons and the students' learning. Our practice took a path of willing collaboration as a result of our willingness to be transparent, honest, and vulnerable.

Shared Reflection

In Phase 1, we determined the benefits of joint reflection learning. We continued to reflect frequently (n=80) in Phase 2 to comprehend our underlying motivations for our pedagogical decisions, to avoid misconception, and to gain trust in one another's

dependability (Murawski & Swanson, 2001; Pratt, 2014). Our shared reflection increased our level of collaboration and allowed us to articulate our co-teaching process in Phase 2.

Level of Collaboration. When I spoke to David about how he had seen our co-teaching partnership evolve, he stated that at the beginning, the collaboration was "close to zero as zero can be without sounding negative" (Olaly, field notes, June 2, 2021). He acknowledged that we could take a few minutes before, during, and after class to touch base with observations about individual students or the lesson. When I asked him to what extent he thought our co-planning affected our teaching, he was clear that building a solid relationship was due to our common approach to education. He noted that a critical factor was how we developed trust by observing each other's talking, questioning, and reacting to students. He said:

> We do this very well and very thoughtfully. We have mastered how to elicit the understanding we are trying to achieve, whether the learning objective or the collaborative learning, we focused on teaching them. I know I can do a better job of making the objective clearer both for the students and/or us, but I kind of take it for granted that we both know where we are going at this time. And we do, I think, do an exceptional job of assisting the other one as well as you did today. You helped me frame and clarify to the kids what learning objectives we wanted to achieve. (Olaly, field notes, November 2, 2021)

When we shared our thoughts on assessment design, delivery, and feedback in Phase 2, David cited collaboration as a necessary component of creating informative assessments. As a result, we recreated some assessments to have more real-life applications, connections, and experiences. We used assessment results to inform our instruction and identify students who needed challenge and support. We discussed alternate settings for assessments, how students perceived questions in the assessment, predicted their responses, and revised the

assessment accordingly. Due to our level of collaboration, we had more projects for our students in Grade 6 than the students David had in other grades. David saw our increase in collaboration because of our shared reflective practice.

> I think we are also doing it [reflecting] for what is best for students. We do it better face-to-face than we did during distance learning. That time in particular was challenging for students and for us to collaborate. However, we made it work even when we were in different time zones. So, I think to summarize it: our collaboration has come from about closer to a zero to closer to a 90 because I do not think we can really reach 100. I do not think that is realistic because there is always that room to improve. (Olaly, field notes, June 2, 2021)

David and I had a common vision of elevating co-teaching methods and cultivating rapport with one another and our pupils. When we met in October 2020, we both recognized the importance of self-reflection and team-reflection as necessary to improving our practice. Then, we began to assess how well we were using our reflective practices to improve, particularly addressing a culture of sustainable growth in instruction, assessment, and feedback. We consistently reflected on what, how, and why we were teaching due to the diversity of our students' abilities and class composition. Without continuous reflection, we would not have met the needs of all students despite the fact that the same lesson would have been presented differently in different classrooms.

We modelled our reflective practice for our students. We anticipated that by encouraging our students to reflect on their learning, they would become more self-aware of and ultimately more successful in their learning. For example, I once told the students,

> You just saw Mr. D and I chatting. We were consulting one another about how we believed the lesson should proceed. We reflect constantly. Mr. D and I would like you to know that we also abide by what we ask you to do. We continually follow the

> lesson and modify it according to how we see you understanding what we are teaching. We would like you to always think about your learning and why you are doing things a certain way. (Olaly, field notes, April 6, 2021)

We often spoke to the students during a lesson to demonstrate that reflection was an integral part of our teaching practice and a skill we wanted them to acquire.

An unexpected outcome of our reflection was that we reminded each other of our responsibility and commitment to student learning and progress. I did not intend to be the "accountability police," but I intentionally focused on being an equity warrior for students. David once stated that my presence brought him back to our commitment to all students. As the study continued, we found that our reflection was ongoing—before, during, and after class. Even when we were not in school, we sent each other WhatsApp messages if any thought about our class came to mind (see Figure 12).

A review of reflective memos revealed that David and I reflected the most on our methods of instruction and student welfare. In addition, we reflected on the assessment writing, delivery, and grading processes, our pastoral responsibilities as homeroom instructors, and how we should handle student behavior, emails, and parents. Reflection on our practice became our most valuable asset. We incorporated reflection into our lessons and gave students frequent opportunities to ruminate on their own work (Olaly, reflective memos, April 20, 2021, May 13, 2021, May 11, 2021, August 3, 2021). Ongoing communication unified David and me and better prepared us for the productive struggles we faced daily in the classroom and outside the classroom.

Reflection on Phase 2 Co-Teaching Process. In our final reflection on the process of our ecology of co-teaching in Phase 2, David and I created visual depictions. We agreed that our co-teaching partnership grew and improved. Figure 13 and Figure 14 illustrate David's and my reflective representations if how we thought our partnership developed.

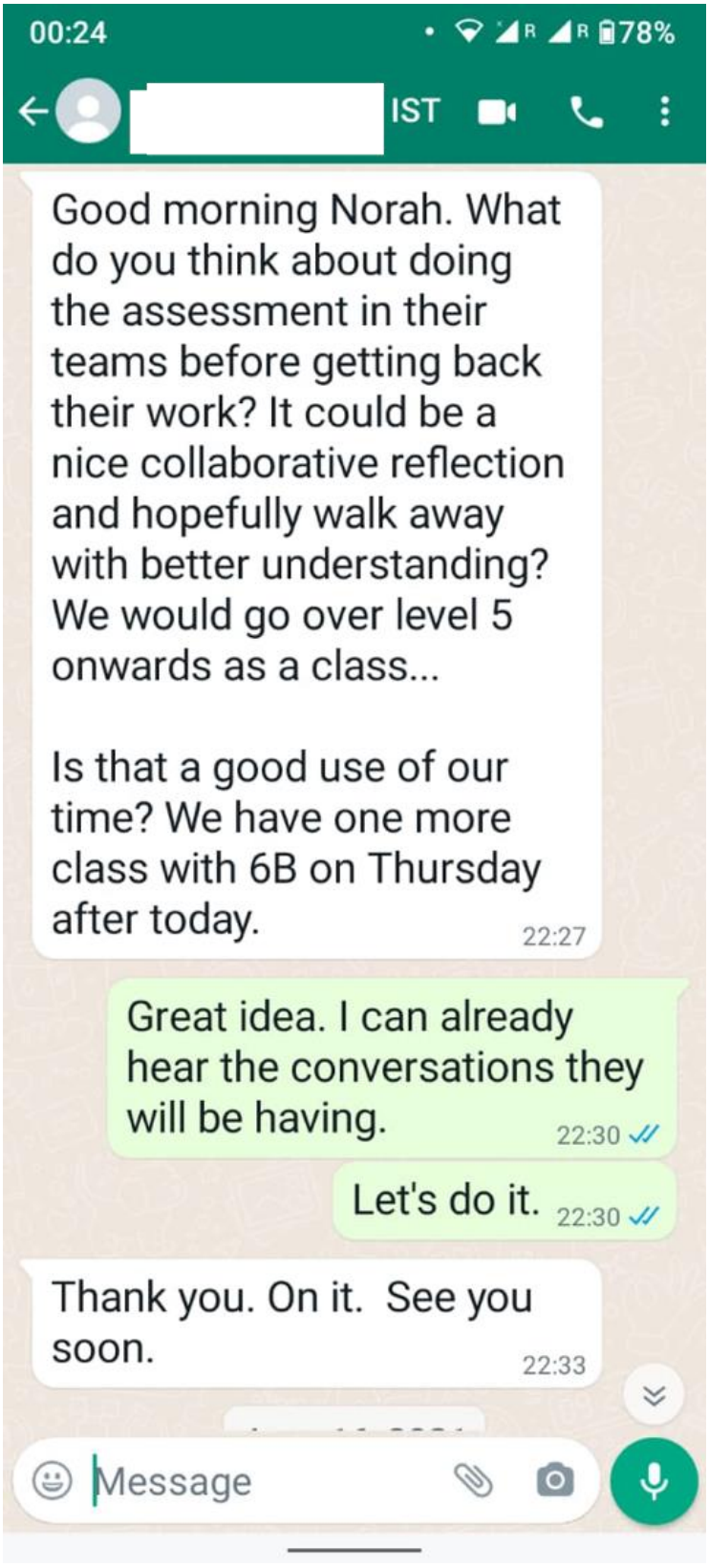


Figure 12. David's WhatsApp message to me on asking students to reflect collaboratively.

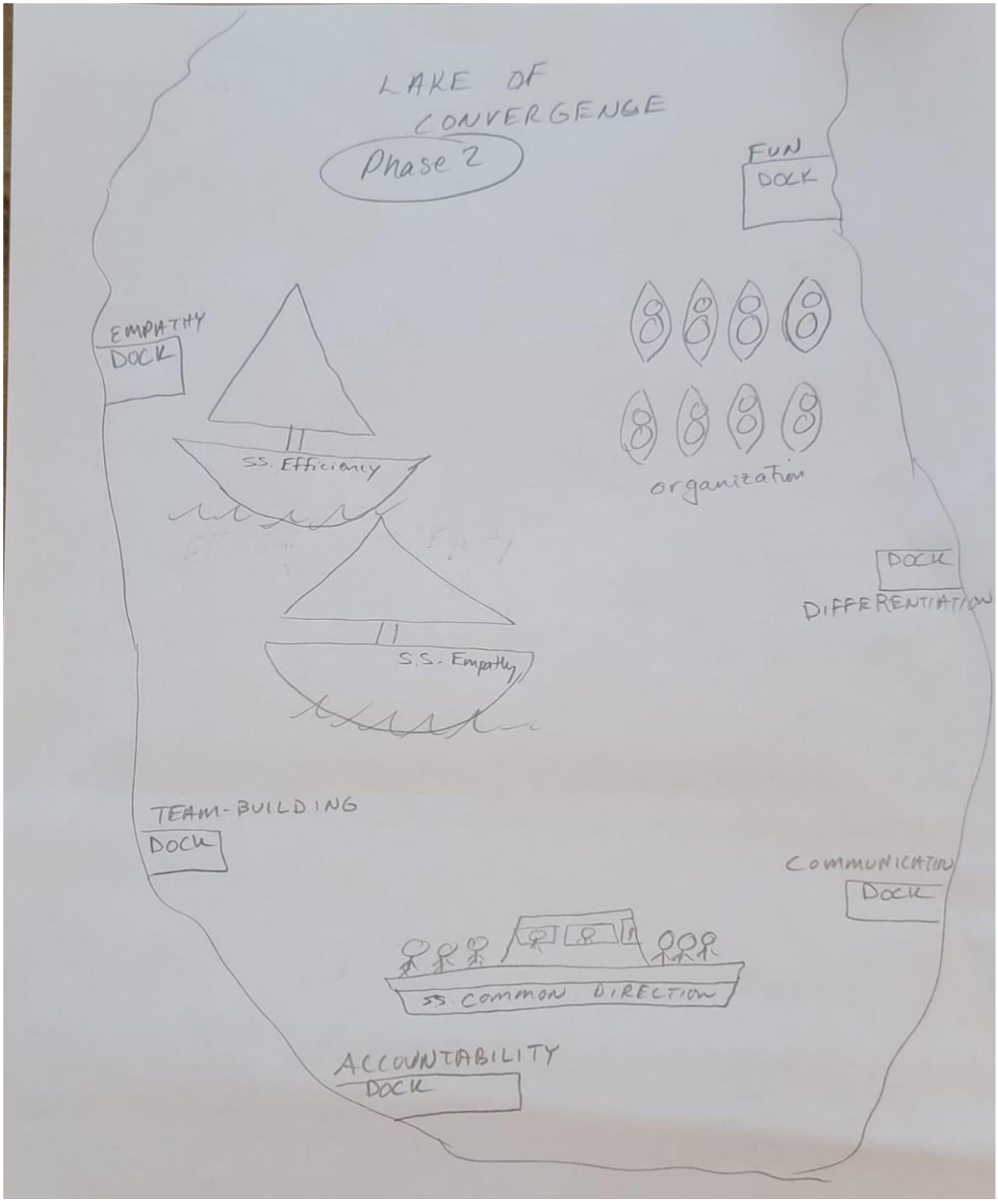


Figure 13. David's illustration depicting ecology of co-teaching process in Phase 2.

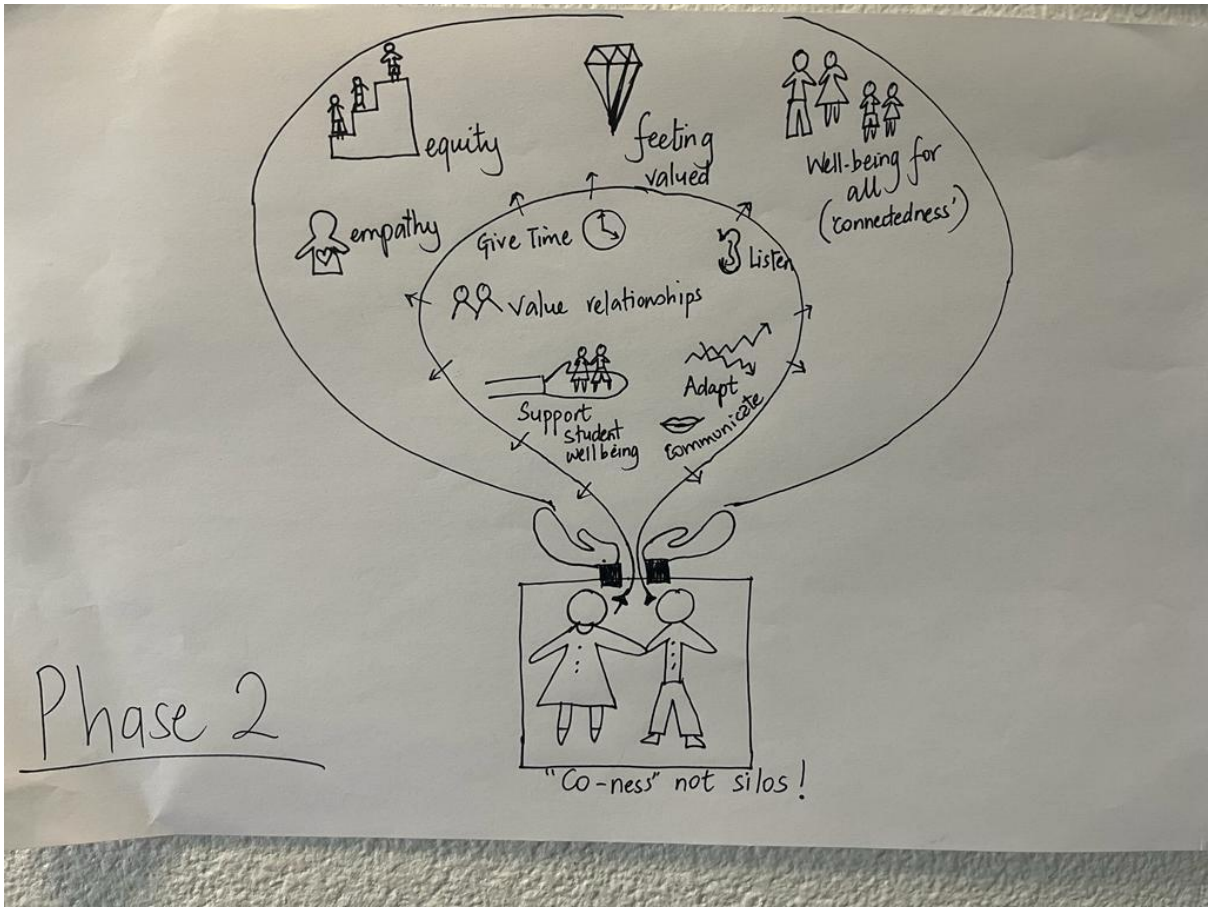


Figure 14. My illustration depicting our ecology of co-teaching process for Phase 2.

According to David, at the conclusion of Phase 1, we reached a point of convergence. Our class developed empathy, efficiency, accountability, team-building, differentiation, and organization while having room for fun as a result of the tranquil environment brought about by the convergence. We felt secure because we developed empathy for one another and taught and practiced team-building skills. David stated that we demonstrated to the students what a strong team looked like by our collaboration; when we placed them in working groups, we explicitly taught them how to build their teams into effective learning units. David demonstrated that as a class and co-teaching team, we improved our communication and sense of responsibility. We improved on instructional differentiation for all students. David explained his illustration by stating that in Phase 2, in contrast to Phase 1, when we had many distinct student groups, we created a more homogenous group where all students' needs were addressed.

As a class, we were moving in the same direction toward success for all pupils as represented by the large boat. During Phase 2, we stayed afloat by empathizing and increasing our efficacy as David and I demonstrated what I call "co-ness." My illustration of the process of our ecology of co-teaching in Phase 2, as depicted in Figure 15, demonstrated that our parity was the result of improved communication, adaptability, and a vision to promote the well-being of all students. David and I valued the relationships we established with students and with each other as a result of listening to them and giving them and ourselves the opportunity to be heard. The ecology of our co-teaching was marked by equitable access of instruction and assessment and feedback to all students. All our students, as well as David and I, felt valued and connected in an atmosphere of empathy for one another. David and I ceased to be individual practitioners and became a co-teaching team in Phase 2 as confirmed by the evidence that emerged because of the process.

Findings

Pre-service and in-service professional learning is frequently cited as essential to the success of co-teaching (Minke et al., 1996; Scruggs et al., 2007). In this study, I hoped to add to the literature about the relationship between teachers' professional development opportunities regarding co-teaching and their confidence, interest, and attitudes toward co-teaching and each other. In the ethnographic-autoethnographic study, we focused on the professional learning that co-teachers experience in their daily interactions with their work.

One finding of the study is that daily interactions and co-construction of knowledge influences the co-teaching relationship and student learning, leading to an ecology of co-teaching; I term this *in situ* professional learning, meaning our learning happened in the situation and a result of the daily interactions and processes we developed to become stronger co-teachers. Our shared responsibility for learning outcomes – ourselves and the students -- became most apparent when David and I achieved larger objectives collectively and made instructional, assessment, grading, and feedback decisions jointly. These objectives included establishing a culture of trust between us, improving our pedagogical practices, and jointly communicating with students, parents, and colleagues.

Most importantly, during the 10 months of the study, we increased our confidence, interest, and attitudes about co-teaching and effected change in our classroom through incremental and iterative reflection by experiential learning of what co-teaching practices were sound for our context (Gawande, 2017). We shared and transmitted our knowledge and expertise to one another in a dialogical exchange that is the essence of praxis—deep reflection to inform action (Freire, 1970). We learned about co-teaching by doing which, in turn, contributed to our individual and collective professional learning. Through our co-teaching relationship, we manifested these important characteristics of learning:

- Dewey's (1938) factors of experiential learning: interaction, continuity, and reciprocity;
- Vygotsky's (1978) intersubjectivity in which peers engaged in dialogue and scaffold each other's learning; and
- CLE axioms, i.e., that learning and leading are dialogical processes and that the people closest to the issue are best situated to solve it (Guajardo et al., 2016).

A second finding from the study is that *catalytic moments* in a co-teaching relationship lead to shifts in practice. David and I encountered several growth points; these catalytic moments represented important junctures in our co-teaching and personal relationship that resulted from paying attention to small learnings and enacting them incrementally (McDonald, 1996). As a result of our open and honest communication, we strengthened our interpersonal relationship as co-teachers and discovered the value in healthy conflict and productive struggle. The result was our enhanced commitment to invest in our co-teaching partnership. Communicating, sharing responsibilities, and a strengthening interpersonal relationship as co-teachers were the main themes that gave rise to the two findings (see Table 6 and Figure 15).

In situ Professional Learning in Co-Teaching

In the study, David and I progressively engaged in *in situ* professional learning as we worked to co-create a sound ecology of co-teaching. *In situ* means in the original or natural place; in our case, that was the co-teaching classroom and the school where we taught as well as the virtual space we created by communicating through emails and other technology. When we started the study, we expected that the school would provide us with a joint planning period and continuous professional development to support our implementation of the school vision of inclusion through co-teaching. However, neither of those structural elements were offered. Thus, to become successful as co-teachers and incrementally improve

Table 6

Themes Across Two Phases

Phase 1 Themes Partnership and communication are necessary for co-teaching.	%	Phase 2 Themes Partnership through shared responsibility and strengthening interpersonal relationships as co-teachers is necessary for co-teaching.	%
Uneven Partnership	63%	Shared Responsibility	48%
Decision-Making	17%	Collaborative Decision Making	25%
Forms of Communication	20%	Strengthening Interpersonal Relationship as Co-Teachers	27%

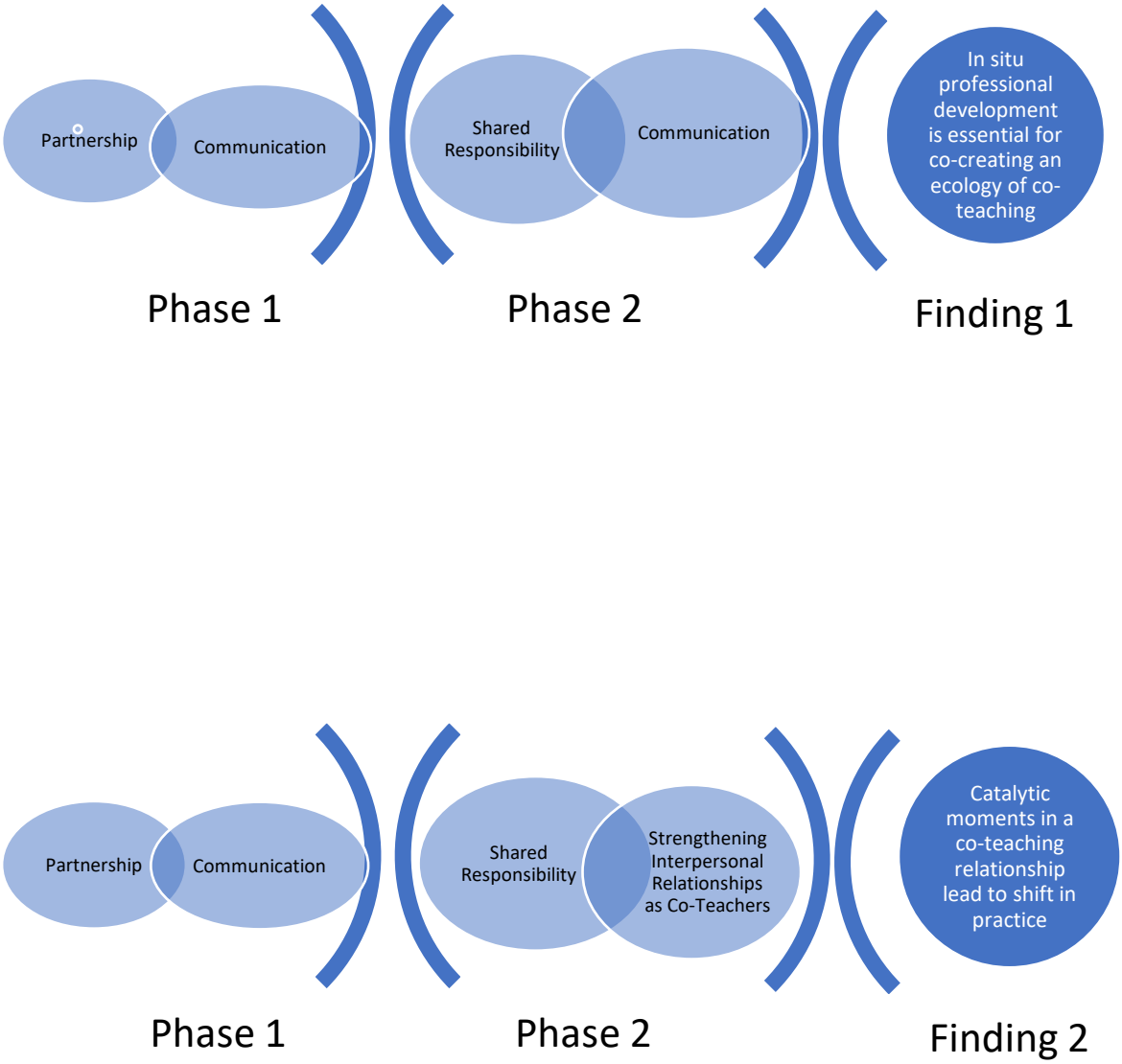


Figure 15. The study findings as a result of two phases of inquiry.

our instructional planning and delivery, assessment preparation skills, and feedback, we co-created a different approach in which became we partners in learning how to co-teach *in situ.*

David and I developed *in situ* professional learning when we moved from autonomous to collaborative practice. Phase 1 data revealed that partnership was essential for co-teaching. For us to develop this partnership, we had to engage in a more unified practice, which plunged us into learning together. Our collaborative practice resulted in the need for us to learn how to effectively reflect on our co-teaching practice "on the fly." We had to make space for our learning by other means than a scheduled planning period, which resulted in a more dynamic communication. The effectiveness of our reflection stemmed from the trust we developed in the process and in turn enabled us to be more innovative in our co-development of an ecology of co-teaching. Thus, we shifted our relationship from acting individually to acting collectively—in other words, we shared responsibility and communicated differently. We accomplished this through deep reflection built on trust (see Figure 16).

Shared Responsibility

The premise of co-teaching rests on the shared expertise that collaboration between the educators in the classroom brings to the instruction, not merely on having two adults in the classroom (Murawski, 2012, p. 8). As the study progressed, David and I "co-planned shared instructional responsibility and co-assessed a group of students with diverse needs in the same general education classroom" (Murawski, 2003, p. 10). We cultivated mutual responsibility for the classroom, pooled resources, and developed joint accountability for all students although our individual level of participation in the classroom sometimes varied. We changed from autonomous practice in which I was in charge of the LS students and David the general student population to a more equitable distribution of responsibility. As we developed our reflective practices, we began to believe in the each other's abilities, integrity, character, and investment in the co-teaching partnership. Our growing relational

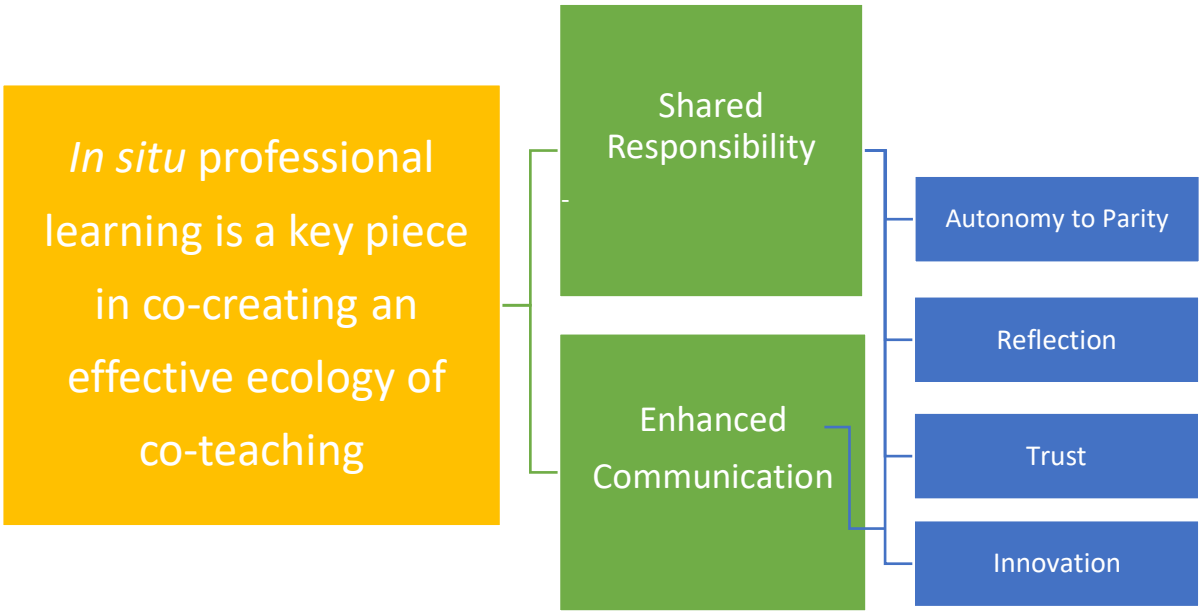


Figure 16. Shared responsibility and communication created space for *in situ* professional learning.

trust enabled us not only to communicate freely but to be creative in a safe environment in which we were comfortable to express ourselves and share ideas on how to be more innovative in our instructional and assessment practices.

Autonomy to Parity. When we began the study, I assumed that, given my prior experience with co-teaching, I would influence David and the direction of our partnership. As the study progressed, we confirmed that teachers' expertise can be used effectively while they use each other's qualities (Friend & Cook, 2010). In order to effectively use each other's qualities, we had to move away from our silo practice that characterized Phase 1 of the study to a collaborative practice. As a result, we engaged in experiential learning where we spent time observing and learning from each other. By working alongside David, he utilized my knowledge of special education, assessment design, and Universal Design for Learning (UDL) while I improved my knowledge of math concepts; as a result, we created a robust learning environment for our students. We were more aware of and planned for students' differing needs and consequently, our instruction was more responsive to them (King-Sears, 2020).

Friend et al. (2010) stated that "because co-teaching departs so significantly from the traditional 'one teacher per classroom' model, it is not reasonable to expect educators to understand and implement it without specific instruction in the pertinent knowledge and skills" (p. 20). However, given that I.S.T. did not provide adequate in-service for co-teachers to develop the interpersonal and collaborative skills, we relied on actively engaging in everyday *in situ* conversations and activities, which were possible because we shared responsibility and communicated effectively.

Reflection. In Phase 1, the partnership and communication themes emerged as crucial for co-creating a co-teaching ecology. In Phase 2, according to the study's findings, as David and I shifted from autonomy to equity in practice, reflection became fundamental to our

professional learning and development. Zeichner & Liston (2014) assert that teacher reflection is fundamental to educational endeavors. In contrast to Moss et al. (2017), David and I determined that both "reflection in action" and "reflection on action" were crucial in co-developing our co-teaching practice. This "mindful reflection" that is centered on being aware of the present and characterized by openness illuminated the crucial connection between our internal worlds as co-teachers, our classroom climate, and our instructional practice.

Fluijt et al. (2016) indicate that high-quality professional learning frequently includes time for teachers to reflect on, receive input on, and modify their practice by facilitating reflection and soliciting feedback. Because we had no alternative, we worked with what we experienced in the "here and now" and used what we learned to cultivate active attention to what was essential for our work because we did not have enough time built into our schedules. To realize our shared vision of co-teaching, we found that learning through reflection on process and through integration of lived experience was crucial.

Enhanced Communication

Key to the collaboration between educators is communicating their shared beliefs and roles with co-planning, co-instructing, and co-assessing all students within the classroom. Communication consists of both verbal and nonverbal interactions such as listening skills, eye contact, responding to questions, and providing feedback to instruction, all of which contribute to successful co-teaching partnerships (Shamberger et al., 2014). David and I went beyond the prescribed communication guidelines for co-teaching. We developed enhanced communication and collaboration within and outside of the classroom. David demonstrated trust by allowing me to be an active instructor and not just an accommodation or modification specialist. By going through this learning process, we shared innovative ways of instruction by continuous reflection and tried more research-based instructional strategies in our classroom.

Trust. Toward the end of Phase 1, David started to demonstrate more trust by allowing me to have increased responsibility in the classroom. We increased our joint decision-making and shared more responsibility in Phase 2, which was a direct result of the trust we had for each other to equally participate in instruction, assessment, grading, and providing feedback. We trusted each other to communicate with the students, parents, and colleagues. Although we did not undergo any training about the need to develop trust, from our daily interactions and the effects of COVID-19 school closings, David and I learned how to develop the kind of trust that provided us with psychological safety to mitigate the vulnerability that accompanies risk (Bryk & Schneider, 2003; Cosner, 2009; DiPaola & Guy, 2009).

The risk in our case was that of losing the chance to successfully co-create a co-teaching partnership that would benefit all our students and failing to recover from the effects of COVID-19 on our students' learning. During distance learning, we learned quickly that we needed to invest in a long-term effort of trust. David and I needed to learn how to perceive each other's actions such as how we each responded to students' needs during distance and hybrid learning (Tschannen-Moran, 2004). We learned how to be reliable and consistent by turning up for the Zoom instructional sessions with students. We built trust by being open with each other and by sharing relevant and appropriate information that helped us navigate the unprecedented distance-learning ordeal. We developed collegial trust as we engaged with our daily work in addition to having shared teaching philosophies, grade-level assignments, and duration within the school (Tschannen-Moran & Hoy, 1997). Our shared decision-making fostered trust and promoted a sense of collective responsibility for the outcomes associated with change in our classroom through co-teaching (Hallam et al., 2015).

Innovation. If the school had provided us with sustained in-service, experts might have guided and facilitated our learning through our practice. Expert coaches can play a vital

role in effective professional development, and teachers are more likely to implement desired practices when supported in this way (Knight, 2004; Kohler et al., 1997; Neufeld & Roper, 2003). However, due to the absence of coaches or co-teaching experts, David and I found ourselves assuming the crucial role of co-learning as we modeled effective instructional practices to one another, reflected during our planning sessions, and collaboratively analyzed student work. I researched evidence-based practices and shared my findings with David, and David equipped me with content knowledge. We provided each other with training in areas in which we required improvement and in which our students would benefit.

Our shared construction of knowledge was essential to the learning process as was the implementation of the resulting innovative ideas. Norris (2022) calls this *sense-making* and *sense-giving*. Our co-teaching experience helped us fulfil our professional responsibilities more effectively. Our need to know and constantly improve professionally provided us the unexpected but welcome opportunity to be co-learners. By providing an "umbrella" that included the elements of daily collaboration—coaching each other, providing feedback, and reflecting on our practices—*in-situ* professional development best supported us in the actual world of our math classroom. By modelling instructional strategies, we benefited each other and the diverse math class population. In summary, although professional development (PD) is often viewed involving training, we flipped the typical PD to what Tredway et al. (2016) refer to as collective and coherent change practices by "co-developing expertise to build individual and collective leaders" and "systematically review[ing] student outcomes to determine changes needed" (p. 63). We confirmed that professional development is actually not an event but the everyday learning we did as co-teaching partners to assess our practices and make iterative changes.

Catalytic Moments in a Co-Teaching Relationship

Our co-teaching relationship was shaped by subtle and obvious catalytic moments, which caused shifts in our practices. A catalytic reaction in chemistry refers to the moment when an added third substance increases the speed of the reaction between two elements. Similar to a sighting (McDonald, 1996), a catalytic moment is a small epiphany when the values one holds about an issue or goal connects with actions; we became aware of moments that propelled our work forward at a faster pace. In the case of David, these circumstances compelled him to surrender his autonomy and space while unsure of the outcome. In my case, I had to shift my role slowly but steadily and be mindful of the right moments to assume more agency. As we utilized the shared space to rethink our classroom practices, our research goal of pursuing equal student access and success remained front and center. The conditions of our daily classroom practice included content goals, student needs, and effective instructional delivery. As we engaged in the work, developed trust, and shared practice, we began to experience an essential aspect of change: vulnerability (Vostal et al., 2019).

Due to the moments of conflict throughout the study, David and I found creative solutions that involved vulnerability, relational trust-building, and the transition from autonomous to collaborative practice. These moments included sacrificing free time to co-plan, the use of "I and my" and the transition to "we, our, and us" pronouns, two instances of good conflict, our co-reflection and shared roles, and expression of appreciation between us. All the moments included developing shared responsibility but were specifically about strengthening our communication as co-teachers (see Figure 17). In Figure 18, I depict the road map of the catalytic moments in our co-teaching journey in which we experienced changes when we sacrificed our personal time to plan, revised our usage of language, how we

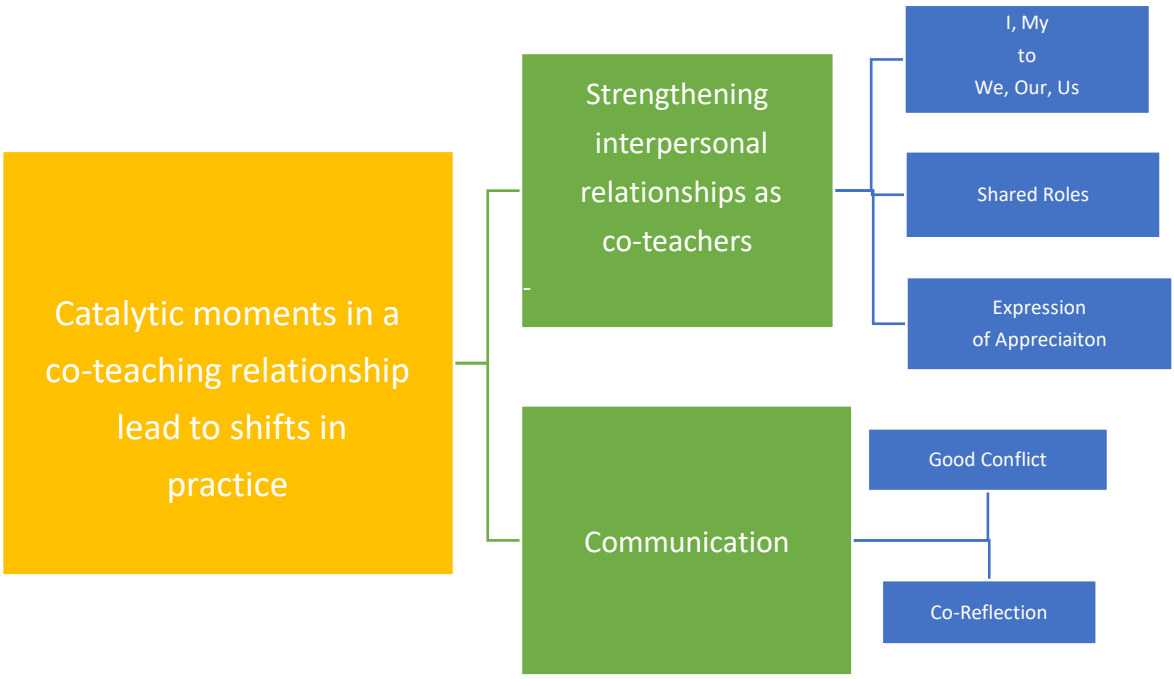


Figure 17. Catalytic moments arising from open communication and our strengthened interpersonal relationship.

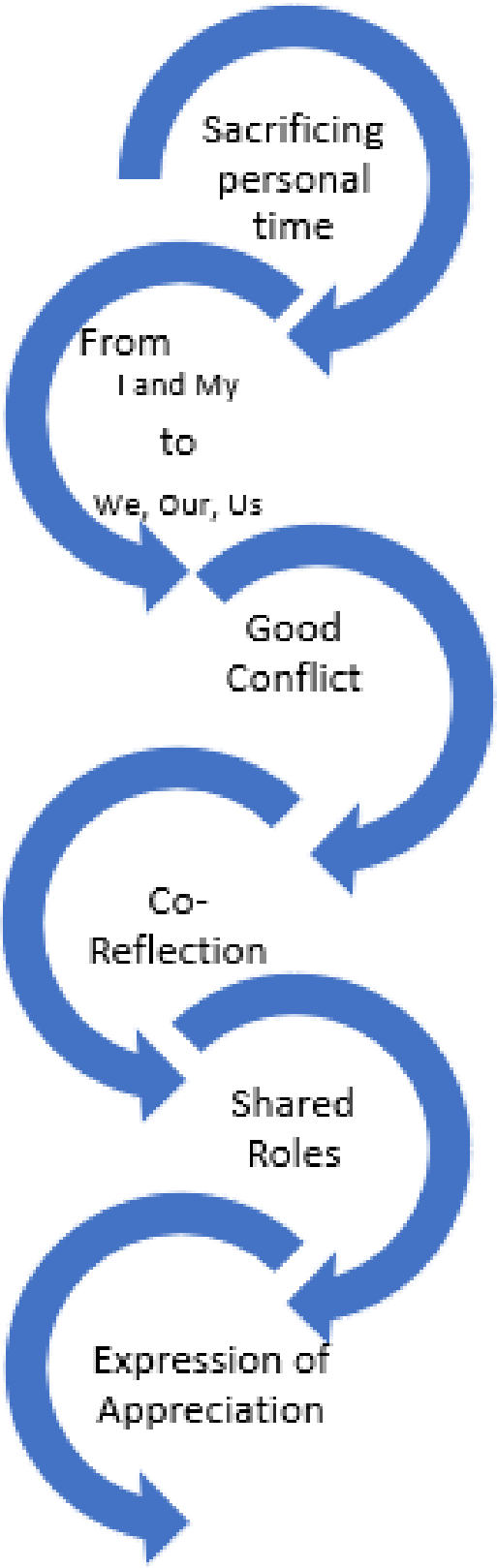


Figure 18. Catalytic moments in our co-teaching relationship that led to shifts in our practice.

jointly engaged in co-teaching, and how we made the most of conflict and reflection. As a result, we shared responsibility and appreciated each other.

Sacrificing Personal Time

Many administrators and teachers find scheduling common planning times for co-teachers a challenge because finding that time requires careful consideration of intricate schedules and, in general, can only be implemented if administrators consider the time a priority (Walther-Thomas et al., 1996). The study revealed that David and I had to deal with the fact that official planning time was not incorporated into our daily agendas. Thus, since we required time, effective communication skills, and confidence in each other's competence and dedication to cultivate this aspect of our co-teaching ecology, we had to make time. To co-plan, we had to engage in a conscious catalytic effort by sacrificing personal time. We discovered more effective modes of communication, which led to corridor planning and reflection sessions prior to and following class. Over time, as we grew accustomed to our routine, we became more proficient, experienced more in-depth planning, and felt more productive, at ease, and creative. In spite of the fact that we spent less time than anticipated on co-planning during the course of the study, the quality of our classroom instruction improved as a result of our willingness to make sacrifices and set aside time for brief but valuable discussions of ideas.

Language Shifts: From "I and My" to "We, Our and Us"

A series of moments were catalytic. A critical one was when David and I shifted from using the pronouns "I and my" to "we, us, and our." By using the pronouns "I and my," David and I created a teaching environment that promoted autonomy. We each existed as silos in the same class. Our practice was private with each individual catering to a different set of the student population: I remained focused on the LS students while David focused on the regular students. David took responsibility for instructional planning, delivery,

assessment design, grading, and feedback. However, the situation improved when, after several conversations and a point of conflict, David realized that he needed to give up his autonomy and work with me as a team. He started using the pronouns “we, us and our.” The shift created parity and promoted public practice, and we began to effectively share space and responsibility. We developed a sense of co-ness.

Good Conflict

During the course of the study, David and I experienced conflict on two occasions. One occurred in Phase 1 of the study due to my interruption during a lesson. Because the lesson ended up taking a different path than David had intended, he was unable to complete the lesson as planned. After reflecting on the incident, David stated that for him, it was the pivotal moment in the trajectory of our co-teaching relationship. David acknowledged that after the conflict, he became more receptive to my insights and more attentive to my ideas.

The second conflict occurred during Phase 2 of the study. David expressed vulnerability in a WhatsApp conversation regarding a situation that he believed I had created by sharing what he had said in an email with a parent. David responded that he had responded prematurely to the incident after we had a conversation and I sent him an email containing an apology and reassurance. We were both capable of being vulnerable while assuming responsibility for our actions.

Throughout the two incidents, David and I determined that co-teachers need to establish norms that support authentic interactions and increase the likelihood of trust-building exchanges (Datnow, 2011; Tschannen-Moran & Hoy, 1997). In addition, we learned to anticipate healthy conflict at work and find productive methods to resolve it by fostering authentic communication and collaboration (Datnow, 2011). In our co-teaching partnership, we developed collegial trust. Despite the moments of difficulty, we had a sense of connection and care that strengthened our relationship (Datnow, 2011; Tschannen-Moran,

2004). Our pastoral duties in our homeroom provided good grounds for building a family-like environment, and the feeling continued to our math class.

Co-Reflection

David and I engaged in extensive personal and collaborative reflection on the work required to co-develop a successful co-teaching ecology. According to the data, our most valuable quality as a co-teaching team was reflection. Reflection time became one of the catalytic moments in our co-teaching partnership because it was during these times that we reflected on ourselves and our performance and built a two-person network of support that enabled us to continue our work. We reflected in an environment that was non-hierarchical, non-judgmental, private, and intimate (Bottery et al., 2009). Not only did David and I learn how to reflect and communicate about our beliefs and values (Kohler-Evans, 2006), but we also tackled challenges for our professional development.

Shared Roles

Continuous co-reflection gave rise to shared roles. Co-teachers have shared a space, but they have not always shared equal status within the classroom; the general education teacher typically takes the lead while the special education teacher supports instruction (Conderman, 2011). In a review of more than 400 qualitative co-teaching studies, Scruggs et al. (2007) found that the general education teacher continues to remain the lead teacher in the front of the classroom, providing instruction to students with the special education teacher in a supporting role. However, the catalytic moments when David and I assumed equitable roles in the classroom occurred when David entrusted me with the class, when we engaged in co-teaching models that gave us shared access to the students, and when we became more innovative in our teaching and more motivated to develop equitable lessons and assessments for all of our students. Parents, students, and colleagues embraced our

partnership, resulting in a learning environment that provided equitable access and success to all our students.

During our co-reflection sessions, David and I became aware of the influence of beliefs and values on students' learning. The awareness influenced our motivation and the quality of instructional practice in terms of collaboration models and which roles we needed to play when using the models. Data showed that I had a marked shift from assistant to lead role in Phase 2, and David assumed assistant role when necessary. We had genuine catalytic opportunities to problem-solve and "deprivatize" our teaching practices (Cosner, 2009).

Given that teaching is a traditionally isolated task (Bryk & Schneider, 2002), sharing roles or work may be challenging for co-teachers. However, we managed to develop equivalent professional status by sharing instructional responsibility for a diverse group of students (Friend, 2007).

Expressions of Appreciation

Co-teaching is a model that emphasizes collaboration and communication among all members of a team to meet the needs of all students (Dieker, 2015). As our communication improved, we strengthened our interpersonal relationship as co-teachers, shared classroom responsibility, and resolved and learned from our conflicts. A catalytic moment that demonstrated our matured ecology of co-teaching occurred when David and I expressed appreciation for the contributions each of us made to the co-teaching partnership. David sent me an email expressing his gratitude for our collaborative efforts as demonstrated by the vignette at the beginning of Chapter 6. He emphasized that we had provided our students with opportunities for academic, social, and A.T.L. success. Due to our collaboration and my contribution to the classroom, he and the students were receptive to learning and benefited from my presence. The appreciation email was a pivotal moment that demonstrated to me the significance and impact of our work.

For my part, I expressed my appreciation for his support during my difficult times with other co-teachers and with the administration. I was appreciative of his openness to establish the collegial trust needed for the effective co-creation of our co-teaching ecology (Bryk & Schneider, 2002; Tschannen-Moran, 2009).

Throughout the study, I realized that paying attention to catalytic moments of change in a co-teaching partnership is crucial in its development and success. The study revealed that as necessary as content knowledge of the general educator and the expertise of the special educator in differentiation are, a strong interpersonal relationship between the two teachers is equally important. When two teachers share the same space daily, there is bound to be conflict and misunderstanding as would occur in any relationship. However, what David and I learned is that conflict is not always a bad thing. Through proper communication, willingness to shift one's verbiage to a more unifying one, agreeing to sacrifice one's time for the greater good of the team to plan and reflect, trusting one's co-teaching partner enough to share roles in the classroom, and most importantly expressing appreciation for each other's contribution is essential for building a healthy and productive co-teaching partnership.

Conclusion

The themes of communication and strengthening interpersonal relationships as co-teachers served as the backbone of the finding that highlights the need for co-teachers to be alert and open to catalytic moments during their co-teaching process. The thematic coding process brought to surface the essential attributes of these moments as the ability to build trust, be vulnerable, be familiar with each other's professional skills, including each other's instructional strengths, weaknesses, interests, and attitudes. Because we spent time talking and getting better acquainted with each other's skills, interests, and educational philosophies, we were prepared to use catalytic moments to improve our co-teaching relationships and practices.

Because communication between David and me was open, truthful, and non-judgmental, we built trust and gave each other room to learn, grow, and share our expertise. Our students benefitted by watching us model what good collaboration looked like. We were more innovative in our teaching, assessment design, and pastoral duties. By engaging in *in situ* professional learning, we became clearer about how professional development required us to undergo a process of change through reflective action, which happens when co-teachers "go slow to go fast." The process required that as we shared our experiences, we became more vulnerable, revealed our struggles and emotions to one another, and developed reliability and consistency in our relationship. We had to consider how we might have been more empathetic with our students and each other by routinely reviewing past conversations and activities and reflecting on how we had progressed. We needed to create a safe environment for everyone to express their thoughts and feelings about not only our teaching but our professional relationship as well.

In this chapter, I presented the findings of the study on the co-development of an ecology of co-teaching by a general and special education teacher. In the final chapter, I discuss the salient discoveries from this study and explore how the findings of this study can contribute to research and to educational practice and policy reform in international schools.

CHAPTER 6: DISCUSSION AND IMPLICATION

David summed up our co-teaching partnership's development and success in an email to me. I then realized the progress we had made and the partnership's success. He said, “We had a very productive and rewarding year with our 6B Math class. The students gained a lot of confidence and are becoming better learners. You did an amazing job teaching and reinforcing our goals in math class, in Learning Support class, and after school. Students like Alice, Linda, Asra needed caring and consistent support—emotionally and cognitively—and you provided that day in and day out. Others, like Nisan and Martin, needed affirmation and reinforcement on their progress; you were there.

And let's face it, students like Faith, Doi, and Dylan took advantage of what they observed the others receiving from you, and it paid dividends for them! Kiera grew heaps in her ATLs, and Anita realized the value of asking for help (and knowing she could be called upon and needed to be engaged!). Richard, Jacob, Seema, and Gupta were eager to please and engage in anything set before them and the interactions with you along the way. Willy and Khosa trust you implicitly. They learned to speak up when they don't understand as well as staying engaged to the best of their ability—they now see value in being present.

To say the least, you have made a lasting impression on these students on how to be a learner and community member. I watch, listen, and learn from you as well and do my best to apply these lessons to my other classes. So, thank you. I genuinely enjoy our time in class together. If you have any thoughts on how to improve for next year, I'm all eyes and ears. Whether there are some thoughts about how to start the year off, how better to differentiate, or augment any units—anything. I have some thoughts and will be sure to share them as I capture and refine them.

In Chapter 5, I presented the findings of the study on our co-teaching experiences as our work together informed the ecology of co-teaching. I began this ethnographic and auto-ethnographic study between a general education teacher and special education teacher with the goal of telling a rich story of the process of how two teachers in an international school worked collaboratively. I engaged with the co-teacher to document evidence to answer the research questions. They were:

1. To what extent do the effective reflective practices of co-teachers and empathetic understandings of each other contribute to the development of this partnership?
2. To what extent do co-educators work collaboratively by co-planning and co-teaching to enhance instructional practices?
3. How does engagement in an "ecology of co-teaching" inform my leadership?

The study design was predicated on the following theory of action: *If a co-teaching team engages in collaborative inquiry of co-teaching by co-planning, co-teaching, and co-reflecting, then the team can develop an ecology of co-teaching that serves as a model for co-teaching.*

While the setting for the study—an international school in Tanzania—had leaders who decided to support co-teaching, developing functional co-teaching partnerships had not occurred. As co-teaching partners, we depended on the strategic plan to become an inclusive school whose mission-statement had promised to inspire, challenge, and support all students. In our co-teaching team, we investigated how we could build a co-teaching partnership that would realize the school's vision and mission within our international school. This asset was a primary driver for the study.

I begin the final chapter with a vignette from David, my co-teacher. He wrote this email after the first phase of the study. In this excerpt, David communicated his appreciation for our work together, which speaks to our partnership. By stating that he was open to

feedback and ideas, he demonstrated that he was invested in an equal partnership in which we could share ideas and roles. He highlighted how a number of students benefited from our co-teaching. The message in the vignette provides an affirmation of a key moment—what I term a catalytic moment in our co-teaching partnership. The values David and I held and our understanding of what a successful co-teaching partnership should be matched what was happening in our class; McDonald (1996) calls a moment of change in which values match actions a *sighting*.

In this final chapter, I discuss the findings of the ethnographic and auto-ethnographic study that I conducted for a period of 10 months through the lens of the relevant extant literature. I review the research questions and discuss the implications of the study for practice, policy, and future research as well as its limitations. The auto-ethnographic study enabled me to look deeper into my growth as a leader. I discuss what I have learned about myself as a leader and practitioner-researcher. I reflect on the methodological approach as well as my equity-focused study to understand my leadership development.

Discussion of Findings

In examining the relationship between the ethnographic study findings and the literature, I analyze sources from the original literature review as well as new sources and use them to respond to the study research questions. Finally, I present a framework for transforming co-teaching in order to expand opportunities for building empathetic relationships and collaborative practices within co-teaching teams. The study findings are:

1. Catalytic moments in a co-teaching relationship lead to shifts in practice.
2. *In situ* professional development is key to co-creating an effective ecology of co-teaching.

The catalytic moments were an impetus for shift in our professional learning. Thus, I discuss that finding first.

Catalytic Moments

Making co-teaching relationships beneficial for students and teachers requires careful consideration and a willingness to address challenges that naturally arise when two people work collaboratively. While co-teaching can provide effective instruction, instructors frequently face obstacles that impede their ability to collaborate successfully. Thus, they need to examine what the obstacles are and be ready to build on catalytic moments—those moments when they realize that each person brings unique knowledge, experience, and skill to the co-teaching partnership. Building on those combined skills offers an important learning experience for teachers and students. I examine the typical obstacles that we encountered and how we overcame them through conversations, reflection, and experimentation.

Common Obstacles to Co-Teaching

Co-teachers often find that they have difficulty establishing parity in classroom roles (Leatherman, 2009; McDuffie et al., 2007; Santoli et al., 2008; Tannock, 2009). In addition, interpersonal issues and technical issues can impede full development of co-teaching partnerships. For example, in our first cycle of inquiry, we had uneven roles. As the special education teacher, I often acted as an assistant, creating an imbalance in the use of expertise and skills, which significantly hindered effective instruction and learning for all students (Bessette, 2008; Naraian, 2010; Scruggs et al., 2007). This disparity is typically attributed to special education instructors' lack of content knowledge (EADSNE, 2004). However, in our case, the general education instructor was a strong content teacher but lacked knowledge and skills for using intervention strategies to assist students with learning needs.

Additional obstacles to co-teaching include interpersonal differences, inadequate planning time, and a lack of administrative support (Carter et al., 2009; Friend & Cook, 2010; Jang, 2006). In general, teachers may have different attitudes or understandings about the inclusion of students with disabilities (Leatherman, 2009) as well as personality,

communication styles, and conflict-resolution styles that can generate tensions that the co-teachers must address (Conderman, 2011; Conderman et al., 2009). In addition, teachers may struggle to find a common planning time if they lack administrative support for developing co-teaching relationships (Carter et al., 2009; Friend & Cook, 2010; Jang, 2006).

Some researchers who have studied the nature of co-teaching relationships recommend certain elements for developing effective collaborative relationships. Professional development should include improving communication skills to prevent or mediate interpersonal conflicts (Carter et al., 2009; Friend & Cook, 2010). Ideally, administrators should assist teachers in scheduling times for professional development and common planning (Leatherman, 2009; Santoli et al., 2008; Scruggs et al., 2007). To build compatible co-teaching relationships, teachers need to share teaching and student inclusion philosophies (Brownell et al., 2006; Leatherman, 2009).

In addition, having a shared vision and engaging in shared reflection allows co-teachers to enhance their co-teaching relationships and instructional practices (Jang, 2006; Roth et al., 1999). The existing body of work on co-teaching definitions reveals a notable lack of emphasis on the significance of a shared vision. The attainment of a common vision can be facilitated by the implementation of active learning, reflective thinking, and collective involvement (Fluijt, 2014; Rytivaara & Kerstner, 2012). These processes involve engaging in a discourse that draws upon experiences derived from daily practice, which serve as a crucial source and point of reference.

Recognizing Moments to Develop Parity

David and I confirmed that co-teaching is not a teaching assignment but a teaching experience (Stein, 2016). Initially, we had some difficulties although we ostensibly shared a common philosophy about its benefit to students. In our case, we did not have interpersonal issues, but we did not have the expected co-planning time and had to adjust our thinking

about how to plan due to lack of school support and the changes we had to make for Covid-19. By the second cycle of inquiry, we had settled some of our concerns and were sharing leadership in the classroom; that included planning, implementing strategies, and assessing together for co-taught instruction, respecting and trusting each other, communicating honestly with each other even when difficult, and assuming shared leadership in the classroom (Cook & Cook, 2004; Cook & Friend, 2004). Mastropieri et al. (2005) in four case studies of co-teaching found that the ability of the special education teacher to learn the content quickly is particularly important in a co-teaching partnership as it sets the stage for equal relationships. Since this was a math class—an unusual content area for shared teaching—the fact that I could assimilate and co-teach the content meant that, by Phase 2, there was not a visible dominant teacher.

However, how co-teachers should implement these essential elements is not evident in the literature. The process, as David and I demonstrated, requires that co-teachers put in the work of experimenting, reflecting, and recognizing the moments when they can build on useful practices. Many of those catalytic moments occurred because we were willing to learn from the different and sometimes difficult experiences. Those moments occurred because we observed student reactions to our joint roles and how students—even those who were not designated as needing accommodation—benefited from the adjustments we made and the support we could offer. In our case, the catalytic moments enabled us to develop these elements and consequently to strengthen our co-teaching practice.

Freire (1970) defines praxis as the "combination of reflection and action, or reflection leading to action" (p. 86). However, his study of praxis is not typical reflection; rather, Freire views reflection as a process that fosters coming to consciousness, also known as *conscientizaçäo,* in which we fully comprehend inequities and take steps to rectify them. In the case of David and me, we moved from individual to shared responsibility. We started the

co-teaching partnership with distinct separate roles. However, after reflection and dialogue, we gradually moved to parity in our practice. Our deliberate action to share roles and responsibility was a result of us coming to consciousness of what an ecology of co-teaching really meant for us and our students.

Professional Learning to Support Co-Teaching

In the ethnographic study I conducted, I borrowed from the ecologies of knowing with the aim of developing intentional engagement between two co-teachers on the micro-level of the classroom and building a set of relationships among the teachers, parents, and students (Guajardo et al., 2016; Gutiérrez, 2016). Through our work of creating a shared ecology of co-teaching on the micro-level, we could better support and interact with the meso-(school) level, influence the larger teaching community at IST, and, by extension, be useful to other international schools that may practice co-teaching. Some necessary professional learning is an initial step for teachers or schools undertaking co-teaching. However, eventually, the co-teaching classroom experience that David and I had in this study helped us appreciate the place that *in situ* professional learning plays in developing an ecology of co-teaching. As a result, we could better understand how to effectively understand and implement the dynamics of forming and implementing effective co-teaching practices.

Necessary Professional Learning

Through the study, we confirmed that the professional practice literature addressed elements, strategies, and conditions for collaboration between general and special education teachers in the co-taught classroom. However, these lessons are mainly taken from the educational system in North America where federal and state mandates are in place in recognition of the benefits of heterogeneous classrooms in which all students' learning is supported (Cook & Friend, 2010). There is a dearth of similar empirical evidence on co-teaching in general and in international schools in particular. One important gap in the

literature has been the role of professional development opportunities in pre-service and in-service regarding co-teaching on teacher outcomes.

The present study addressed this gap by examining the relationships between co-teaching professional development opportunities and teacher confidence, interest, and attitudes. The co-teaching team has to co-create a culture in which learning is embedded in ongoing, day-to-day processes through which practitioners collaborate in continuous learning for the improvement of practice (Fullam, 2007; Kerke, 2003). We put into practice three elements that Yurkovsky et al. (2020) recommend for schools and systems for continuous improvement at the micro level: "Grounding improvement efforts in local problems or need; empowering practitioners to take an active role in research and improvement; engaging in iteration, [including] a cyclical process of action, assessment, reflection, and adjustment" (p. 404).

While school-level professional learning is important for initially understanding the processes and roles of co-teachers, effective implementation requires a different kind of professional learning—daily sharing of experiences, planning, implementation, and reflection through which the co-teachers take on a self-directed or *in situ* learning. According to Dewey (1938), individuals acquire knowledge by active engagement and interpersonal exchanges. By experiential learning, they cultivate strategies that enable them to excel as collaborative educators. David and I experienced this in our daily practice of co-reflection and adapting our instruction to incorporate what we observed and learned in our quotidian practice.

Previous studies (Avalos, 2011; Smith et al., 2003) highlighted how professional learning differed when teachers participated in two out of three different co-teaching professional development models (multi-session workshop, mentor teacher group, or practitioner research group). Participation in a practitioner research group was the most efficient, and the multi-session workshop the least. Other factors that influenced professional

learning are the duration and the quality of the training. In our case, the ethnographic study lasted for 10 months, but the quality of our *in situ* professional learning was more beneficial than any of the school-designed workshop sessions. In effect, we became daily researchers of our work together and used the evidence from each day, including student actions and learning, to support our decisions about next steps.

In addition, our motivation to be part of *in situ* professional learning was key to the development of our co-teaching partnership and change in our practice. David and I agreed that we gained the least from the multi-session workshop model held at the beginning of our co-teaching partnership and benefitted most from *in situ* professional learning. We needed time to consider how to develop our co-teaching practice and implement changes in our classroom from what we learned during our daily interactions to choose specific teacher actions, receive feedback, reflect, and implement additional changes during the 10 months of the inquiry (Darling-Hammond et al., 2017). For the findings of the study to take root and contribute to a robust ecology of co-teaching, we needed a prolonged intervention in which we gradually combined our knowledge and skills in math instruction and in special education interventions to design and implement tools for learning and reflective experiences that better served the purpose of our professional co-learning in the small learning community (Avalos, 2011).

How In situ Professional Learning Supports Co-Teaching

As David and I offered feedback and engaged in regular reflection, we began to realize that high-quality professional learning occurs when teachers think about, receive input on, and make changes to their practice. Absent structured planning time, we learned to work together informally and on email to develop ways of working through conflicts or missteps. By the second phase of inquiry, we were accepting feedback from each other, and we were thoughtfully moving toward the expert co-teaching practices we wanted for our classroom.

We understood that even without formal and regular school-sponsored, in-service, or professional development opportunities on co-teaching, we could build our skills through our daily reflective practice and conversations. We became more confident about our instructional practices, communication with peers, parents, and students, and most importantly with each other as the study progressed. Although the co-teaching literature is replete with recommendations for training in co-teaching and related skills, previous research indicates that teachers receive limited guidance on the day-to-day practices necessary for effective co-teaching and feel inadequately prepared (Scruggs et al., 2007). The results of this study support the importance of sustained *in situ* professional learning for teachers on co-teaching models and skills.

Initially, I defined the term *ecology of co-teaching* as the interactions of the teachers with students and parents. Through this study, I understood more fully what that ecology looks like in practice. We worked to tell the story of how to build a co-teaching partnership in our international school context. This study revealed that *in situ* professional development is a key piece to co-creating an effective ecology of co-teaching because David and I demonstrated factors of experiential learning when we interacted daily in both homeroom and math class, showed continuity in how we taught, implemented the skills we learned as we progressed in our co-teaching partnership, and reciprocated our knowledge and empathy throughout the study (Dewey, 1938). We engaged in dialogue about practice and how we related to each other as co-teachers, which helped scaffold our professional learning (Vygotsky, 1978). Through regular and conscious reflection, we learned that learning and leading are dialogical processes and that the people closest to the issue are best situated to solve it (Guajardo et al., 2016).

While adapting a collaborative co-teaching model at IST was a school-wide decision, the role of the administrators in terms of organizational management to achieve the goal was

vital. While we managed, we realized that stronger instructional leadership was needed to implement an effective collaborative co-teaching model schoolwide (Sheehy, 2007). The administration should have done more about providing co-planning time, reviewing student caseloads in relation to the student composition in each co-taught class, the relationship among co-teachers, and the special education teacher's knowledge of content to be taught. However, by the time the study commenced, the school had not scheduled planning time in co-teacher schedules, understood the importance of building relationships, or equitably distributed students for balanced caseloads that could facilitate implementation of the co-teaching strategy (Crockett, 2002; Gerber & Popp, 2000; Gillespie, 2017, Goor et al., 1997; Spillane et al., 2004). In this study, I examined how David and I developed empathetic relationships with each other while finding ways to implement the school's vision and how our relationship supported our professional and personal growth as co-teachers as well as our students.

Participating in an ethnographic study within a safe space—a place where David and I were willing to be vulnerable, develop relational trust, and permit healthy conflict—allowed us to observe and respond to catalytic moments in our co-teaching partnership. These moments supported us in creating a dynamic and healthy co-teaching ecology. The process began slowly, but by the end of the study, we confirmed that in order to learn deeply, we must iteratively test new methods of collaboration to be more effective as teachers and leaders (Quadros-Meis, 2021). The study revealed that co-reflection is an indispensable component of teacher collaboration and in effecting transformative change in a classroom. To strengthen teacher collaboration, co-teachers must have conversations about their collaborative work so they can meet students' needs. Through our lived experience, we can make a claim that for professional learning to be effective, it must be an integral part of a deliberately developed continuous improvement effort by co-teachers.

Re-Examining Research Questions

The overarching question guiding the ethnographic study was: *How do a general education and a special education teacher develop a co-teaching partnership?* I engaged with the co-teacher to document evidence to answer the research sub-questions. They were:

1. To what extent do the effective reflective practices of co-teachers and empathetic understandings of each other contribute to the development of this partnership?
2. To what extent do co-educators work collaboratively by co-planning and co-teaching to enhance instructional practices?
3. How does engagement in an "ecology of co-teaching" inform my leadership?

David and I developed the ability to recognize and address the complexities inherent in our work by engaging in individual and team reflection. In addition, we fostered a mindset that viewed this complexity as an opportunity for professional development. According to the study's findings, co-teaching teams are capable of establishing their own professional learning growth consistent with their shared vision. Co-teachers can establish effective co-teaching partnerships by reflecting on these goals and engaging in daily reflective practice that facilitates their attainment. The data clearly demonstrated that David and I developed empathic relationships as a result of our daily efforts to build relational trust and demonstrated vulnerability towards one another. Through developing reflective practices and being empathetic towards one another, we demonstrated that we were not only accountable for attaining academic outcomes but also assumed the responsibility of caring for students entrusted to our care (Fluijit, 2016).

David and I improved our instructional practices by collaborating on instructional planning and delivery. The extent to which we did this largely depended on our willingness, attitude, and motivation to make time for co-planning. David and I assumed a major leadership role in this endeavor. Co-planning and scheduling for it was a crucial aspect that

required a substantial amount of time and effort. Nevertheless, David and I understood that we were the drivers of a value-driven education model and that we were responsible actors who had to guarantee the development of an effective co-teaching model in our classroom that would be replicated throughout the school. It would have been advantageous to receive support from the school administration by incorporating planning into our schedules. Despite the lack of support, we were able to use this obstacle as an opportunity for growth and ensure that we made time for what was essential to the co-development of our co-teaching ecology. I address the third research question in the leadership development section.

Implications

The current study showed that it is important to listen to stories of the people closest to the problem (Guajardo et al., 2016). David and I were the people charged to bring about institutional change. Our combined story is of two co-teachers who found a way to create an ecology of co-teaching by surmounting moments of tension and by making deliberate choices guided by *in situ* professional learning. As we were among those charged to bring about greater inclusion at IST, we created and sustained transformative change within our class by being willing to explore new practices (Yung, 2021). I discuss practice, policy, and research implications to provide recommendations for schools seeking more equitable outcomes for students in an inclusive setting.

Practice

According to Kendi (2019), practice changes happen after policy changes. I highlight how the study impacts practice in our current context and the practice community, which is made up of all teachers practising co-teaching at IST and the international school community. Co-teaching teams should not expect to work alone to introduce more equitable practices within their learning communities. They should find people who share their values and beliefs, who hold similar ideals, and who seek to institute change, no matter how small. By

collaborating in their shared vision, co-teaching teams at IST and other IB schools practicing or wanting to practice co-teaching could have a collective impact as tempered radicals who change or improve the system from within (Meyerson & Scully, 1995). They need time and support to adapt general co-teaching practices to their situation.

Through collaboration and common efforts, we experienced a transformation in the math classroom (Woo & Henriksen, 2023); we had a shared vision and used common practices, and we processed what we learned daily as a way to change the environment for all our students (Wise & Jacobo, 2010). If teachers are given the "chance to assimilate their [co-teaching] experience, to argue it out, to adapt it to their own interpretation . . ." (Marris, 1974, p. 157), then they can be more receptive to the innovation.

The reflective practices that we engaged in as co-teachers supported what we learned and how we learned as well as the actions we take in our math class (Argyris & Schön, 1978). Teachers in a co-teaching partnership or those working to co-develop one should give priority to reflection on practice and relational trust. Content area knowledge and expertise, years of experience, or school mandates cannot take the place of sound reflective practice and relationships in an ecology of co-teaching.

Reflection and inquiry should be central to learning and development. The ethnographic study supported what literature on professional development highlights with regards to reflective practices. Generating feedback and supporting reflection often include opportunities to share both positive and critical reactions to authentic instances of teacher practice, such as lesson plans, demonstration lessons, or videos of instruction. These activities are frequently undertaken during a coaching session or a group workshop facilitated by an expert. However, in our case, we did not have a coach or an expert to help us examine what we did in the classroom. David and I shared feedback and created opportunities for reflection to create a richer environment for our learning and our students' learning. Co-teachers should

embrace whatever skills and knowledge they have and support each other in developing or improving their co-teaching partnerships that translate to equitable student access to learning regardless of school-provided professional development sessions.

Furthermore, when David and I engaged in observation and reflection conversations, we promoted transfer of our conclusions to classroom practice. The combination of collaborative leadership in our classroom, forming an albeit small community of practice, and examining our practice led to changed practices in the classroom to improve equitable access of instruction, assessment, and feedback for all our students.

The ethnographic study conducted in one classroom with only two participants can be used as road map for IST and other international schools to develop a school-wide ecology of co-teaching in which the "road starts with informal exchanges in a school culture that facilitates the process, continues in networking of co-teachers, and is strengthened in formalized experiences such as courses and workshops that introduce peer coaching or support collaboration and joint projects" (Avalos, 2011, pp. 17–18).

Despite the long history of professional learning communities, only some are successful in creating conditions for teacher agency and collaboration while others do not affect teacher practice (DuFour et al., 2005; Wood, 2010). Despite our small professional learning community, David and I demonstrated that focusing on the experiences of the participants using an iterative process demonstrated that co-constructing learning is an important aspect of the research process (Freire, 1970; Little, 2006).

Policy

The review and restructuring of organizational norms require understanding the people within the organization (Argyris & Schön, 1978; Guajardo et al., 2016; Weiss, 1995). In the case of IST, the introduction of the inclusion policy required that school leaders spend

time understanding the values, interests, and knowledge of the stakeholders and gain insight from the people closest to the issues the school was trying to solve.

The ethnographic study design addresses the penury of opportunities for co-teachers to tell rich stories of the crucial part they play in the implementation of policy. IST's inclusion policy implementation recommendations included providing professional development on co-teaching at the teacher level. However, no review occurred of the implementation using data from observations or conversations with teachers about changing practice and implementing effective communities of practice to strengthen teacher learning (Britt, 2023). The school administration provided minimal walk-through observation data, making it difficult to know the extent to which the development and implementation of the inclusion policy was successful.

The school administration needs to establish ways for co-teachers to share their experiences and evidence-based data about the development and implementation of co-teaching in their classrooms. These recommendations brought to light from the study findings support changes at the meso level and can change the way teachers view their role as key players in the implementation of the school's vision on inclusion. It is one thing to develop policy but another to have organizational structures in place to monitor and report on the progress of the policy.

Local Policy (Micro and Meso)

At many international schools, the inclusion policy is influenced by or borrows from the provisions of IDEA to implement their inclusion programs; IST was no exception. Using co-teaching as a service delivery model, the schools require support to make intentional changes in inclusive practice. School administration and boards must provide the necessary resources to implement an effective community of practice that allows teachers to have time to collaborate, reflect, and observe. When school administration and boards put structures in

place to support teacher learning and collaboration, teachers build agency, which in turn enables them to make intentional changes to practice (Britt, 2023). School leaders have a critical role in establishing a climate where collaboration among teachers can thrive. School leaders can support co-teacher efforts to engage in and improve inclusive practice through co-teaching by providing suitable structures for professional learning and feedback on their observations of or conversations with the teachers. To address conflicts faced during co-teaching, administrators can support co-teachers to formalize working agreements with administrative participation to facilitate clear communication and norms of collaboration. Schools should also consider adopting both formal working agreements and midyear check-in surveys so that co-teaching issues can be addressed and resolved.

According to Wenger and Wenger-Trayner (2015), as adults come together for student well-being, achievement, and passion, they learn how to engage and improve their interactions directly through the process of dialogue. By providing time and avenues for conversation and collaboration among co-teachers, schools can enhance the quality of teacher exchange that contributes to the development of a sound ecology of co-teaching.

Co-teaching has financial considerations. For a school to be inclusive as IST envisioned, hiring enough special education teachers to co-teach with at least the core subject area teachers would entail added costs. “Special education is more expensive than general education, … and costs… appear to be escalating” (Banks et al., 2015, pp. 926–927). Inclusion requires an investment of resources to make it work, and it’s not cheap. Resources could be in form of more learning support teachers to collaborate with more general education teachers. Given the low ratio of special education teachers to general education teachers at IST, interdisciplinary collaboration can also include having subject specialists co-teach. By doing this, students would benefit from the presence of two teachers, and the school can save on the added costs of more special education teachers.

International School Policy

International schools wanting to implement inclusive programs lack a research basis upon which to implement evidence-based programs (McLeskey et al., 2014). While researchers have studied inclusion in public schools in the U.S. and other countries, evidence from international schools is lacking. Schools run the risk of sacrificing quality instruction for the appearance of education for all (Kauffman & Badar, 2014).

IB schools like IST are encouraged to review philosophy, organization, and curriculum (Rao et al., 2016). Yet, normative principles and self-reviews do not fully address how to successfully implement inclusive practices in classrooms, and individual teachers continue to find inclusion a sound idea but without sufficient professional guidance on exactly how to achieve the desired outcomes (Gillespie, 2017). The ethnographic study has shown the importance of exploring contextual and more intimate ways of addressing issues of inclusion in particular schools as no international school is the same. Inclusion policies have to be directed by those closest to the problem.

The implications for policy and practice were defined by the findings from the study. Getting actively involved in *in situ* professional learning, infusing reflective practices, communication, and shared leadership to diffuse moments of tension and by building relational trust, collaboration, and understanding affirmed the work David and I engaged in during the course of the study. Further research would support greater understanding and development of policy and practice.

Research

A key part of the research was the extent to which two co-teachers could act as equity advocates in an inclusive school (Evans, 2013). The study provided the two teachers a chance to be at the center of the work that would have implications on practice, specifically, co-teaching as a service delivery method. Because co-teaching requires interaction and depends

on teacher personalities, case studies (Mastropieri et al., 2005) or ethnographic research is critical to understand how reflective practices and empathetic relationships between teachers and between teachers and students to impact the development of an ecology co-teaching. Next, I review what I learned from using the research methodology, what new questions emerged about the process, how the study can be replicated, and what new studies might emerge from this study.

Research Process: Ethnographic/Auto-Ethnographic Study

The purpose of the ethnographic study was to focus on ways of producing meaningful, accessible, and evocative research grounded in the personal experience (Ellis & Bochner, 2000) of two co-teachers co-developing an ecology of co-teaching. Previous research has not adequately addressed the issue of how the transition from private teaching practice to a co-development of a co-teaching partnership among international schoolteachers occurs. The findings provide valuable insight into how co-teachers negotiate the personal and professional aspects of their identities to improve their teaching practices. By engaging my co-teacher as a co-practitioner researcher, we co-constructed learning about our classroom that supported a collaborative effort for change (Creswell & Guetterman, 2019).

The ethnographic study enabled me to study our relational practices, common values and beliefs, and shared experiences for the purpose of helping other co-teaching teams at IST; as a result, colleagues in co-teaching partnerships can better understand the co-teaching culture (Maso, 2001). I did this by becoming a participant observer and using field notes of the happenings in our classroom and for students.

I produced a thick description of our experience (Geertz, 1973; Goodall, 2001), which provides an output more suitable for a wider and more diverse mass audience than traditional research and makes personal and social change possible for more people (Bochner, 1997; Goodall, 2001). Our co-constructed narrative allowed David and me to talk about relational

experience and to examine how we coped with challenges and celebrated small wins—our catalytic moments—during the process of co-developing an ecology of co-teaching. However, we only have information from our classroom; I believe that further research on what was happening in other co-taught classes would have given us more information on the state of our co-teaching practice as a school and increased the impact of the study. A local research question that could be explored is: *What are the experiences of co-teachers across the middle school at IST?*

Recommendations for Future Research

Throughout the ethnographic study, David and I established the co-development of our co-teaching ecology through inquiry and the use of a small community of practice to propel our learning (Bryk et al., 2015). To develop a qualitative study, we were guided by the following principles: make the project problem-specific and user-centered; develop an iterative improvement process and respond to teacher understandings; believe in the power of conversation among teachers; and respect indigenous knowledge. We used inquiry and communities of practice to drive learning (Bryk et al., 2015), to enhance our practice, and to contribute to current research in all the mentioned areas.

Practitioners can improve co-teaching conditions by using an ethnographic research process, using observation data and reflection to inform next steps in their instructional practice. On a school level, we can engage as activist researchers with our peers and use this approach on a school level to address diverse equity issues. More research of this type is required to inform the practice community.

Future researchers need to explore if addressing the barriers identified in this study leads to the successful use of co-teaching. In addition, there is a growing need to examine the effectiveness of co-teaching as the research evidence base of the practice is still emerging especially in international schools like IST. Researchers examining the most effective co-

teaching approach(es) would promote equitable access and student success in international schools where policies are still not mandated and or where schools, like IST, do not have formal structures to test co-teaching as a service delivery model.

The examination of case studies pertaining to various international schools can provide a more detailed description of the process by which co-teaching relationships are established. Longitudinal research may examine co-teacher teams that have maintained their collaboration over an extended period. Conducting an inquiry into this correlation could assist leaders in fostering the development and maintenance of co-teacher team connections.

International schools seek to support teachers in their quest to create an inclusive learning environment because the schools and the current global culture value diversity. This could be a characteristic of the modern *Zeitgeist* in education, or it could be a characteristic of international schools. Individualized learning, co-teaching, and differentiation are valued in international school teacher culture. In the classroom, this takes the form of student choice, project-based learning, rubric-based grading, including other voices in the curriculum, and encouraging a growth mindset. Teachers envision an ideal learning environment that has both individualization for diverse learning profiles and the drive for excellence. However, research is needed on the achievement of students with and without learning needs in co-taught classrooms compared to their peers in classes without co-teaching. By being inclusive and using co-teaching as a service delivery model to meet the needs of students with learning needs, schools need to provide data to parents and teachers; to date, co-teaching is the best instructional model that serves all students. However, the results of this study should be considered exploratory due to the limited sample used and consequently highlights important areas for future research.

Limitations

Only one general education teacher from IST participated in this study; therefore, the sample is not representative of all teachers and co-teaching in the school. It is thus crucial to replicate this study with a larger sample size. The study should be conducted by either one special education teacher and several general education teachers or by special education teachers and their co-teaching general education teacher partners. A larger sample size could provide further informative insights on the factors that hinder or promote the successful co-creation of an ecology of co-teaching. Despite these limitations, the findings of this study shed light on the aspects that may promote and/or hinder the co-development of an ecology of co-teaching in an international school setting.

Time was a limitation in the ethnographic study. Even though the two inquiry phases spanned more than 10 months, we needed additional time to see the full effects of reflective practice and student success. In addition, most of the study took place during the COVID-19 pandemic, and the conditions we had to endure and surmount as we worked on developing our co-teaching partnership may be atypical compared to what would have happened if we had fully transitioned to remote learning.

Leadership Development

I would describe myself as a compliant student. One who listens attentively, finishes assignments on time, and thrives for excellence. Throughout my schooling I did my best and kept moving up the ladder as every good student should. However, in my adulthood, when I became an educator, I discovered my equity warrior side. I did not do well in the face of injustice or unfairness. I spoke out and this often got me into trouble with some administrators. When students were let go because they had learning needs and were feared bring a school's scores down, I protested, when a student labelled "he cannot" by his teachers yet all he needed was proper testing and accommodations, I intervened, when schools tried

very hard not to admit students due to their disabilities, I stood in the gap and showed the administration that we could meet their needs. In my classes, I was willing to allow students to fail to give them a chance to try again in a safe place. I had my first experience with co-teaching as a Grade 2 special education teacher in a class with a seasoned general education teacher and a novice paraprofessional. Our class was an example in the county and from then on, I became a co-teaching advocate.

Before working at IST, I had 13 years of professional experience as a special education teacher. Among these experiences, I assumed a leadership role as a coordinator for student support services for 9 years. I had been accustomed to participating in the decision-making process pertaining to matters that impacted the provision of services and the accessibility of learning for students with learning challenges. I possess a considerable amount of experience in the practice of co-teaching and have consistently demonstrated a strong commitment to its implementation. In reflecting on my past experiences with co-teaching partnerships, I became fully aware that while they had been effective, I had not actively considered the factors contributing to their success during the collaborative process. My understanding of the complexities involved in establishing an ecosystem of co-teaching was significantly enhanced via the implementation of this ethnographic investigation.

Throughout the study, I did not hold a formal leadership position at the school. I was a Grade 6 learning support (special education) teacher. However, my leadership journey during the study was most remarkable. I went into the study with the mindset that my expertise in the field and my prior experience was all that I needed for me to make an impact in the school's vision of inclusion and for the co-teaching service delivery model to succeed. I could not have been more mistaken. However, I realized that I could be a changemaker even without a formal leadership position. I had to be open to reimagining myself as a leader even

when not formally in charge and to new learning even in a situation I thought I had all the required knowledge and skill.

The COVID-19 pandemic made schooling take on an unprecedented face, and each stakeholder had to adapt to the new situation. During this time, I learned how to lead during a crisis; trust and vulnerability were essential components of an equity leader. As an instructional leader, building relational trust with my students, their families, and colleagues was the most important step toward promoting student success in the classroom.

Leading When Not in Charge

Despite not being in a "position of power," I demonstrated leadership in collaboration with the co-teacher. As David and I engaged in equity work by adopting roles as co-conspirators, we both were transformed. We abandoned our engrained ways of knowing and working and developed authentic collaborative relationships of solidarity with families. We collaboratively devised ways to *act with* students and parents and, at times, *acted on* their behalf. By listening and knowing differently and using our positions of power to promote solidarity with students and families, we evolved into leaders who "showed up" differently in our class and school to fully address the issues brought about by the inclusion policy and the creation of co-teaching partnerships at IST (Love, 2019; Shields, 2010; Theoharis, 2010).

My idea that I had to be in a formal leadership position to be of any influence outside of the classroom was unfounded. The authentic collaborative relationship of solidarity that David and I managed to build with our students and their families was a direct result of the trust and solidarity we had with each other. I learned that, as a leader, you can only give what you have and that one can be a leader regardless of one's position in the school. It was important to start by creating a sense of acceptance and community in the space available—in my case, the math classroom.

Throughout the study, I encountered numerous obstacles and setbacks, particularly in my pursuit of a formal leadership position at the school. I believed that by pursuing these positions, I would have a greater impact on the school's co-teaching and implementation of the inclusion vision and that my work would be more meaningful and valuable. However, I learned that true leaders take action despite systemic and personal barriers. I was the one in the arena, so I had to try. As our work progressed, I was clear that leadership is not defined by the position. Instead, as a leader, I made the position. If I were to make any meaningful and valuable addition to the ecology of co-teaching at IST by transferring knowledge and skills to my practice as an educator, I had to engage in co-constructing knowledge and building skills (Militello et al., 2019). I had to be ready to learn because as the old adage goes, “Experience is the best teacher.” Dewey (1938) indicated that the challenge for experience-based education is to provide learners with quality experiences that will result in growth and creativity in their subsequent experiences. Through the study, I have learned that I can lead even when I am not in command, and when I am in charge, I must recognize that my classroom teachers are leaders. I focused on the opportunity to lead as a class teacher.

As a co-teaching team, David and I transitioned from safe and comfortable meetings to engagement in deeper conversations about inequities in our classroom that we could act explicitly on as equity leaders (Rigby & Tredway, 2015). Our planning and reflections as well as our day-to-day conversations became spaces where we could dependably share successes and challenges as well as increase our co-teaching literacy and our individual and collective confidence as exemplary co-teachers in the school. We began to act from a deepening commitment to equitable access to instruction and assessment. We moved from teachers following an espoused directive from the administration to fulfil a school vision to equity warriors responding to an equity-focused agenda of meeting the needs of all our students.

Leading During Crisis

A large part of the study was conducted during the COVID-19 pandemic. The pandemic created an unprecedented set of challenges. During this time, the school experienced a range of teaching models, namely, remote online learning, pod-system learning, and hybrid learning. I understood that online learning is very different. Much of the pedagogical struggle with school closure was the lack of understanding by the parents and administration that students cannot have the same online instructional time as their older peers. Online learning is not doing school 6 hours a day like being in a brick-and-mortar setting. To do it right takes time, training, and practice as well as a significant shift in how we think about school (Olaly, reflective memo, October 30, 2020). The lesson derived during this time was to be flexible as a leader and to listen to the students and teachers who are in the thick of the crisis.

During the closure and ongoing online learning, a group of parents wrote a petition to the School Board and threatened to withdraw their children from the school due to reduced contact time with teachers and the loss of after school extra-curricular activities that they had already paid for. Most of the petitioners were local parents who are the more permanent clientele as opposed to the expatriate families, especially those who work for consulates and embassies who come and go. Due to the effects of the pandemic, many local parents who are business owners had suffered losses and were requesting discounts in tuition fees for their children.

In addition, the government of Tanzania had publicly announced that the corona virus did not exist in Tanzania and that consequently everything was to operate as before. The pressure from political circles to open the school during the fall was high; the school administration felt that if they did not open the school, they would be defying the government. Eventually, the school obeyed the political directive to open the school in the

fall, but it found a middle ground by operating on a hybrid model where students were placed in pods to avoid unnecessary contact. David and I, like the rest of the teachers, had to adjust to co-teaching in different rooms. The parents were glad that their children were able to return to school despite the restrictive measures that were put in place. I learned that, as a leader, I have to know how to balance the expectations of the parents who are the main funders of the school with the political directives that come from the host country.

What I learned from this experience and will remember as a leader is that politics is the art of influencing people and, more narrowly, influencing to attain and retain power and control over governance. However, participation in and leadership at times of such struggles are learning opportunities for children, teachers, and families. As a leader, I must be ready to listen, learn, and understand what different stakeholders are saying before making decisions.

Relational Trust

We participated in this study at a time when the school was experiencing the difficulties associated with transitioning to an inclusion model in which students with disabilities are integrated into general education classes. The school administration did not fully understand that the change they proposed would foster a new culture in which general and special education instructors should collaborate closely as co-teachers. The degree of trust within a school's culture is a strong predictor of whether collaborative practices, such as professional learning communities, occur and are effective (Bryk & Schneider, 2002; Forsyth et al., 2006). As a leader, I learned that by addressing issues of relational trust, I can foster trust among my counterparts. I would do this by facilitating co-teaching team meetings in which colleagues can speak openly and be vulnerable.

Leaders should shift teaching from individualistic to interdependent, scaffolding opportunities for building trust in lower-risk and higher-risk interactions (Tschannen-Moran & Hoy, 2000). Lower-risk interactions are social, natural, and simple tasks that enable

teachers to demonstrate trustworthiness and form opinions. Because David and I shared a homeroom, we had daily interaction with each other and our students in a non-academic environment, which helped us extend our perception of kinship and reduced isolation and "otherness" (Moolenar, 2012) and increased our mutual trust (Friend, 2000). We shared lunch duty on different days, and we could often confer or cover for each other when one of us was unable to do so for various reasons. These low-risk interactions offered us opportunities to display trustworthy behaviors such as benevolence or openness to one another, which trickled down to how we ran our homeroom and math class.

Higher-risk interactions, like instructional and assessment design, require repeated trust judgements, allowing actors to demonstrate competence and dependability over time. Kochanek (2005) suggests providing instructors with low-risk opportunities before engaging in high-risk activities. More high-risk collaboration between David and me increased our interdependence. I relied on David's knowledge of the subject matter while he relied on me to provide accommodations and interventions to struggling students. What David and I experienced demonstrated that interdependence was frequently accompanied with a feeling of vulnerability (Bryk & Schneider, 2003; Hoy et al., 2006; Tschannen-Moran & Hoy, 1997). Vulnerability created the conditions for trust, and trust facilitated interdependence (DiPaola & Guy, 2009).

As a school leader who envisions a co-teaching culture in a school, I would be mindful of how I foster an environment in which my colleagues or teachers can develop a level of relational trust. Leaders' trustworthiness sets the stage for trust-building behaviours among colleagues, and their actions are crucial for effective reform and collegial trust (Cosner, 2009; Tschannen-Moran & Hoy, 2000). My experience made me understand that, as a leader, I can cultivate a climate of collegial trust that can affect the entire school. This fosters collaboration, knowledge sharing, and student learning. High collegial trust leads to

greater professionalism among teachers, fostering kinship and further trust as evidenced by David and me.

Where There Is a Will, There Is a Way

The narrative David and I told during the process of building our co-teaching partnership demonstrates the importance of having the voices of those we serve or work with at the decision-making table. This study is significant because it gave voice to the experiences of two international school teachers involved in co-teaching, teachers who represent a population whose perspectives are scarce in the literature. We represent a group of teachers determined to find a way to make co-teaching successful despite the challenges we face for the sake of our students.

The practice of co-teaching continues to be used by schools to meet the needs of diverse learners within inclusive classrooms. As a result, teacher education and in-service trainings must directly respond to the variety of skills and practices necessary to promote effective co-teaching. However, the limited research literature indicates that continued investigation into effective practices and structures are critical. This study sets the foundation to further inquiry into co-teaching and related areas by suggesting that professional development in co-teaching may be associated with greater teacher confidence and interest in co-teaching and more positive teacher attitudes about this instructional practice.

According to Fluijt et al. (2016), three important conditions are necessary for success for co-teaching as an instructional delivery model. Initially, co-teaching teams need to establish a collective vision pertaining to their understanding of effective teaching and learning. Secondly, they should determine how they jointly assume accountability for their instructional practices within the classroom. For example, the concept of inclusion should not solely pertain to those with special educational requirements but rather encompass all students inside the classroom. This entails recognizing each student as an individual with

unique potential for growth and future opportunities. The third requirement is the necessity for students and co-teachers to collaborate over an extended duration, fostering a relationship based on trust and empathy. This collaboration should reflect their commitment to the transition "from yields to values" (p. 11), which involves organizing the perspectives of students and parents, even those that express dissent, as well as the transition "from results to development" (p.12) movement.

Learning is a social process, and peers are an integral part of the equation. David and I embarked upon an eventful journey to establish an ecology of co-teaching that would improve equitable access and success to all our students, one marked by moments of solitude and unity, private and public learning experiences, vulnerability and healthy conflict, productive struggles, and catalytic moments that ultimately led to a shared understanding and practice of quality co-teaching.

REFERENCES

Ainscow, M., & Miles, S. (2008). Making education for all inclusive: Where next? *Prospects*, *38*(1), 15–34.

Ainscow, M. (2005). Developing inclusive education systems: What are the tools of change? *Journal of Educational Change, 6,* 109–125.

Algozzine, B., & Anderson, K. M. (2007). Tips for teaching: Differentiating instruction to include all students. *Preventing School Failure: Alternative Education for Children and Youth*, *51*(3), 49–54.

Anderson, G. L., Mungal, A., Pinit, M., Scott, J., & Thomson, P. (2013). Politics, equity, and diversity in global context: Educational leadership after the welfare state. In L. Tillman & J. J. Scheurich (Eds.), *Handbook of research on educational leadership and equity and diversity* (pp. 43–61). Routledge.

Argyris, C., & Schön, D. (1974). *Theory in practice: Increasing professional effectiveness*. Jossey Bass.

Argyris, C., & Schön, D. (1978) *Organizational learning: A theory of action perspective,* Addison Wesley.

Argyris, C., & Schön, D. A. (1992). *Theory in practice: Increasing professional effectiveness*. John Wiley & Sons.

Artiles A., & Kozleski E. (2007). Beyond convictions: Interrogating culture, history, and power in inclusive education. *Language Arts*, *84*, 351–358.

Artiles, A., Kozleski, E. B., Dorn, S., & Christensen, C. (2007). Learning in inclusive education research: Remediating theory and methods with a transformative agenda. *Review of Research in Education, 30,* 1–30.

Avalos, B. (2011). Teacher professional development in teaching and teacher education over ten years, *Teaching and Teacher Education*, *27*(1), 10–20.

Bacharach, N., Heck, T., & Dahlberg, K. (2008). Improving student academic achievement using a co-teaching model of student teaching. *Voices from the Field, 1*(1), 49–61. http://www.teachercenter.mnscu.edu/staff/featured/JTEpiece.pdf

Bakkenes, I., Vermunt, J. D., & Wubbels, T. (2010). Teacher learning in the context of educational innovation: Learning activities and learning outcomes of experienced teachers. *Learning and Instruction, 20*(6), 533–548.

Banks, J., Frawley, D., & McCoy, S. (2015). Achieving inclusion? Effective resourcing of students with special educational needs. *International Journal of Inclusive Education, 19*(9), 926–943.

Bassey, M. (1999). *Case study research in educational settings*. Open University.

Baeten, M., & Simons, M. (2014). Student teachers' team teaching: Models, effects, and conditions for implementation. *Teaching and Teacher Education*, *41*, 92–110.

Bartlett, K., Pelletier, K., Kusuma-Powell, O., & Powell, W. (2016). *Planning our path: An inclusive audit protocol.* Association of Supervision and Curriculum Development.

Bennett, D. J., & Fisch, A. A. (2013). Infusing co-teaching into the general education field experience. *Interdisciplinary Journal of Teaching and Learning, 3*(1), 18–37.

Berk, L. E. (2000). *Child development* (5th ed.). Allyn and Bacon.

Bessette, H. J. (2008). Using students' drawings to elicit general and special educators' perceptions of co-teaching. *Teaching and Teacher Education, 24*(5), 1376–1396.

Bickel, W. E., & Bickel, D. D. (1986). Effective schools, classrooms, and instruction: Implications for special education. *Exceptional Children, 52*(6), 489–500.

Blackley, C., Redmond, P., & Peel, K. (2021). Teacher decision-making in the classroom: The influence of cognitive load and teacher affect. *Journal of Education for Teaching, 47*(4), 548–561.

Bloom, B. (1956). *Taxonomy of educational objectives: The classification of educational goals*-Handbook 1, Cognitive Domain. David McKay.

Blumenreich, M. (2016, October 28). Assigning reflective memo blogs to support teacher research data analysis. *Voices of Practitioners Staff, 600*. https://issuu.com/naeyc/docs/vop_for_web_fall_2016/72

Boaler, J. (2000). Exploring situated insights into research and learning. *Journal for Research in Mathematics Education, 31*(1), 113–117.

Bochner, A. P. (1997). It's about time: Narrative and the divided self. *Qualitative Inquiry, 3*(4), 418–438.

Bottery, M., Man, W. P., Wright, N., & Ngai, G. (2009). Portrait methodology and educational leadership: Putting the person first. *International Studies in Educational Administration, 37*(3), 82–96.

Bouck, E. (2007) Co-teaching … not just a textbook term: Implications for practice, preventing school failure. *Alternative Education for Children and Youth*, 51(2), 46–51.

Britt, L. B. (April 2023). *Creating a home: Promoting equitable academic discourse by establishing teacher agency and co-design* (Doctoral Dissertation, East Carolina University). The Scholarship (http://hdl.handle.net/10342/12819).

Brendle, J., Lock, R., & Piazza, K. (2017). A study of co-teaching identifying effective implementation strategies. *International Journal of Special Education, 32*(3), 538–550.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design.* Harvard University Press.

Brown, J., & Bell, S. (2014). Supporting young people with dyslexia in international schools. A case study example of current provision in Southeast Asia. *Support for Learning, 29*(2), 154–166.

Brownell, M. T., & Pajares, F. (1999). Teacher efficacy and perceived success in mainstreaming students with learning and behavior problems. *Teacher Education and Special Education, 22*(3), 154–164.

Brownell, M. T., Adams, A., Sindelar, P., Waldron, N., & Vanhover, S. (2006). Learning from collaboration: The role of teacher qualities. *Exceptional Children, 72*(2), 169–185.

Bruce, C., Esmonde, I., Ross, J., Dookie, L., & Beatty, R. (2010). The effects of sustained classroom-embedded teacher professional learning on teacher efficacy and related student achievement. *Teaching and Teacher Education, 26*(8), 1598–1608.

Bryk, A. S., & Schneider, B. L. (2002). *Relational trust: A core resource in schools*. Russell Sage.

Bryk, A., S., & Schneider, B. L. (2003). Trust in schools: A core resource for school reform. *Educational Leadership, 60*, 40–44.

Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahieu, P. G. (2015). *Learning to improve: How America's schools can get better at getting better*. Harvard Education Press.

Buchheimer, A. (1963). The development of ideas about empathy. *Journal of Counseling Psychology, 10*(1), 61.

Buckley, F. J. (2000). *Team teaching: What, why, and how?* SAGE.

Carter, N., Prater, M. A., Jackson, A., & Marchant, M. (2009). Educators' perceptions of collaborative planning processes for students with disabilities. *Preventing School Failure, 54*(1), 60–70.

Chan, T., & Yuen, M. (2015). Inclusive education in an international school. A case study from Hong Kong. *International Journal of Special Education*, *30*(3), 86–97.

Chartrand, S. (2019). Funding issues and proactive responses in special education, *BU Journal of Graduate Studies in Education, 11*(1), 17-21.

Clandinin, D. J., & Connelly, F. M. (1996). Teachers‘ professional knowledge landscapes: Teacher stories—stories of teachers—school stories—stories of schools. *Educational Researcher*, *25*(3), 24–30.

Conderman, G., Johnston-Rodriguez, S., & Hartman, P. (2009). Communicating and collaborating in co-taught classrooms. *Teaching Exceptional Children Plus, 5*(5) 1–17.

Conderman, G. (2011). Methods for addressing conflict in co-taught classrooms. *Intervention in School and Clinic, 46*(4), 221–229.

Connelly, F. M, Clandinin, D. J., & He, M. F. (1997). Teachers' personal practical knowledge on the professional knowledge landscape. *Teaching and Teacher Education*, *13*(7) 665–674.

Cook, L., & Friend, M. (1996). Co-teaching: Guidelines for creating effective practices. *Focus on Exceptional Children, 28*(3), 1–16.

Cook, L., & Friend, M. (2010). The state of the art of collaboration on behalf of students with disabilities. *Journal of Educational and Psychological Consultation, 20*(1), 1–8.

Cosner, S. (2009). Building organizational capacity through trust. *Educational Administration Quarterly*, *45*(2), 248–291.

Cowger, A. (2017, April 11). *Why special education is a civil right*. TNTP. https://tntp.org/blog/post/why-special-education-is-a-civil-right

Creswell, J. W. (2003). *Research design, qualitative, quantitative, and mixed methods approaches* (2nd ed.). Sage.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage.

Creswell, J. W., & Guetterman, T. (2018). *Educational research* (6th ed.). Pearson.

Creswell, J. W., & Plano Clark, V. (2011). *Designing and conducting mixed method research* (2nd ed.). Sage.

Crockett, J. B., & Kauffman, J. M. (1998). Taking inclusion back to its roots. *Educational Leadership*, *56*(2), 74–77.

Crockett, J. (2002). Special education's role in preparing responsive leaders for inclusive schools. *Remedial and Special Education, 23*(3), 157–168.

Cuban, L. (1990). Reforming again, again, and again. *Educational Researcher*, *19*(1), 3–13.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development.* Learning Policy Institute.

Darling, N. (2007). Ecological systems theory: The person in the center of the circles. *Research in Human Development, 4*(3-4), 203–217.

Datnow A. (2011). Collaboration and contrived collegiality: Revisiting Hargreaves in the age of accountability. *Journal of Educational Change, 12*(2), 147–158.

Delany, M. (2016). *Special education needs*. Oxford University Press.

Denzin, N. K. (1989). *Interpretive biography*. Sage.

Dewey, J. (1910). *How we think.* D. C. Heath.

Dewey, J. (1938). *Experience & education.* Touchstone.

Dieker, l. (2015). *Cooperative teaching*. Accessed October 27, 2020, from http://www.specialconnections.ku.edu/?q=collaboration/cooperative_teaching

DiPaola M., & Guy, S. (2009). The impact of organizational justice on climate and trust in high schools. *Journal of School Leadership, 19*(4), 382–405.

Drago-Severson, E. (2012). *Helping educators grow: Strategies and practices for leadership development.* Harvard Education Press.

Dukes, C., & Lamar-Dukes, P. (2009). Inclusion by design: Engineering inclusive practices in secondary schools. *Teaching Exceptional Children, 41*(3), 16–23.

Ellis, C., & Bochner, A. P. (2000). Autoethnography, personal narrative reflexivity. Researcher as a subject. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed.; pp. 733–768). Sage.

Ellis, C., Adams, T. E., & Bochner, A. P. (2011). Autoethnography: an overview. *Historical Social Research, 36*(4), 273–290.

Evans, A. E. (2013). Educational leaders as policy actors and equity and equity advocated. In L. C. Tillman and J. J. Scheurich (Eds.), *Handbook of research on educational leadership for equity and diversity* (pp. 459–475). Routledge.

Ferguson, D.L., Kozleski, E., & Smith, E. (2003). Transforming general and special education in urban schools. In F. Obiakor, C. Utley, & A. Rotatori (Eds.), *Advances in special education, 15: Effective education for learners with exceptionalities* (pp. 43–74). Elsevier Science.

Florian, L., & Black-Hawkins, K. (2011). Exploring inclusive pedagogy. *British Educational Research Journal, 37*(5), 813–828.

Florian, L., & Spratt, J. (2013). Enacting inclusion: A framework for interrogating inclusive practice. *European Journal of Special Needs Education, 28*(2), 119–135.

Florian, L. (2014). What counts as evidence of inclusive education? *European Journal of Special Needs Education, 29*(3), 286–294.

Fluijt, D., Bakker, C., & Struyf, E. (2016). Team-reflection: The missing link in co-teaching teams. *European Journal of Special Needs Education*, *31*(2), 187–201.

Freeman, M. (2004). Data are everywhere: Narrative criticism in the literature of experience. In C. Daiute & C. Lightfoot (Eds.), *Narrative analysis: Studying the development of individuals in society* (pp. 63–81). Sage.

Freire, P. (1970). *Pedagogy of the oppressed*. Continuum.

Friend, M. P., & Bursuck, W. D. (1996). *Including students with special needs: A practical guide for classroom teachers.* Allyn and Bacon.

Friend, M. P., & Cook, L. (2010). *Interactions: Collaboration skills for school professionals*, (6th ed.). Merrill.

Friend, M. P., Cook, L., Hurley-Chamberlain, D., & Shamberger, C. (2010). Co-teaching: An illustration of the complexity of collaboration in special education, *Journal of Educational and Psychological Consultation, 20*(1), 9–27.

Friend, M. P. (2000). Myths and misunderstandings about professional collaboration. *Remedial and Special Education, 21*(3), 130–160.

Friend, M. P. (2008). *Co-Teach!* Marilyn Friend, Inc. https://coteach.com

Fullan, M. (2007). *The new meaning of educational change* (4th ed.), Teachers College Press.

Gallo-Fox, J., & Scantlebury, K. (2016). Coteaching as professional development for cooperating teachers. *Teaching and Teacher Education, 60*(1), 191–202.

Gawande, A. (2017, January 23). Tell me where it hurts. *The New Yorker*, 36–45. http://www.newyorker.com/magazine/2017/01/23/the-heroism-of-incremental-care

Geertz, C. (1973). *The interpretation of cultures*. Basic Books.

Gerber, P. J., & Popp, P. A. (2000). Making collaborative teaching more effective for academically able students: Recommendations for implementation and training. *Learning Disability Quarterly, 23*, 229–236.

Gersten, R., Walker, H., & Darch, C. (1988). Relationship between teachers' effectiveness and their tolerance for handicapped students. *Exceptional Children, 54*(5), 433–438.

Gillespie, S. N. (2017). The role of leadership in changing the culture of an international school to be inclusive of students with special needs. *Walden Dissertations and Doctoral Studies, 3943.* https://scholarworks.waldenu.edu/dissertations/3943

Goodall, H. L. (2001). *Writing the new ethnography.* AltaMira.

Goor, M. B., Schwenn, J. O., & Boyer, L. (1997). Preparing principals for leadership in special education. *Intervention and School and Clinic, 32*(3), 133–141.

Graybill, J. (2020, April 20). What parents of special needs children need to know about international schools. https://blog.thepienews.com/2020/04/what-parents-of-special-needs-children-need-to-know-about-international-schools/

Grima-Farrell, C. R., Bain, A., & McDonagh, S. H. (2011). Bridging the research-to-practice gap: A review of the literature focusing on inclusive education. *Australasian Journal of Special Education, 35*(2), 117–136.

Guajardo, M., Guajardo, F., Janson, C., & Militello, M. (2016). *Reframing community partnerships in education: Uniting the power of place and wisdom of people*. Routledge.

Gutiérrez, K. D. (2016). Designing resilient ecologies: Social design experiments and a new social imagination. *Educational Researcher, 45*(3), 187–196.

Hale, C. R. (2008). *Engaging contradictions: Theory, politics, and methods of activist scholarship.* University of California Press.

Hayden, M. C. (2006). *Introduction to international education: International schools and their communities*. Sage.

Hayden, M. C. (2011). Transnational spaces of education: The growth of the international school sector. *Globalisation, Societies and Education, 9*(2), 211–224.

Hehir, T. (2006). *New directions in special education: Eliminating ableism in policy and practice.* Harvard Education Press.

Herr, K., & Anderson, G. L. (2014). *The action research dissertation: A guide for students and faculty* (2nd ed.). Sage.

Hoekstra, A., Brekelmans, M., Beijaard, D., & Korthagen, F. (2009). Experienced teachers' informal learning: Learning activities and changes in behavior and cognition. *Teaching and Teacher Education*, *25*(5), 663–673.

Honigsfeld, A. & Dove, M. G., (2010). *Collaboration and co-teaching: Strategies for English learners*. Corwin.

Hoy W., Gage C., & Tarter C. (2006). School mindfulness and faculty trust: Necessary conditions for each other? *Educational Administration Quarterly*, *42*, 236–255.

hunter, L., emerald, e., & Martin, G. (2013). *Participatory activist research in the globalized world*. Springer.

Ingersoll, R. M. (2003). *Who controls teachers' work?* Harvard University Press.

International Baccalaureate (IB). (2015). The *IB guide to inclusive education.* Author. https://www.ibo.org/programmes/equity-and-inclusive-education-in-the-ib/

International Baccalaureate Organization. (2016) *Learning diversity and inclusion in IB programs.* Author.

ISC Research and Next Frontier Inclusion. (2016). Research survey of inclusion in international schools and those offering international curricula. Retrieved 29 July, 2020, from https://www.flipsnack.com/InternationalSchoolConsultancy/inclusion-ininternational-schools-and-those-offering-internatio.html

ISR Member. (2011, 10 June). Going international with special needs children https://internationalschoolsreviewdiscuss.wordpress.com/2011/06/09/goinginternational-with-special-needs-children/In-text citation

Jacob, E. (1987). Qualitative research traditions: A review. *Review of Educational Research*, *57*(1), 1–50.

Kanner, L. (1964). *A history of the care and study of the mentally retarded.* Charles C. Thomas.

Kauffman, J., & Badar, J. (2014). Instruction, not inclusion, should be the central issue in special education: An alternative view from the USA. *Journal of International Special Needs Education, 17*(1), 13–20.

Kauffman, J., Gerber, M., & Semmel, M. (1988). Arguable assumptions underlying the regular education initiative. *Journal of Learning Disabilities*, *21*(1), 6–11.

Keller, D. (2015). Leadership in international schools: Understanding and managing dualities. *Educational Management Administration & Leadership, 43(*6), 900–917.

Kendi, I. (2019). *How to be an anti-racist*. One World.

King, A. H. (2022). Synchronizing and amending: A conversation analytic account of the "Co-ness" in co-teaching, *Linguistics and Education, 67*, 101015, 1–12.

King-Sears, M. E. (2020). Introduction to special series on universal design for learning *Remedial and Special Education*, *41*(4), 191–193.

Kochanek, J. (2005). *Building trust for better schools*. Corwin Press.

Kohler, F. W., Crilley, K. M., Shearer, D. D., & Good, G. (1997) Effects of peer coaching on teacher and student outcomes, *The Journal of Educational Research*, *90*(4), 240–250.

Kohler-Evans, P. A. (2006). Co-teaching: How to make this marriage work in front of the kids. *Education*, *127*(2), 260–264.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

Leatherman J. (2009). Teachers' voices concerning collaborative teams within an inclusive elementary school. *Teaching Education*, *20*(2), 189–202.

Leverett, L. (2002). Warriors to advance equity: An argument for distributing leadership. *Spotlight on Student Success, 709.* The Laboratory for Student Success.

Lilly, M. S. (1992). Labeling: A tired, overworked, yet unresolved issue in special education. In W. Stainback & S. Stainback (Eds.), *Controversial issues confronting special education: Divergent perspectives* (pp. 90–95). Allyn Bacon.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry.* Sage.

Marris, P. (1974). *Loss and change*. Routledge & Kegan Paul.

Maso, I. (2001). Phenomenology and ethnography. In P. Atkinson, A. Coffey, S. Delamont, J. Lofland, & L. Lofland, (Eds.), *Handbook of ethnography* (pp. 136–144). Sage.

Mastropieri, M. A., Scruggs, T. E., Graetz, J., Norland, J., Gardizi, W., & McDuffie, K. (2005). Case studies in co-teaching in the content areas successes, failures, and challenges. *Intervention in School and Clinic, 40*(5), 260–270.

Maxwell, J. A. (2005). *Qualitative research design: An interactive approach* (2nd ed.). Sage.

Maykut, P., & Morehouse, R. (1994). *Beginning qualitative research: A philosophic and practical guide.* The Falmer Press.

McDonald, J. P. (1996). *Redesigning schools: Lessons for the 21st century*. Jossey-Bass.

Merriam, S. B. (1995). What can you tell from an N of 1?: Issues of validity and reliability in qualitative research. *PAACE Journal of Lifelong Learning, 4*, 51–60.

Meyer, A., Rose, D. H., & Gordon, D. (2014) *Universal design for learning: Theory and practice.* CAST.

Meyerson, D. E., & Scully, M. A. (1995). Tempered radicalism and the politics of ambivalence and change. *Organization Science, 6*(5), 585–600.

Miles, M. B., & Huberman, A. M. (1994). *An expanded sourcebook: Qualitative data analysis* (2nd ed.). Sage.

Militello, M., Rallis, S. F., & Goldring, E. B. (2009). *Leading with inquiry and action: How principals improve teaching and learning*. Corwin Press.

Mitchiner, M., McCart, A., Kozleski, E., Sweeney, H., & Sailor, W. (2014). What are emerging trends and future directions in effective inclusive elementary schools for students with extensive support needs? In J. McLeskey, N. L. Waldron, F. Spooner, & B. Algozzine (Eds.), *Handbook of effective inclusive schools: Research and practice* (pp. 477–491). Routledge.

Moss, D., Czocher, J., & Lamberg, T. (2004). Frustration with understanding variables is natural. *Mathematics Teaching in the Middle School, 24*(1), 10–17.

Murawski, W. W., & Dieker, L. (2013). *Leading the co-teaching dance: Leadership strategies to enhance team outcomes.* Corwin.

Murawski, W. W. (2009). *Collaborative teaching in secondary schools: Making the co-teaching marriage work.* Corwin.

Murawski, W. W., & Lochner, W. (2011). Observing co-teaching: What to ask for, look for, and listen for. *Intervention in School and Clinic, 46*(3), 174–183.

Murawski, W. W., & Swanson, L. (2001). A meta-analysis of co-teaching research: Where are the data? *Remedial and Special Education, 22*(5), 258–267.

Murawski, W.W. (2003). *Co-teaching in the inclusive classroom: Working together to help all your students find success (grades 6–12)*. Institute for Educational Development.

Murawski, W. W. (2008). Five keys to co-teaching in inclusive classrooms. *The School Administrator, 65*(8), 29.

Murawski, W., M. (2012). 10 tips for using co-planning time more efficiently. *Teaching Exceptional Children, 44*(4), 8–15.

Murawski W. W., & Hughes C., E. (2009). Response to intervention, collaboration, and co-teaching: A logical combination for successful systemic change. *Preventing School Failure, 53*(4), 267–277.

Myles, B. S., & Simpson, R. L. (1989). Regular educators' modification preferences for mainstreaming mildly handicapped children. *Journal of Special Education, 22*, 479–491.

Neufeld, B., & Roper, D. (2003). *Expanding the work: Year II of collaborative coaching and learning in the effective practice schools.* Education Matters. https://files.eric.ed.gov/fulltext/ED480874.pdf

Nganga, C. W. (2011). *A narrative study of international teachers' transitional identities in U.S. high schools* (Doctoral dissertation, The University of North Carolina at Greensboro). https://libres.uncg.edu/ir/uncg/f/Nganga_uncg_0154D_10626.pdf

Nilholm, K. , & Göransso, C. (2017). What is meant by inclusion? An analysis of European and North American journal articles with high impact. *European Journal of Exceptional Needs, 32*(3), 437–451.

Nilsson, P., & van Driel, J. (2010). Teaching together and learning together: Primary science students teachers' and their mentors' joint teaching and learning in the primary classroom. *Teaching and Teacher Education, 26*(6), 130–135.

Norris, J. M. (2022). *School leaders sensemaking and sense giving.* Brill.

Oliver, M., Avramides, K., Clark, W., Hunter, J. Luckin, R., & Hansen, C. (2017). Sharing teacher knowledge at scale: Teacher inquiry, learning design and the representation of teachers' practice. *Teacher Development, 22*(4), 587–606.

Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal experiential perspective. *Qualitative Social Work, 1*(3), 261–283.

Pelletier, K. (2013). *Who are our schools for? The case for inclusion.* Retrieved 5 June, 2020 https://caseforinclusion.org/application/files/5015/8179/5128/Case_for_Inclusion_2020_Key_Findings_021420web.pdf

Philpott, D. F., Furey, E., & Penney, S. C. (2010). Promoting leadership in the ongoing professional development of teachers: Responding to globalization and inclusion. *Exceptionality Education International, 20*(2), 28–54.

Pijl, S. J., & Frissen, P. H. A. (2009). What policymakers can do to make education inclusive. *Educational Management Administration and Leadership*, *37*(3), 366–377.

Powell, W., & Kusuma-Powell, O. (Eds.) (2015). *An inclusive toolkit.* Association of Supervision and Curriculum Development.

Powell, W., Kusuma-Powell, O., Pelletier, K., & Bartlett, K. (2013). *Towards inclusion*. Next Frontier Inclusion.

Powell, W., Kusuma-Powell, O., Pelletier, K., & Bartlett, K. (2014). *Inclusion in international schools: A practical guide for school leaders*. Next Frontier Inclusion. https://gcdisthinkingoutloud.wordpress.com/2017/09/04/the-next-frontier-inclusion-in-international-schools-a-practical-guide-for-school-leaders/

Pratt, S. (2014). Achieving symbiosis: working through challenges found in co-teaching to achieve effective co-teaching relationships. *Teacher and Teacher Education, 41,*1–12.

Quadros-Meis, M. (2021). Cultivating brave space: How networks fortify school leaders to ensure equitable access for Black youth. (Doctoral Dissertation, East Carolina University). Retrieved from The ScholarShip (http://hdl.handle.net/10342/9066.)

Qvortrup, A., & Qvortrup, L. (2018). Inclusion: Dimensions of inclusion in education, *International Journal of Inclusive Education, 22*(7), 803–817. http://doi/10.1080/13603116.2017.1412506

Richardson-Garcia, L. (2019). *Utilizing community learning exchanges to empower all voices and strengthen community engagement in an international middle school* (Order No. 27629160). ProQuest Dissertations & Theses Global (2352655582) https://www.proquest.com/dissertations-theses/utilizing-community-learning-exchanges-empower/docview/2352655582/se-2

Riessman, C. K. (1993). *Narrative inquiry.* Sage.

Rigby, J. G., & Tredway, L. (2015). Actions matter: How school leaders enact equity principles. In M. Khalifa, N. A. Witherspoon, A. F. Osanloo, & C. M. Grant (Eds.), *Handbook of urban educational leadership* (pp. 426–440). Rowan & Littlefield.

Roberts, B. (2012). Reflection on what is implied by international with reference to 92 international education and international schools. *International Schools Journal, 31*(2), 69–76.

Rosenthal, L. (2019). *Fits and starts: One elementary school's journey toward trauma-informed leadership* (Order No. 27629324). ProQuest Dissertations & Theses Global (2353569572).

Roxå, T., Pleschová, G., Thomson, K. E., & Felten, P. (2021). Conversations that make meaningful change in teaching, teachers, and academic development. *International Journal for Academic Development*, *26*(3), 201-209.

Rytivaara, A., & Kershner, R. (2012). Co-teaching as a context for teachers' professional learning and joint knowledge construction. *Teaching and Teacher Education*, *28*(7), 999–1008.

Rytivaara, A., Pulkkinen, J., & de Bruin, C. L. (2019). Committing, engaging and negotiating: Teachers' stories about creating shared spaces for co-teaching. *Teaching and Teacher Education*, *83*, 225–235.

Sailor, W. (2009). *Making RTI work. How smart schools are reforming education through schoolwide RTI*. Jossey-Bass.

Sailor, W. (2015). Advances in schoolwide inclusive school reform. *Remedial and Special Education*, *36*(2), 94–99.

Saldana, D. C., & Waxman, H. C. (1997). An observational study of multicultural education in urban elementary schools. *Equity and Excellence in Education*, *30*(1), 40–46.

Saldaña, J. (2016). *The coding manual for qualitative researchers*. Sage.

Santoli S. P., Sachs J., Romey E. A., & McClurg S. (2008). A successful formula for middle-school inclusion: Collaboration, time, and administrative support. *Research in Middle Level Education Online*, *32(2),* 1–13.

Schön, D.A. (1984) *The reflective practitioner: How professionals think in action*. Basic Books.

Scruggs, T., Mastropieri, M. A., & McDuffie, K. A. (2007). Co-teaching in inclusive classrooms: A meta synthesis of qualitative research. *Exceptional Children*, *73*(4), 392–416.

Semmel, M. I., Abernathy, T. V., Butera, G., & Lesar, S. (1991). Teacher perceptions of the regular education initiative. *Exceptional Children*, *58*(1), 9–24.

Schmidt, S., & Venet, M. (2012). Principals facing inclusive schooling or integration. *Canadian Journal of Education, 35(1),* 217–238.

Shaklee, B. D. (2007). Focus on international schools: Serving students with learning disabilities. *Advances in Learning and Behavioral Disabilities*, *20,* 265–283.

Shamberger, C. T., Williamson-Henriques, K. M., Moffett, N., & Brownlee-Williams, Y. (2014). Special educators speak out on co-teaching knowledge and skills, *Journal of Research Initiatives*, (1*)2,* Article 6. https://www.semanticscholar.org/paper/Special-Educators-Speak-Out-on-Co-Teaching-and-Shamberger-Williamson-Henriques/9623ea17c6a02f32b2028711ebf124ed94444d97

Sheehy, L. (2007). *Leadership for co-teaching: A distributed perspective* (Doctoral dissertation, Virginia Polytechnic Institute and State University, 2007). ProQuestLLC http://proquest.umi.com.ezproxy.lib.vt.edu:8080/login?COPT=REJTPUcyODcrNTU1NCZJTlQ9MCZWRVI9Mg==&clientId=8956

Shin, M., Lee, H., & McKenna, J. W. (2016). Special education and general education preservice teachers' co-teaching experiences: A comparative synthesis of qualitative research. *International Journal of Inclusive Education, 20*(1), 91–107.

Sileo, J. M. (2011). Co-teaching: Getting to know your partner. *Teaching Exceptional Children, 43*(5), 32–38.

Simpson, R., & Myles, B. (1990). The general education collaboration: A model for successful mainstreaming. *Focus on Exceptional Children, 23*(4), 1–10.

Skrtic, T., M. (1991). The special education paradox: Equity as the way to excellence. *Harvard Educational Review, 61,* 148–206.

Skrtic, T. M., Sailor, W., & Gee, K. (1996). Voice, collaboration, and inclusion democratic themes in educational and social reform initiatives. *Remedial and Special Education 17*(3), 142–157.

Smith, C., Hofer, J., Gillespie, M., Solomon, M., & Rowe, K. (2003). How teachers change: A study of professional development in adult education. In P. N. Blakely & A. H. Tomlin (Eds.), *Adult Education: Issues and Developments.* Nova Science Publishers.

Smith, D., Frey, N., Pumpian, I., & Fisher, D. (2017). *Building equity: Policies and practices to empower all learners*. Association for Supervision and Curriculum Development.

Snyder, R. F. (1999). Inclusion: A qualitative study of in-service general education teachers' attitudes and concerns. *Education, 120*(1), 173.

Soudmand, F., & Ahour, T. (2020). The effect of one teach-one assist model of co-teaching on Iranian EFL learners' reading comprehension. *Journal of English Language Pedagogy and Practice*, *13*(26*),* 24–48.

Spillane, J. P., & Coldren, A. (2011). *Diagnosis and design for school improvement: Using a distributed perspective to lead and manage change*. Corwin Press.

Spillane, J. B., Halverson, R., & Diamond, J.B. (2004). Toward a theory of leadership practice: A distributed perspective. *Curriculum Studies, 36*(1), 3–34.

Spradley, J. P. (1980). *Participant observation*. Rinehart & Winston.

Stainback, S., & Stainback, W. (1988). Educating students with severe disabilities. *Teaching Exceptional Children, 21(*1), 16–19.

Stainback, S., Stainback, W., & Forest. M. (1989). *Educating all students in the mainstream of regular education*. Brookes.

Steele, C. (2010). *Whistling Vivaldi: How stereotypes affect us and what we can do*. W.W. Norton.

Strauss, A. L., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Sage.

Stringer, E. T. (2013). *Action research* (4th ed.) Sage.

Takala, M., Pirittmaa, R., & Tomanen, M. (2009). Inclusive special education: The role of special education teachers in Finland. *British Journal of Special Education, 36*(3), 162–173.

Tannock M. T. (2009). Tangible and intangible elements of collaborative teaching. *Intervention in School and Clinic*, *44*(3), 173–178.

Taylor, S. J., & Bogdan, R. (1984). *Introduction to qualitative research methods: The search for meanings* (2nd ed.). Wiley.

Theoharis, G. (2007). Social justice educational leaders and resistance: Toward a theory of social justice leadership. *Educational Administration Quarterly, 43*(2), 221–258.

Thomas, G. (2013). A review of thinking and research on inclusive education policy, with suggestions for a new kind of inclusive thinking. *British Educational Research Journal, 39*(3), 473–490.

Tredway, L., Simon, K., & Militello, M. (2021a). Professional development superglue. *The Learning Professional, 42*(2), 52–55.

Tschannen-Moran M., & Hoy W. (1997). Trust in schools: A conceptual and empirical analysis. *Journal of Educational Administration, 36*(4), 334–352.

Tschannen-Moran, M., & Hoy, W. K. (2000). A multidisciplinary analysis of the nature, meaning, and measurement of trust. *Review of Educational Research, 70*(4), 547–593.

Tschannen-Moran M. (2004). *Trust matters*. Jossey-Bass.

Tschannen-Moran M. (2009). Fostering teacher professionalism in schools: The role of leadership orientation and trust. *Educational Administration Quarterly*, *45*(2), 217–247.

UNESCO. (2008). *Inclusive education: The way of the future.* Author. https://unesdoc.unesco.org/ark:/48223/pf0000162787

UNESCO. (1994). *Salamanca statement and framework for action on special needs education*. Author. http://www.unesco.org/education/pdf/SALAMA_E.PDF

UNESCO. (2015). *Education 2030. Incheon declaration and framework for action for the implementation of sustainable development goal 4*. Author.

United States Office of Overseas Schools. (2014). *Count me in*. http://www.state.gov/m/a/os/c18630.htm

van Driel, J. H., Verloop, N., & Beijaard, D. (2001). Professional development and reform in science education: The role of teachers' practical knowledge. *Journal of Research in Science Teaching*, *38*(2), 137–158.

Vandercook, T., & York, J. (1989). A team approach to program develop and support. In J. York, T. Vandercook, C. MacDonald, & S. Wolff (Eds.), *Strategies for full inclusion* (pp. 21-43). Institute on Community Integration.

Vangrieken, K., Meredith, C., Packer, T., & Kyndt, E. (2017). *Teacher communities as a context for professional development: A systematic review, 61,* 47–59. https://www.sciencedirect.com/science/article/abs/pii/S0742051X16304681

Vaughn, S., Bos, C. S., & Schumn, J. S. (2000). *Teaching mainstreamed, diverse, and at-risk students in general education.* Allyn & Bacon.

Villa, R. A., & Thousand, J. S. (1995). *Creating an inclusive school*. Association for Supervision and Curriculum Development.

Vostal, B. R., McNaughton, D., Benedek-Wood, E., & Hoffman, K. (2015). Preparing teachers for collaborative communication: Evaluation of instruction in an active listening strategy. *National Teacher Education Journal*, *8*(2), 5–14.

Vygotsky, L. (1978). *Mind in society*. Harvard University Press.

Waitoller, F. R., & Artiles, A. J. (2013). A decade of professional development research for inclusive education: A critical review and notes for a research program. *Review of Educational Research*, *83*(3), 319–356.

Wall, S. (2006). An autoethnography on learning about autoethnography. *International Journal of Qualitative Methods*, *5*(2), 146–160.

Walther-Thomas, C., Bryant, M., & Land, S. (1996). Planning for effective co-teaching: The key to successful inclusion. *Remedial and Special Education, 17,* 255–264.

Weis, L., & Fine, M. (2004). *Working method: Research and social justice*. Psychology Press.

Wenger, E., & Wenger-Trayner, B. (2015). *Communities of practice. A brief introduction.* http://wenger-trayner.com/introduction-to-communities-of-practice/

Wise, D., & Jacobo, A. (2010). Toward a framework for leadership coaching. *School Leadership and Management, 30*(2), 159–169.

Woo, L. J., & Henriksen, D. (2023). The critical role of teachers in educational design processes. *Teachers College Record.* https://journals.sagepub.com/page/tcz/collections/commentaries

Yung, M. M. (2021). *Portraits of relentless progressives: Equity work in complex educational organizations.* (Doctoral Dissertation, East Carolina University). Retrieved from The ScholarShip (http://hdl.handle.net/10342/9062).

Yurkovsky, M. M., Peterson, A. J., Mehta, J. D., Horwitz-Willis, R., & Frumin, K. M. (2020). Research on continuous improvement: Exploring the complexities of managing educational change. *Review of Research in Education, 44*(1), 403–433.

Zeichner, K. M., & Liston, D. P. (2011). *Reflective teaching: An introduction* (2nd ed.). Routledge.

Zwart, R. C., Wubbels, T., Bergen, T., & Bolhuis, S. (2007). Experienced teacher learning within the context of reciprocal peer coaching. *Teachers and Teaching: Theory and Practice, 13*(2), 165–187.

Zwart, R. C., Wubbels, T., Bergen, T., & Bolhuis, S. (2009). Which characteristics of a reciprocal peer coaching context affect teacher learning as perceived by teachers and their students? *Journal of Teacher Education, 60*(3), 243–257. http://doi/10.1177/0022487109336968

APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board 4N-64 Brody Medical Sciences Building· Mail Stop 682 600 Moye Boulevard · Greenville, NC 27834
Office 252-744-2914 · Fax 252-744-2284 · rede.ecu.edu/umcirb/

Notification of Exempt Certification

From: Social/Behavioral IRB To: Norah Olaly
CC: Matthew Militello Date: 8/19/2020

Re: UMCIRB 19-001612
Co-developing an "ecology of co-teaching" for general education and special education teachers

I am pleased to inform you that your research submission has been certified as exempt on 8/19/2020. This study is eligible for Exempt Certification under category # 2b.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

Document CitiCompletionCertificate_NorahOlaly_June2019.pdf.pdf(0.01) Consent Form to Participate in Research.docx(0.01)
Interview Protocol.docx(0.01)
OBSERVATION GUIDE.docx(0.01) Olaly_Dissertation Proposal_July 26.docx(0.01)
School Support Letter.pdf(0.01)

Description
Additional Items
Consent Forms
Interview/Focus Group Scripts/Questions Additional Items

Study Protocol or Grant Application Additional Items

For research studies where a waiver or alteration of HIPAA Authorization has been approved, the IRB states that each of the waiver criteria in 45 CFR 164.512(i)(1)(i)(A) and (2)(i) through (v) have been met. Additionally, the elements of PHI to be collected as described in items 1 and 2 of the Application for Waiver of Authorization have been determined to be the minimal necessary for the specified research.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

APPENDIX B: CITI CERTIFICATION

CITI PROGRAM

Completion Date 02-Jun-2019
Expiration Date 01-Jun-2022
Record ID 29933279

This is to certify that:

NORAH OLALY

Has completed the following CITI Program course:

Human Research (Curriculum Group)
Group 2.Social / Behavorial Research Investigators and Key Personnel (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

East Carolina University

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w403a153e-b35c-46c9-aa11-c2e2b3b2bd5d-29933279

APPENDIX C: SCHOOL APPROVAL LETTER

International School of Tanganyika
Challenge | Support | Inspire

PO Box 2651 Dar es Salaam, Tanzania
Central and Elementary Office Phone: +255 684 228882/3
+255 658 228883/5
Secondary Office Phone: +255 22 260 1126/7 or
+255 787 997778/96
Web: www.istafrica.com
Email: information@istafrica.com

June 20, 2019

To Whom It May Concern:

International School of Tanganyika recognizes the benefits of participating in relevant, well-designed research studies proposed by qualified individuals. Approval for conducting such studies is based primarily on the extent to which substantial benefits can be shown for International School of Tanganyika and its mission of educating students. The purpose of this letter is to notify you of the **approval** to conduct the dissertation study titled, "Co-developing and implementing reflective practices to develop an "ecology of co-teaching" with participants in our school. We also give permission to utilize the spaces at International School of Tanganyika to collect data and conduct observations and interviews for the dissertation project.

The project meets all of our school guidelines, procedures, and safeguards for conducting research on our campus. Moreover, there is ample space for **Norah Olaly** to conduct her study and her project will not interfere with any functions of International School of Tanganyika. Finally, the following conditions must be met, as agreed upon by the researchers and International School of Tanganyika:

- Participant data only includes information captured from the stated data collection strategies.
- Participation is voluntary.
- Participants can choose to leave the study without penalty at any time.
- Any issues with participation in the study are reported to the school administration in a timely manner.
- An executive summary of your findings is shared with the school administration once the study is complete.

In addition to these conditions, the study must follow all of the East Carolina University IRB guidelines.

We are excited to support this important work.

Respectfully,

International School of Tanganyika
P. O. Box 2651
Dar es Salaam
Tel: 022 2151817/8

Dr. Mark Hardeman
Head of School
International School of Tanganyika

APPENDIX D: ADULT CONSENT FORM

Informed Consent to Participate in Research
Information to consider before taking part in research that has no more than minimal risk.

Title of Research Study: Developing an ecology of co-teaching: An ethnographic study of a co-teaching partnership.
Principal Investigator: Dr. Matthew Militello
Institution, Department or Division: College of Education
Address: 220 Ragsdale, ECU, Greenville, NC 27858
Telephone #: (919) 518.4008
Study Coordinator***:*** Dr. Matthew Militello
Telephone #: (919) 518.4008

Why am I being invited to take part in this research?
The purpose of this research is to engage in iterative cycles of inquiry to develop an "ecology of co-teaching" at our school. This study utilizes co-planning meetings as the methodology for collaboration among co-teachers. The co-planning meetings are information exchanges centered on a topic that directly affects all constituents. **You are being invited to take part in this research because** you are a teacher at the participating middle school. **The decision to take part in this research is yours to make. By doing this research, we hope to learn** to what extent the study participants work collaboratively using reflective practices to enhance instructional planning and practices?
If you volunteer to take part in this research, you will be one of about 3 people to do so.
Are there reasons I should not take part in this research?
There are no known reasons for why you should not participate in this research study.
What other choices do I have if I do not take part in this research?
You can choose not to participate.
Where is the research going to take place and how long will it last?
The research will be conducted at your school. The total amount of time you will be asked to volunteer for this study is approximately twenty-four hours.
What will I be asked to do?
You will be asked to do the following: If you agree to participate in this study, you may be asked to participate in one or more interviews co-planning meetings. Interviews and classroom observations will be audio/video recorded. If you want to participate in an interview but do not want to be audio recorded, the interviewer will turn off the audio recorder. If you want to participate in a classroom observation but do not want to be video recorded, you will be able to sit out of field of view of the video camera and still be audio recorded. Interview and classroom observation questions will focus on your reflections and experiences in co-planning meetings.
What might I experience if I take part in the research?
We do not know of any risks (the chance of harm) associated with this research. Any risks that may occur with this research are no more than what you would experience in everyday life. We do not know if you will benefit from taking part in this study. There may not be any personal benefit to you but the information gained by doing this research may help others in the future.

Will I be paid for taking part in this research?
We will not be able to pay you for the time you volunteer while being in this study.

Will it cost me to take part in this research?
It will not cost you any money to be part of the research.
Who will know that I took part in this research and learn personal information about me?
ECU and the people and organizations listed below may know that you took part in this research and may see information about you that is normally kept private. With your permission, these people may use your private information to do this research:

- Any agency of the federal, state, or local government that regulates human research. This includes the Department of Health and Human Services (DHHS), the North Carolina Department of Health, and the Office for Human Research Protections.
- The University & Medical Center Institutional Review Board (UMCIRB) and its staff have responsibility for overseeing your welfare during this research and may need to see research records that identify you.

How will you keep the information you collect about me secure? How long will you keep it?
The information in the study will be kept confidential to the full extent allowed by law. Confidentiality will be maintained throughout the data collection and data analysis process. Consent forms and data from interviews will be maintained in a secure, locked location and will be stored for a minimum of three years after completion of the study. No reference will be made in oral or written reports that could link you to the study.
What if I decide I don't want to continue in this research?
You can stop at any time after it has already started. There will be no consequences if you stop and you will not be criticized. You will not lose any benefits that you normally receive.
Who should I contact if I have questions?
The people conducting this study will be able to answer any questions concerning this research, now or in the future. You may contact the Principal Investigator at nolaly@istafrica.com (weekdays days, 8:00 am – 5:00 pm).
If you have questions about your rights as someone taking part in research, you may call the Office of Research Integrity & Compliance (ORIC) at phone number 252-744-2941. If you would like to report a complaint or concern about this research study, you may call the Director of the ORIC at 252-744-1971.

If you have questions about your rights as someone taking part in research, you may call the Office of Research Integrity & Compliance (ORIC) at phone number 252-744-2914 (days, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director for Human Research Protections, at 252-744-2914

Is there anything else I should know?
The information in the study will be kept confidential to the full extent allowed by law. Confidentiality will be maintained throughout the data collection and data analysis process. Consent forms and data from interviews will be maintained in a secure, locked location and will be stored for a minimum of three years after completion of the study. No reference will be made in oral or written reports that could link you to the study.

I have decided I want to take part in this research. What should I do now?
The person obtaining informed consent will ask you to read the following and if you agree, you should sign this form:

- I have read (or had read to me) all of the above information.
- I have had an opportunity to ask questions about things in this research I did not understand and have received satisfactory answers.
- I know that I can stop taking part in this study at any time.
- By signing this informed consent form, I am not giving up any of my rights.
- I have been given a copy of this consent document, and it is mine to keep.

Participant's Name (PRINT)	**Signature**	**Date**

Person Obtaining Informed Consent: I have conducted the initial informed consent process. I have orally reviewed the contents of the consent document with the person who has signed above, and answered all of the person's questions about the research.

Person Obtaining Consent (PRINT)	**Signature**	**Date**

Principal Investigator (PRINT)	**Signature**	**Date**