

Developing Collective Teacher Efficacy Through Embedded Qualitative Reflective
Practices in Continuous Improvement for Equity

by

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ABSTRACT

The purpose of this study was (a) to build embedded reflective practices with qualitative data in alignment with existing continuous improvement (CI) for equity processes and (b) provide professional development (PD) to support educators in using qualitative data sharing processes with the expectation of collective teacher efficacy (CTE) development. CTE and the enabling conditions (ECs) of embedded reflective practices and empowered teachers were studied to determine how educator engagement in structured storytelling about evidence of success could support their CTE development. The underlying theoretical frameworks for this study were CI and CTE in the context of liberatory approaches to education.

This mixed methods action research (MMAR) study was conducted in the United States in Northern California at a public charter high school utilizing the EL Education learning model. Six participants in a representative sample engaged in a four-week intervention involving four collaboratively-designed, virtual, 2-hour PD sessions. Pre- and post-intervention surveys were administered and based on the CTE Scale and the Enabling Conditions for Collective Teacher Efficacy Scale (EC-CTES). Two individual interviews and a four person focus group were also conducted post-intervention. Quantitative data from the surveys were analyzed through descriptive statistics and a one sample *t*-test. An inductive analysis process was utilized to analyze qualitative data to determine codes, categories, and themes. Both the quantitative and qualitative data were synthesized.

Results suggest a consistent presence of CTE and the existence of embedded reflective practices and empowered teachers both before and after the intervention. Although the quantitative data demonstrates no significant change from the pre- to post-survey in the development of CTE across the whole staff, the qualitative data demonstrates that participants were positively influenced by the intervention in regards to their CTE, empowerment, and embedded reflective practices. The discussion focuses on CTE development with qualitative, educator-generated evidence of success in a liberatory school environment. Findings inform the local and larger educational context by providing an example of how educator storytelling as evidence of success in CI for equity processes can influence CTE development.

DEDICATION

This is dedicated to the teachers, in the form of educators, friends, coaches, colleagues, community members, families, students, and student-athletes, who believed I could learn and gave their energy to teach me.

This is for those who may work a lifetime and not see it, but believe it, and take us one step closer.

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LIST OF ABBREVIATIONS

CI	Continuous Improvement
CRSL	Culturally Responsive School Leadership
CTE	Collective Teacher Efficacy
CRTOE	Culturally Responsive Teaching Outcome Expectancy Scale
CRTSE	Culturally Responsive Teaching Self-Efficacy Scale
EC	Enabling Condition (for CTE)
EC-CTES	Enabling Conditions for Collective Teacher Efficacy Scale
FGR	Focus Group Respondent
IRB	Institutional Review Board
MMAR	Mixed Methods Action Research
NCLB	No Child Left Behind
NYCOB	New York City Outward Bound
PLC	Principal Led Conference
PD	Professional Development
RC	Research Cycle
RQ	Research Question
SEL	Social and Emotional Learning
SLCs	Student Led Conferences
SPSS	Statistical Package of Social Science
TSES	Teacher Sense of Efficacy Scale
TSES-CP	Teacher Sense of Efficacy Scale-Critical Pedagogy
TLCs	Teacher Led Conferences

“The academy is not paradise. But learning is a place where paradise can be created. The classroom, with all its limitations, remains a location of possibility. In the field of possibility we have the opportunity to labor for freedom, to demand of ourselves and our comrades, an openness of mind and heart that allows us to face reality even as we collectively imagine ways to move beyond boundaries, to transgress. This is education as the practice of freedom.”

-bell hooks (1994)

“It’s not like love and spreadsheets don’t go together.”

-adrienne maree brown (2022)

Chapter 1

Larger and Local Context

Larger Context

Good intentions to improve teaching, learning, and student success have permeated educational institutions across time. These intentions, from policymakers and educators alike, can be steeped in a desire to liberate and empower students in community through an equitable and expansive approach to supporting the development of independent learners and freedom. They can also be steeped in an ongoing contribution to inequity with a harmful commitment to silence and niceness in the face of injustice (Castagno, 2014, 2019; Lewis & Diamond, 2015) as well as a narrow and

harmful focus on student achievement as only represented by standardized test scores (Boykin & Noguera, 2011; Dianis et al., 2015; Duncan-Andrade & Morrell, 2008; Hammond, 2015; Kohn, 2000; Safir & Dugan, 2021). Various American federal and state initiatives have pressured PreK-12 public schools to emphasize this kind of performance, which has resulted in extensive internal and external local, state/territory, and federal accountability measures. More recently, mandates to support equitable achievement for all students in school have come to the fore. Although No Child Left Behind (NCLB) began a call for equal test scores for all students and Race to the Top continued this emphasis, these policy initiatives did not address the complexities of what this means in practice with equity at the center (Boykin & Noguera, 2011). Moreover, these mandates involved evaluating and addressing systemic as well as local concerns within schools and their communities. Although shifting from relying on intentions to considering actual impact in schools and school systems can be helpful and important, this impact needs to be considered holistically, across student experience, engagement, and support. As a result, even greater intensity and complexity have been added to the work required of educators and educational leadership. As Bryk and Gomez (2008) explained when discussing the importance of continuous improvement (CI), “it is inconceivable to respond effectively to the demands for better schools without also seriously transforming the ways we develop and support school professionals; the tools, materials, ideas, and evidence with which they work” (p. 182). A top-down mandate for standardized, test-based outcomes without investment in building local skills and knowledge has not

enabled the development of equity-based solutions and liberatory approaches. To support all students to achieve as independent and critical learners, educators must be empowered with the skills, knowledge, beliefs, and attitudes to positively influence equitable student success and school development. I intend to extend current scholarship and practitioner knowledge about CI for equity and how it can develop collective teacher efficacy (CTE) to enhance educator mindsets and behaviors toward supporting all learners. Although there is research about how CTE can develop when educators look at evidence of success, there is not a great deal of research addressing how educator stories as qualitative evidence shared systematically among educators can be examined and utilized to build helpful and desirable beliefs and actions within a liberatory school program. I am defining liberatory practices in alignment with Freire (1970), Freire & Macedo (2007), hooks (1994), (2003), and (2010). I define this further below as well within the constructs of CTE and CI for equity. The school itself identifies these practices as equity-based and aligned directly with the EL Education learning model. The school utilizes the term “equity,” and I utilize the term “liberatory” when discussing these frameworks to how the work is situated at the school. My specific focus on how to develop effective embedded reflective practices for sharing educator-generated qualitative evidence of success addresses a local need and can contribute to the overall research.

Specifically, the school’s approach to CI for equity, in context and in community, is how we are addressing the demands and intensity of the work in our educational setting. CI is sometimes referred to as improvement science. I see similarities in how

these terms are utilized in education and will use CI throughout this dissertation. I will use the framing of CI in education that has been implemented in individual schools and school systems to support the ongoing monitoring of progress in context and as part of a system (Bryk, 2020; Bryk et al., 2015; Hinnant-Crawford, 2020; Park et al., 2013).

Progress with CI is defined together, in community, at the school. In the school program, the understanding of student achievement is expanded with the EL Education learning model (EL Education, 2018; Berger et al., 2014, 2016). The school program also subscribes to an equity-based approach to education, which I describe as liberatory, in their realization of this learning model (Duncan-Andrade, 2009; Freire, 1970; Freire & Macedo, 2007; hooks, 1994, 2003, 2010). This means the expanded definition of student achievement encompasses the mastery of knowledge and skills (which does include standardized test scores, but not solely focus on them), character development, and high quality student work that allows for complexity, authenticity, and craftsmanship (Berger et al., 2016; EL Education, 2018). In alignment with Freire (1970), this educational approach utilizes the posing of relevant problems, in relationship with local community partners, to help students consider solutions, engagement, and choice in how they will define progress together. Therefore, the progress monitoring efforts must address all elements of an expanded definition of student achievement and the support and emancipatory accountability with educators to realize this reality. In addition, this CI approach provides an opportunity to develop CTE through the effective organization of evidence of success. Donohoo et al. (2018) describe how

...based on a synthesis of more than 1,500 meta-analyses, collective teacher efficacy is greater than three times more powerful and predictive of student achievement than socioeconomic status. It is more than double the effect of prior achievement and more than triple the effect of home environment and parental involvement. It is also greater than three times more predictive of student achievement than student motivation and concentration, persistence, and engagement. (pp. 1-2)

Although the school staff has studied CTE and has a regular system for reviewing quantitative evidence of success in cycles of improvement, we have not yet systematized our approach to collecting educator-generated qualitative evidence of success as a part of our embedded reflective practices.

The school currently utilizes qualitative evidence in the form of survey responses, interviews, and focus groups. However, there is not yet a structure for collecting and analyzing educator stories as qualitative evidence regularly and efficiently. If a better approach to capturing this qualitative evidence can be created in the school program, it can influence holistic student achievement more equitably as well as contribute to the overall research on how to support CTE development in schools. Beyond this specific school program, providing educators with systematic approaches to sharing their own qualitative evidence of success can contribute to developing CTE, which is a powerful, renewable resource for all educators (Bandura, 1993). Even in this school program with robust data systems across quantitative and qualitative methods, there is not yet any focus

on consistent, functional collection and sharing of educator stories. There is limited research on the effective collection and sharing of this kind of educator-generated qualitative evidence of success in support of CTE development within a CI system, particularly with educators engaging in this sharing of stories all together.

In addition, an investigation of qualitative “success” with staff provides the ability for the staff to delve into the complexities of success itself. This means success can be reflected on beyond a surface outcome to consider the holistic view of what truly constitutes success for an educator or their colleagues. This means the challenging elements of what led to the success, temporary failures, or long term failures that ultimately supported helpful reflections can all be considered a part of this umbrella of success. This definition of success can also ultimately consider what is collaborative success together with students and families. This means “success,” although not always in quotes, is representative of a more holistic view of the word for the purposes of this study. It is also embedded within a liberatory approach to education.

I intend to contribute to the school community specifically and the overall body of research that can benefit education systems working to equitably support holistic achievement with all learners. When educators can effectively and regularly share evidence of success through their storytelling together, this could provide insight into how CTE is developed overall. Research currently emphasizes the importance of CTE and how it can benefit student achievement (Goddard et al., 2000, 2017; Eells, 2011; Tschannen-Moran & Barr, 2004) and school culture (Caprara et al., 2003; Hoy et al.,

2002; Klassen, 2010; Lim & Eo, 2014; Tschannen-Moran & Barr, 2004; Tiplic et al., 2015). Vicarious experiences are important in contributing to the development of CTE (Bandura, 1977, 1997; Donohoo, 2017). This means there is the potential for the sharing of relevant education stories, together in a staff group, to provide opportunities for these vicarious experiences to be heard and recognized. There are surveys, focus groups, empathy interviews, etc. to collect qualitative data overall in CI for equity strategies (Bill and Melinda Gates Foundation, 2023; Bryk, 2020; Hinnant-Crawford, 2020; Peurach et al., 2022). However, these ask for qualitative evidence, and potential opportunities for vicarious experiences, to be shared separately. Particularly if a team can be brought together to engage in the sharing of stories as qualitative evidence of success, rather than through asking for stories to be shared individually, it can allow for the whole group to be present to build that CTE together. There is not a great deal of evidence to suggest this is a well-known, abundantly researched, or existing practice happening regularly to develop CTE or within CI for equity practices in schools. Also, when discussing CTE development with embedded reflective practices and CI for equity methods, quantitative data as evidence is more frequently mentioned (Donohoo, 2013, 2017; Donohoo & Velasco, 2016; Goddard et al., 2015; Park et al., 2013; Valdez et al., 2020). This intervention could be an opportunity to consider how evidence of success can regularly go beyond test scores or only quantifiable data in regular embedded reflective practices. With this research, there can be an opportunity to engage in the ongoing, system-wide improvement necessary to sustain equitable progress in all school communities.

This larger context I am describing must also be informed by the specific obstacles facing educators and educational systems today. The next section will describe those to provide further context that is important to understanding the problem of practice. CI and CTE then are introduced as ways to address obstacles and inequities faced in American public education overall and in the specific school program. With both CI and CTE, evidence of success is essential. There are more application examples and it is more common in the research, in the larger and local contexts, for how quantitative evidence is shared regularly through embedded reflective practices to develop CTE. Therefore, my narrow focus on how to develop CTE through effective embedded reflective practices for sharing qualitative evidence of success in the form of educator stories is addressing a local need and can contribute to the overall research and discourse.

Obstacles Faced by Educators

This section will provide further context to understand my problem of practice and how it is situated in the overall educational landscape. I am explaining how these overall and everyday obstacles can prevent equitable access and opportunities with all learners, how CI and CTE can address these obstacles, and what this means for supporting the sharing of educator-generated qualitative evidence of success. As I will explain further in Chapter 2's literature review section, when viewed through the lens of critical theories, these obstacles exist within an entire educational system that has the potential to breed inequality and ultimately reproduce elements of social structures and organizations that oppress instead of liberate (Stanton-Salazar & Dornbusch, 1995). The

destructive forces of white privilege, white supremacy, and white rage are also all intertwined elements of the social, economic, and political systems in America and American schools (C.E. Anderson, 2016). Specifically, when I am discussing the positive potential to overcome the following obstacles through CTE and CI practices, I am situating progress and achievement critically and for liberatory purposes. I also do not expect a single person or school to create solutions alone in the face of systemic forms of oppression. I will now explain the typical obstacles faced by educators and educational leadership when looking to improve a school or school system.

Effective and strategic systems for improvement in schools have been required to help all practitioners rise to the challenge of supporting all students to succeed in their school settings within the contexts of their communities. Dixon and Palmer (2020) explained how school leaders were in charge of and motivated to support all learners while acknowledging that a school is situated within a larger reality. In particular, the authors suggested, “the traditional approach of implementing discrete, isolated initiatives within a culture of compliance has proven inadequate to the task of redesigning school systems for higher performance and equitable outcomes” (pp. 1-2). Therefore, school systems have been tasked with rising to the challenge of supporting all learners through progress monitoring in a variety of forms. Nevertheless, school leaders and teachers have been hindered in their efforts by limited resources and inappropriate plans for the school's contextual factors.

Lack of Resources

First, frequently school leaders and teachers have been provided with resources that were too limited to adequately address the complex challenges faced by them. For example, oftentimes, educators have been asked to add new duties to implement a new process without being provided with the additional resources required to implement the process realistically. Funding and, as a result, staffing hurdles have continued to exist.

In California specifically, the longer term teacher shortage is well documented, with rural areas like where the school program is located experiencing this at an even higher rate (Darling-Hammond et al., 2018). Although the teacher shortage is real, this terminology may not capture how teachers are also subject to potentially harmful and exclusionary teacher preparation systems and certification pathways (Gorlewski & Tuck, 2019). In addition, Darling-Hammond et al. (2009) explain how teachers in the United States are often left out of crucial decision-making opportunities and report not feeling professional development resources and collaboration time were adequate. This can severely limit the opportunities available to develop more teachers as human resources in schools. The disrespect and stressors of educators such as a lack of support, burn out, and anxiety, exacerbated by the COVID-19 pandemic, has implications for recruitment and retention as well (Bill et al., 2022; Pressley, 2021; Steiner & Woo, 2021). When schools are lacking in human resources, it is a complex matter related to how teachers are trained, supported, and respected, or not.

Wang (2020) emphasized the difficulty for leaders in dealing with a lack of resources by explaining how “sometimes, the diminished budget or volatile funding can put principals in a forced-choice dilemma like choosing between losing an arm or losing a leg” (p. 13). This metaphor disturbingly and accurately demonstrated how underfunded, under-resourced school programs were continually asked to do more with less.

Educational leaders' intensity of operational demands can mean instructional improvement cannot be the sole focus for principals and superintendents (Darling-Hammond et al., 2007). Schools have been expected to focus on cultivating equitable outcomes for all learners while further working to disrupt the inequitable systems that existed within society as a whole, but this did not mean schools have been given the appropriate resources and support to do so.

Only External Accountability

Too often, ‘a one size fits all approach’ from external agencies and entities has been implemented to improve schools and learner outcomes. Accountability, stated plainly, is taking responsibility for a person’s or an entity’s actions. If the goal has been to support school organizations to be able to support all learners, the context and the internal mechanisms and conditions within these organizations should then play a role in how accountability systems are considered. Fullan et al. (2015) explained how policymakers should “lead with creating the conditions for internal accountability” which “occurs when individuals and groups willingly take on personal and collective responsibility for CI and success for all students (Hargreaves & Shirley, 2009)” (p. 4). When external

accountability is privileged above and not in conjunction with internal accountability, this becomes an obstacle rather than an incentive. Piecemeal, top-down efforts meant to improve progress have not produced results despite being the long term norm (Hinnant-Crawford, 2020). Therefore, internal systems have been essential in considering how to support the responsibility for learning within a school organization.

Instead of building internal capacity, empowering and engaging meaningfully with stakeholders, and supporting systems for sustainable progress monitoring in context, the work of being accountable can lead to the result of constantly changing course. Cohen and Spillane (1992) explain how reformers in education can continue introducing more for teachers and schools to incorporate without limiting strategic initiatives. This makes it difficult for schools to find effective solutions in context when more and more external priorities are being mandated. This focus on external accountability, coupled with urgency based on good intentions, can produce policymakers and educational leaders that “tend to adopt, attack, and abandon” (Rohanna, 2017, p. 66). This means stakeholders and school communities are not given time to consider what is working, what is not, and what is the best next step. School organizations can be forced to test new ideas quickly and under pressure for immediate results. Again, the intentions to produce quickly and easily seen results can be good, but they are not leading to transformational change.

CI. More recently, individual approaches developed by and for the schools in which they have been implemented have come to be viewed as more appropriate. One type of approach that has garnered support has been CI, which has been defined as “the

act of integrating quality improvement into the daily work of individuals in the system” when quality improvement is considered “the disciplined use of evidence-based quantitative and qualitative methods to improve the effectiveness, efficiency, equity, timeliness or safety of service delivery processes and systems” (Park et al., 2013, p. 4-5). CI in education has been implemented in individual schools and school systems to support the ongoing monitoring of progress in context and as part of a system (Bryk, 2020; Hinnant-Crawford, 2020, Bryk et al., 2015; Park et al., 2013; Peurach et al., 2022). For an educational organization to be implementing CI, the institution would need to move beyond CI as just the name of a strategy or words mentioned in the title of the document. CI then has been embedded in the structures and mindsets of a school as a “robust methodology—a highly practical form of rigorous inquiry” (Bryk et al., 2015). Therefore CI in education has been an approach that can support organizational advancement through ongoing, internally embedded mechanisms for growing the system and techniques for making and documenting progress.

System-wide CI processes, skills, and knowledge have been based on the idea that improvement was necessary and that there are methods to obtain feedback to determine whether improvement occurred (Langley et al., 2009). When externally mandated annual data reviews and plans have been considered a best practice, this meant a less frequent examination of disaggregated data. Dunaway et al. (2014) examined the School Improvement Plan (SIP), which exists in one form or another in every state in America. In doing so, they learned that many superintendents found this well-intentioned, annual

monitoring system was generally ineffective because it did not provide evidence that could be used to guide the improvement. Bryk (2020) provides specific examples of how CI actually occurs to discuss the difference between a SIP-type of annual improvement planning versus a commitment to ongoing, explicit CI strategies. Too often, a specific format for a top-down plan was emphasized rather than ongoing monitoring by all practitioners, the internal development of expertise, and the empowerment of stakeholders to own objectives and results together within a system-wide approach to achieving progress.

CI as a Way to Address Obstacles

Appropriate shared leadership structures can help support school improvement and progress monitoring strategies of those improvements that empower teachers to build their individual and collective capacity. Such an approach has the potential to support the necessary sharing of instructional improvement information and it can create a system-wide belief in the group's collective abilities to find solutions. Most importantly, there is potential for equity to be addressed, in mindset and action, when practitioners engage in strengths-based approaches built in relationship with those closest to the work for equitable access, opportunities, and impact (Hinnant-Crawford, 2020; Peurach et al., 2022). Obstacles are then seen as problems to be solved together, with deep engagement in considering what progress is and what it is not.

CI as a System-wide Approach

The power of CI in a particular setting has been fully realized when stakeholders have worked together to develop solutions/programs, implement and evaluate them, and share information about them in the specific context of the school (Hinnand-Crawford, 2020). Jordan et al. (2014) cautioned that in education, “new and revisited models scatter the landscape, touted as ‘the answer,’ ‘the fix,’ ‘the way’” and that these “fixes are grounded in the idea of a stable and certain world” despite the reality that problems in education should be viewed as wicked, or dilemmas without a simple and clear solution (p. 416). Notably, the authors situated educational dilemmas as contextual and ongoing. Thus, educators engaging in CI together have sought incremental progress through iterative testing and feedback in context. Bryk (2020) echoed these ideas and extended them when he claimed, “CI is not the next ‘new program’” but instead “focuses on how schools can both make current programs work better and take advantage of whatever new initiatives they might introduce to secure quality outcomes reliably in their local contexts” (p. 175). Consequently, CI approaches with respect to addressing issues in education have not sought to find a single right solution that would then be applied in exactly the same way at all schools; rather, advocates of CI have been careful to take context into account as part of the CI process. Further, the application of CI has typically considered the current demands on schools and practitioners while providing a sustainable method of meeting new challenges and new local issues as they arise.

The obstacle of developing and supporting the essential human resources within a school also has connections to CI for equity practices within a system. Darling-Hammond

(2022) explains that the modern teacher shortage crisis may be mitigated by “ongoing professional learning,” “participation in decision making on school improvements,” and “leadership opportunities that engage expert teachers in mentoring” which can be opportunities provided by collaborative, school system-wide CI processes (p. 18). This means CI can potentially be a tool for teacher retention. A negative staff culture has been identified as a key driver in chronic instability with teacher turnover identified as turnover happening every year over multiple years (Jellison Holme et al., 2018). If CI can allow for engagement in decision-making, supportive of teacher learning, with leadership opportunities, this may contribute to a more positive culture as well.

CI Supporting Equitable Student Achievement

Although some of the mandated state and federal plans have asked schools to disaggregate data, examining demographic data annually connected to traditional measures of student achievement has provided a limited view of the equitable or inequitable conditions that exist daily in classrooms and within interactions at a school. Regularly examining data across identities such as race, ethnicity, socioeconomic status, gender, homelessness status, foster status, etc., will encourage and support staff to consider their own biases and actions that contribute to inequity. When collaboratively presenting and examining data with peers, educators must have been asked to examine disaggregated data to investigate where achievement has not been equitable. Benson and Fiarman (2019) explained, “if unconscious racial bias is overlooked, improvement efforts may never achieve their highest potential. It may not be an exaggeration to say that if

educators do not examine and counter their biases, improvement efforts will always fall short” (p. 29). Thus, ongoing, school-wide CI processes should have provided opportunities to uncover and address bias. As a result, such an approach to CI has afforded occasions to examine bias within individuals, teams, and systems when data tracking was disaggregated. Furthermore, the liberatory approach to education (Duncan-Andrade, 2009; Freire, 1970; Freire & Macedo, 2007; hooks, 1994, 2003, 2010) can provide the solid foundation for CI to be done in community and therefore be most effective in its aims of improvement.

CI to Develop CTE

Essentially, good intentions and top-down best practices have not always empowered educators and stakeholders to collaboratively meet the demands of supporting all learners (Dunaway et al., 2014). Nevertheless, school system-wide CI, situated in context, has potential as a promising approach to disrupting inequity in student achievement (Fullan et al., 2015; Hinnant-Crawford, 2020; Park et al., 2013). Bandura (1997) defined collective efficacy as “a group’s shared belief in its conjoint capability to organize and execute the courses of action required to produce given levels of attainment” (p. 477). This means a group with collective efficacy has exhibited confidence in their combined abilities to execute actions that lead to a desired behavior or outcome. CTE can support the mindset for believing in a group’s ability to make progress, while CI provides further support for how to do so. At a New York City Outward Bound (NYCOB) school, that is also a part of the EL Education network, CI

and CTE are described as clearly connected in this local context (Kushner & Rochowicz, 2022). The belief and practice are intertwined. Collective efficacy has contributed to creating progress locally and across school systems utilizing forms of CI (Bryk, 2020). This explicit connection is becoming more clear between CI and CTE.

In addition, CI has the potential to contribute to CTE development through the effective engagement with evidence of success (Donohoo et al., 2018; Donohoo et al., 2020). When practitioners implemented CI school system-wide, Bryk (2020) described, “not only did these educators make headway on specific problems, their efforts also enlarged the capacities in their respective organizations to address new problems in the future” (p. 209). This showed collective efficacy was able to be applied to novel dilemmas that were inevitable when dealing with wicked educational problems. When evidence of such successes was gathered and shared effectively, it has empowered educators to keep making progress. Donohoo et al. (2018) explained how collective efficacy worked when they said,

The primary input is evidence of impact. When instructional improvement efforts result in improved student outcomes that are validated through sources of student learning data, educators’ collective efficacy is strengthened. Evidence of collective impact, in turn, reinforces proactive collective behaviors, feelings, thoughts, and motivations. Bandura referred to this as ‘reciprocal causality’ (Bandura, 1993), noting that collective efficacy is a social resource that does not get depleted by its use; it gets renewed. (p. 3)

Taken together, the implications indicate that such outcomes are important because resources to solve problems in schools are finite whereas wicked educational problems are infinite in their occurrence. CI can provide opportunities for educators to collect evidence of influence and share this work with peers to enhance CTE. Thus, collective efficacy is a renewable resource, which means that this resource is not extinguished by use over time (Bandura, 1993). CI, therefore, can be a structure and approach that can support practitioners in developing CTE which helps them sustain their abilities to address complicated problems in educational settings.

Local Context

The Researcher's Engagement

I was the founding executive director of an American high school that operates as its own Local Education Agency. This school is located on Nevada City Rancheria Nisenan Land. This school serves about 185 students with 18 staff members in grades 9-12. This public charter program in rural Northern California launched in 2014 using the innovative EL Education learning model. The school has utilized data-driven decision-making and teacher-led progress monitoring from the beginning to support equitable outcomes for all learners, teacher reflection on progress, and internal sharing of best practices. I have implemented a shared leadership approach to school-wide work. I based this approach in and am using a definition of shared leadership from EL Education (2018), where “leadership is a collaborative, dynamic effort toward a common vision for teaching and learning” where “leaders strategically build the leadership capacity of

others; they set up structures for staff and other members of the school community to take responsibility for school improvement efforts and empower these individuals to lead the work” (p. 87). This has been important because it has laid the foundation for CI structures and mindsets that foster CTE at the school from its inception.

This collective view of leadership and power came from my own views of who can lead. As a woman leader who has faced discrimination for my gender and as a person who did not grow up with wealth but learned to navigate wealthy higher educational institutions, I have been aware of the importance of sharing leadership in education, what it looks like, and who gets to engage in it. I have unearned privilege as a white, cis-gendered, able-bodied, and straight woman. I was a leader, the sole administrator and supervisor, who had hierarchical power and privilege in the school program. Although only one of my parents went to college, both championed education. I will be the first in my immediate and extended family to earn a doctorate, as far as I know. I benefit from myriad unearned privileges which definitely contribute to any form of leadership I get to enjoy. However, I have been working to disrupt “the gendered stereotypical expectations of a heteronormative white male leader” throughout my career and specifically in this school site (Gause, 2020, p. 76). In addition, the complexities of leading as a woman, even though I do not experience the complexities of leading as a woman of color, are real and do influence how I approach shared leadership (Sanchez-Hucles & Davis, 2010). CI is a mechanism for this work because it asks everyone to engage in and share the power of leading the school collectively. Since the school’s launch in 2014 there have been

collaborative approaches to decision-making, defining progress, and creating this educational ecosystem. Since 2017, the school has developed more explicit teacher-driven CI efforts to improve progress monitoring as well as to specifically support the development of CTE.

In the creation of this school, I engaged in collaboratively planning, launching, and then sustaining our program from December 2013 until June 2022. Although I loved my tenure in this work, I made a decision to shift from my role in our school community at the end of the 2021-2022 school year. In coordination with our staff and Board of Directors, we decided to move forward with my dissertation research still at the school program. The initial Research Cycle (RC) 1 took place at the school in fall 2021, and the dissertation RC 2 was planned for the spring of the 2022-2023 school year. The school has a history of engaging with research partners, so it is normalized throughout the program already. In alignment with the school's research policies, the engagement in ongoing research was welcomed and supported. This allowed me to step down from my role at the school while maintaining the relationships and connections I had worked to build over time and benefitted from in our community. My shift from my former role was based on a desire to move my career in a different direction and serve educational organizations in a new position. My commitment to liberatory approaches to education that support equity for and with all in community has not shifted, but my formal title and job did.

The school serves a predominantly white community. However, the program has a racial and ethnic diversity in the school student population that exceeds proportionalities present County-wide. According to the United States Government (2022a), 92.7% of the county where the site is located identifies as white. In the 2021-2022 school year, 68.8% of students at the school identified as white, 1.1% African American, 2.3% American Indian or Alaska Native, 0.6% Asian, 13.6% Latinx, and 10.8% two or more races (California Department of Education, n.d.). Further details about the school setting are provided in Chapter 3. The school also endeavors to support all students to have access to college preparatory academics, making them eligible for public state colleges and universities. Only particular high school coursework allows for this in California. The school is only one of two high schools in the County that requires they ensure all students graduate eligible to go to a state school if they so choose. The graduation rates were 100% in 2021 and 95.6% in 2022 (California Department of Education, n.d.) with 100% college acceptance since the first graduating class in 2017. Not that rates of graduation in and of themselves indicate the kind of education that is being provided or that college is the only form of acceptability in life beyond high school. The school supports students to have access and opportunities through a holistic and equitable approach to teaching and learning along with these elements of the program. The school earned an EL Education credential in the spring of the 2021-2022 school year. This national recognition means the school has demonstrated equitable support for the expanded definition of student achievement through the utilization of the EL Education model in both implementation

and impact. The EL Education whole school model can embody a student-centered approach to teaching and learning that empowers stakeholders, demands community partnership, and supports the creation of student work that contributes to a better world (EL Education, 2018).

An essential element to my approach to this work in the local context is my commitment to preserving the anonymity and privacy of the participants and the school community as a whole to the greatest extent possible. Due to the small nature of the school, even vague descriptors like “a 9th grade English teacher” could reveal exactly who this person is. Going deeper, indicating specific practices could reveal exactly who is doing what or advocating for which position. People are sharing insights, feedback, and stories. Therefore, I will be carefully providing details only as needed. Although I endeavor to explain and provide evidence for any claims in this dissertation, it is not at the expense of individuals or the school community. Engaging as a researcher, with all the privilege and power that creates, I am committed to supporting the community first and foremost so that their equity-based progress is centered and their stories are not provided unnecessarily for witness (Tuck & Yang, 2013). This means some elements of what is shared within the intervention sessions may not be passed on to the academy. It also means local knowledge or local evidence of success will not be captured to elicit and then share struggle to inflate the necessity of this dissertation. This is especially important to prevent doing this at the expense of community members who may be purposefully excluded within educational systems and structures. The stories in this participatory

action research are shared with trust, and I will endeavor to be deserving of that trust and vulnerability throughout this process.

EL Education Learning Model

It is essential to understand my own roots as an educator and my commitment to CI through the lens of the EL Education learning model. I do not believe CI should be utilized to uphold a harmful status quo or iterate on traditional models of education that look at students as vessels to be filled according to a harmful and racist banking approach (Freire & Macedo, 2007). The EL Education whole school model, on the contrary, is in alignment with a student-centered and community-driven approach to teaching and learning where partnerships throughout and across the program breed collaboration among stakeholders in every layer of the organization. From roots in a partnership with Outward Bound and Harvard Graduate School of Education in the early 1990s, this learning model was born in the United States under a call for comprehensive school reform (EL Education, 2018; Heath & Smagorinsky, 2018). The name has evolved from Expeditionary Learning Outward Bound to Expeditionary Learning, and now is known as EL Education. EL Education focuses on supporting an expanded definition of student achievement that is based in the mastery of knowledge and skills, character, and high quality student work across student-engaged assessment, leadership, culture and character, instruction, and curriculum domains (EL Education, 2018). As this latest edition of the Core Practices booklet describes, EL Education is a model built on including the community, designing projects that can make a difference locally, and

having students learn appropriate skills through real life application in relevant contexts (EL Education, 2018). With the whole school model approach, there is studied evidence of its positive and significant impact on equitable student academic achievement (EL Education, n.d.d; Nichols-Barrer & Haimson, 2013; UMASS Donahue Institute, 2011), student belonging (Lee & Riordan, 2018), and on effective teacher instructional practices (Dolfín et al., 2018; Sharpswain, 2005). In the 2010s, the EL Education organization then developed the K-8 literacy curriculum that is showing strong results in literacy academic achievement as well (Bocala et al., 2019; EL Education, n.d.c). Liberatory approaches to teaching and learning center learners, families, community, and staff (Duncan-Andrade, 2009; Freire, 1970; Freire & Macedo, 2007; hooks, 1994, 2003, 2010). This school design model can be applied in a way that is committed to doing just that. The CI efforts within the local context are therefore situated within this liberatory lens with a “critical hope” in how CI can be an internal system within a worthwhile school program to support students, families, and staff equitably and sustainably (Duncan-Andrade, 2009, p. 191). To be clear, the CI efforts in the local context are meant to continue to improve equitable and inclusive practices in education with and for all students in community.

EL Education and the Enabling Conditions (ECs) of CTE

The EL Education learning model, at its core, involves adult collaboration among staff to fulfill the vision of this school program (DeLima, 2017; Dolfín et al., 2018; Warner, 2014). There is a correlation between how the design of the school model lends itself to creating the ECs of “CTE: empowered teachers, embedded reflective practices,

cohesive teacher knowledge, goal consensus, and supportive leadership” (Donohoo et al., 2020, p. 161). The shared leadership expectations and structures help empower teachers while the model is centralized around a shared set of beliefs and practices contributing to cohesive teacher knowledge and shared goals overall. Supportive leadership is at the core of this school design model as it defines the domain of leadership as follows:

EL Education supports school leaders to build a cohesive school vision focused on EL Education’s Dimensions of Student Achievement, continuous improvement, and shared leadership. Leaders align resources and activities to the school’s vision and lead a professional culture with a growth mindset. Leaders shape school structures to provide equitable education to all students, celebrate joy in learning, and build a schoolwide learning community of trust and collaboration. Leaders work collaboratively with families, staff, and students to make evidence-based decisions that enable all students to achieve. (EL Education, 2018, p. iv)

How leadership is framed, approached, and supported in EL Education lends itself directly to the development of CTE on staff. Reflection is also a tenet of the work in EL Education and this word is mentioned 31 times in the body of EL Education’s (2018) Core Practices text. However, the explicit cultivation and support of embedded reflective teacher practices with educator-generated qualitative data within CI systems is not yet clearly defined within the learning model’s approach to whole-school reform. This helps

frame how my action research dissertation will be focused narrowly on this specific element of CTE development within CI systems at this EL Education school.

Liberatory Practices

There are myriad ways to define liberatory practices in the classroom. Although EL Education’s learning model may create opportunities for liberatory practices to be in place at a school program, this school chose to specifically work to engage in a liberatory approach. While I use the term liberatory and have gone deeper into those concepts in this dissertation as an underlying element for this study to explain the school program’s approach, the school utilizes EL Education terminology and the word “equity” to describe the program and the goals of serving all learners. Overall, as stated above, the EL Education learning model may provide opportunities to realize a liberatory school vision and practice in alignment with Duncan-Andrade (2009), Freire (1970), Freire & Macedo (2007), hooks (1994, 2003, 2010). However, the school made decisions about how to implement this model that ultimately led to working toward a liberatory approach. Any liberatory approach means the work is ongoing. Each individual staff member can build or erode the democratic approach and practices in every interaction, decision, or practice. The school also exists within larger systems at play. There are practices at the school that may act in direct opposition to the vision of creating a liberatory-based program. When I say the school uses a liberatory approach, it means there is a striving for this approach as well even when it is not there yet. The following examples provide some

insight into what the liberatory approach at the school may look like, sound like, and feel like.

I will lay out examples of what the liberatory practices can mean in the specific local context at this school program. As with any liberatory approach, this is and will continue to be a work in progress. I will provide examples to demonstrate what I mean by this term at this school. This work is real and involves critical thinking skills that support student inquiry and full engagement (hooks, 2010). This work is ever-evolving, based on learning done in real time, in context. Ideally there is an ongoing commitment to the idea of “when you know better, you do better” which, according to Oprah Winfrey, was advice given to her by Dr. Maya Angelou (Oprah Winfrey Network, 2011, 2:08). This is a basis for how this work is approached in the school community with the school community.

An example of a liberatory approach involves the school’s project with the Nevada City Rancheria Nisenan tribe. This was developed by reaching out to the tribal spokesperson, Shelley Covert, to establish a relationship and to hear how the school and students could be supportive of the local tribe. Although businesses could contribute a percentage of profits regularly to the tribe, the public school program could not provide school public funding directly to this program. When the tribe determined it would be helpful to create a short film and build attention for federal recognition for the tribe, students led this initiative at the school in connection with the local tribe. It was also partially funded by an EL Education Better World Day grant as it was a project that would be contributing to this annual celebration. When the tribe determined there should

be an immediate change in how they approached their right to federal recognition, the students and adult advisor shifted accordingly. This demonstrated how the tribe and its representatives were situated as “valuable contributors toward the collective intellectual enterprise” (Duncan-Andrade & Morrell, 2008, p. 108). There was no privileging of the school, or any person in the school, as an authority on knowledge or information more important than the tribal members themselves. This is connected to the idea of culturally responsive school leadership (CRSL), where leaders are meant to “recognize the aspirations of the communities they serve” (Khalifa, 2018, p. 21). Instead of the school dictating the aspirations of the project, the school leadership, formal and informal, related to this project, acted in service of the expertise that the tribe was graciously sharing with the school. All advisory classes hosted Ms. Covert as a speaker, engaged in activities surrounding the making of the film, and contributed to a project supporting the local tribe’s message. The genuine land acknowledgment within the video then became embedded in school events like in announcements at graduation and for regular gatherings like Board of Director meetings with inclusion on all agendas. This land acknowledgment and the work contributing to it at the school demonstrate a commitment to understanding and disrupting settler colonialism instead of upholding it within the curriculum (Blenkinsop & Fettes, 2020; Simpson, 2014). This work was also in support of validating Native American students in the school itself. It is connected to the idea that the Native American students at the school may have been subjected to messaging within the school or school systems overall that contributed to internalized oppression which can

understandably interfere with student engagement and success (Hammond, 2015). This project provided an opportunity to center Native American knowledge, community, cultural wealth, and leadership. This demonstrated that the school saw a responsibility to acknowledge its own role in being on this land and contributing to schooling on this land.

Another specific example of how the school engages in a liberatory approach is how students study Japanese American citizens and Japanese residents' contributions and internment in the United States during World War II. This is a way to support student inquiry beyond simple narratives about the role the United States played in this aspect of the war. The following is a basic description of the inquiry framing and process. The 10th grade World History course opens with students engaging with the TedTalk by Chimamanda Ngozi Adichie about “The Danger of a Single Story” (Adichie, 2009). As Adichie (2009) explains, “The consequence of the single story is that it robs people of dignity. It makes our recognition of our equal humanity difficult...” (13:33) and “Stories have been used to dispossess and to malign, but stories can also be used to empower and to humanize. Stories can break the dignity of a people, but stories can also repair that broken dignity” (17:24). This idea sets the foundation for student inquiry and collective meaning-making that is seeking the nuanced and real stories of the people who were interned through engagement with primary sources which is in alignment with the EL Education learning model (EL Education, 2018). Students read primary source testimonials from American citizens and residents of Japanese descent who were forced into internment camps. Students hear from the people who experienced this dangerous

othering and exclusion. Students also go to and experience the Manzanar National Historic Site (National Park Service, 2021) to learn from the exhibits and reflect on the American decision to forcibly intern and incarcerate people due to their race. When we learned more about the contributions of Japanese American soldiers from the 442nd RCT/100th Battalion and the Military Intelligence Service, a local monument to their service, and the connection to our region, students researched further about the bravery of these soldiers and their families (Placer County Japanese American Citizen's League, 2021). Students are asked to consider how monuments are made, how stories are told to humanize and present realities of policies created that had dehumanizing effects. This method is about helping students engage in inquiry to fully understand the contributions of Asian Americans during this time in American history when the United States also chose to engage in its own form of internment camps. Learning through this case study is an example of how the school is challenging an idea that American niceness is something where "even acts of aggression are framed as passive, reluctant, and defensive acts to protect oneself against the potential aggression of another" (Bramen, 2017 as qtd. in Castagno, 2019, p. xiii). There is an acknowledgment of how this happened in the United States and not just abroad, with an attempt to frame internment as a complex, concerted effort that was not a simple, well-meaning American mistake. This inquiry considers when power is abused in the United States, how this abuse is remembered, and our own role in telling or not telling a single story moving forward. As Shor (1996) explains, productivity in this way does not in and of itself disrupt a harmful status quo, but it can

“when a discourse questions existing knowledge and unequal power relations...when it connects subjectivity to history while relating personal contexts to social contexts and academic texts” (p. 180). Engaging with the Manzanar National Historic Site and other local monuments provides an opportunity for students to consider “how the word is passed” when determining the nuance of bigotry at home and how it is remembered and memorialized when discussing World War II (Smith, 2021). This approach to learning history, in alignment with the EL Education (2018) Core Practices and learning model, provides an opportunity for students to “dive deep into case studies (often on local topics), during which students can engage in research and work as social scientists” (p. 41). This means students are analyzing historic events, reconciliation, and progress to make meaning and present their research in alignment with the work of historians today as well as with a deeper understanding of how this happened in the United States.

Another instance of how liberatory practices are embedded within the school program is how students explore the local systems of power and engagement with power. For example, when the community was considering the building of a dam within the local watershed, all senior students attended and then analyzed a local board meeting of the irrigation district. This district would play a vital role in the ultimate decision about the dam. This allowed students to consider the publicly elected board, how public board meetings are run, how public comment is made, and how the final decision will occur. Students also consulted with local environmental advocacy groups. Students concluded their learning in an analysis of this potential decision. In the beginning of the school’s

founding, students observed and participated in public school board meetings about the school program itself. This was optional, but was encouraged by the school program when there were discussions of the school's existence, location, and learning model happening publicly with the authorizing district. All junior students also engage in the process of writing and submitting op-eds about local issues of their choosing. Students are tasked with understanding the topic and goal of their op-ed as well as its potential impact within the community. Students must navigate the submission and potential revision processes. All of these instances involved research, the forming of informed opinions, backing up claims with evidence, and navigating institutional power. There is an emphasis on teaching critical thinking (hooks, 2010). Anyon (2014) advocates for having students work directly with the community as "students who are knowledgeable about dominant forms of power and how this power affects them can better move...to informed efforts at change of the system" (p. 173). The above examples demonstrate ways the school is supporting students to consider local systems of power and engage directly in their own roles within them. It is not dictating a side for students to take, but rather how they would need to navigate existing structures to have their view supported or heard. This also emphasizes the idea that students are worthy contributors to and important citizens in their world. Student engagement beyond the school walls is welcomed and encouraged as the work of the school is done in community.

Internally, within the school walls, an example of how student voice is honored involves the utilization of a survey that considers equitable classroom conditions. The

school utilized versions of the Cultivate (UChicago Impact, 2023) survey. This survey addresses equitable classroom conditions and is based on Farrington et al.'s (2012) considerations of how students can best be supported to learn. This survey is not utilized to penalize teachers, nor is it used to blame students. It is internally called the "Feedback to Grow" survey. The survey provides an opportunity for every student to provide feedback about important aspects of how teachers support equitable classroom conditions such as affirming identities, student voice, supportive teachers, and teacher caring. This survey was used with advisory and academic classes. Patterns in weaknesses across the school were identified and further PD supports were provided with teacher teammates giving each other tips and resources. Teachers were encouraged to discuss their results and areas for growth with students to demonstrate their willingness to learn and make progress together. Teacher Led Conferences (TLCs) also allowed opportunities to track and reflect on progress with cohorts of students. Students had analyzed this data themselves at different times. A short film was produced by school leadership where a diverse group of students were asked for their advice for teachers to address some of the weaknesses present. I, along with another staff member, were asking students directly what they thought about specific areas of growth for their teachers to give them advice and help them. It was an attempt to share power and authority together. It was also meant to recognize the expertise of students and to acknowledge their essential feedback to teachers and staff in the program. Student involvement in the video was a completely optional ask of students and not meant to put invisible labor onto anyone. The goal was to

include students in finding solutions and making progress with the adults in the school to collaboratively develop and define equitable classroom conditions. For example, students provided advice for ways teachers could relate better to students, genuinely incorporate student voice more frequently, and overtly demonstrate their support for students more clearly. They sometimes provided specific examples of classrooms where certain practices worked well. It was about supporting students to consider how they could help solve these real, complex problems through the sharing of their own knowledge and skills to engage in community-building work together (Boggs, 2012). Although I was not equal to students in my power and privilege during the filming and curation process of making this video, I was attempting to use my hierarchical authority to help empower student voice and demonstrate how important their co-construction of our community is. As Hinnant-Crawford et al. (2023) explain, “While aggregate data can shed light on the teacher, individual student responses illuminate the experience the student is having in a particular classroom” which is why we sought to dig deeper into the responses and stories of our students through this film (p.13). The video was utilized in a staff-wide PD session and archived for future reference. Teachers were engaging in collaborative inquiry about this work together, accessing resources, the staff library, and support in PD, and then also hearing directly from students as experts about ways to improve.

Similarly, all staff at the school, once the school was open with students in it, were hired with student input throughout the interview process in sample lessons (when applicable) and the student interview panel. This means students get to design and ask

interview questions and then debrief their thoughts of candidates based on the school's approach to teaching and learning. Sample lessons also involve a debrief with students where they give warm and cool feedback about the candidate. In addition to hiring, as was explained above, students also contribute to the teacher development process through ongoing feedback cycles that include student advice and meaning-making. Shor (1996) explains how "shared authority is...a means to overcome unilateral authority by democratizing power relations and a means to critically study subject matter" (p. 154). Involving students in their school's hiring and teacher development processes is an effort to do just that.

Student-led Conferences (SLCs) additionally provide an opportunity for student voice to be centered as relationships are strengthened between the school and the student support network outside of school. These conferences offer an alternative to common practices where teachers and parents/guardians interact without student input or presence. They also provide an opportunity for the student to reflect on and provide evidence for their progress. EL Education school programs often utilize this structure (EL Education, 2018) and SLCs and Passages were a part of this specific school since its launch. They are supported in Crew, or advisory, class. The Crew Advisor, student, family (parent/guardian, supportive adults in their lives), and student support (friends, Crewmates) can all be present. Community members as outside panelists can also join SLCs. Students can dictate who attends beyond family and the Crew Advisor. They lead the conference presentation and engage in a question and answer session. There is a norm

of 100% engagement in SLCs at this school with students and families which means it is a biannual opportunity for the students, families, and the school to collaborate on how best to support the student now and moving forward. Community members also engage and invest their energy and support in local student development. This is a way of engaging across the community as equals, a way of sharing power, and creating an expectation of collaboration toward a movement where students are centered (Anyon, 2014). This is also a way of demystifying exactly what is happening in the classroom to determine what is working at the school to support students and what is not through collaboration with student and family expertise. It is also an attempt to reject any form of dehumanization where the student and family are talked at and about instead of engaged with collaboratively, with the student leading the way (Freire, 1970).

The SLC is a way to collaborate in community with the students and families together. This is the singular engagement expectation for all families, and scheduling allows for flexibility after work hours and with virtual attendance. Although there are other meetings, fieldwork opportunities, celebrations of learning, and parent/guardian-based group gatherings to encourage collaboration, transparency, belonging, and the creation of a family network, SLCs are the only “mandatory” element of engagement with our families. There is a desire to create a positive network with families and students, but there is also an awareness of how network expectations can become a disadvantage or even exclusionary (Small, 2009). Networks can empower or unite, but their existence can breed inequity when they demand a great deal of excess

time or act as “institutional coercion” (Small, 2009, p. 187). The SLC is meant to be an achievable invitation to collaborate with all students and families for essential support of our student learners. It is a liberatory practice in the way it is implemented and supported at the school program.

These are just some of the specific examples of liberatory practices that have existed within the school program. Again, the school itself utilizes terminology in alignment with being equity-based, while I am utilizing the terminology and framework of liberation. The examples provided here do act in alignment with EL Education but are not inevitable as a result of utilizing the learning model. This is not an exhaustive list, and it is based on my own internal knowledge of the school from my nine years working within this program as the founding executive director. It also does not include all the nonexamples. The work of supporting liberatory practices is complex and ever-evolving. It can be a straightforward lens for how each interaction and every policy can be considered in community. There are also explicit examples at the school of how liberation was not supported at various times. Each staff member within the school is also engaging in their own journey with equity and they exist within larger societal systems. There are practices and policies that can improve being enacted by human individuals within the school and larger systems. This work is happening within the realities and mandates of a public school system as well. The work is continuous across the school to engage in liberatory practices.

Initial CI Implementation

The initial approach to CI at the school site required individuals and teams to choose a short-term ‘move’ that they wanted to make, collect data about the influence this move was having on student achievement, and then share results with peers each semester through a presentation of learning or TLC. Collaboration in PD occurred as individuals and teams considered data together and determined where there were current strengths and weaknesses influencing student achievement. Then, individual teachers and teams were mobilized to address the concerns. Potential data that could be used to track the effects of the move were determined, ‘data trackers’ were established, and time in teacher PD was provided for updating the trackers.

Uniform Documentation of CI

The uniform documentation system originally utilized at the school site to capture this CI work involved the use of Google Apps for Education. Shared Google documents had tables with teacher or team names, their planned moves, and embedded links to data trackers that were often on shared Google spreadsheets. There was also a Google spreadsheet goal dashboard, which was updated quarterly to display progress based on self-assessment. TLC documentation involved using Google Slide templates that were shared and utilized to capture the work of the semester and to share this with all practitioners in the session. The uniform documentation system was meant to effectively share evidence of effects on student achievement as well as evidence of collective efficacy across the school.

Internal Conferences

Teachers shared progress through collaborative check-ins in ongoing, internal PD and through the shared goal dashboard. Results of CI cycles through a TLC presentation occurred at the end of the semester. Teachers were provided time in PD to analyze data and reflect on results and implications for future CI cycles or practice. Frequently, it was the case that successful moves in one context or classroom became implemented system-wide based on educator peers adopting a best practice across the school. I engaged in a principal-led conference (PLC) to share CI progress with the entire staff. Notably, all students were required to engage in an appropriate version of self-assessment and goal monitoring through a student-led conference (SLC) structure presenting to advisors, family, and peers.

Improving Current CI Practices in Support of CTE

Teachers shared anecdotal and survey-based feedback about the uniform documentation system for our CI efforts. Teachers stated the documentation system was difficult to navigate to set up CI cycles and to determine what progress was being made throughout the semester. Teachers expressed there was a ‘disconnect’ between the documentation system and its intended purpose to (a) support sustainable CI for equitable student outcomes (b) build CTE. Because teachers have shared the documentation system was less effective for the beneficial sharing of evidence, it was ripe for revision.

RC 1 addressed the need for a better quantitative evidence collection and distribution system. It involved the implementation of a PD sequence, pre- and post-

surveys, as well as teacher interviews. The revision and inclusion of a quantitative data visualization structure, through the use of Google Data Studio, allowed a more coherent and sustainable examination of quantitative evidence of success. It also laid the foundation for the integration of this data visualization system across other structures in the school such as PD, grade team meetings, student success team meetings, and instructional leadership team meetings. Survey results after the PD sequence with a heavy emphasis on using Google Data Studio demonstrated a positive and significant increase in Likert-scale ratings for the following measures of supportive leadership on the Enabling Conditions for Collective Teacher Efficacy Scale (EC-CTES): “School leaders support us in understanding data collection and analysis” and “school leaders support us to utilize data to make our own decisions” (Dohonoo et al., 2020, p. 157). The need for a more coherent system around the collection, display, and utilization of quantitative data as a part of the EC of embedded reflective practices for CTE was shifted in a positive direction.

In addition to shifting to a better data visualization system for frequently examining disaggregated mastery-based grading data to inform cycles of improvement, a narrowing of the focus for improvement cycles occurred. Shifts were made based on what the team learned about CI and in seeing how a unified system of data dashboarding contributed to greater coherence in the CI work. In refining CI and networked improvement community application with CI, Caillier (2020) details how initially “it was difficult to establish a common set of measures to assess our overall progress and impact,

and few schools had the data structure in place to track disaggregated data relevant to their aim” (para 11). Although there is a desire to balance autonomy in CI for equity practices so there is collaborative engagement and realization of progress together, having disparate CI goals and cycles was not necessarily serving the students or staff. Internally, staff offered feedback about narrowing the aim of our CI cycles after this was practiced. Kushner and Rochowicz (2022) also address the balance of convergence and divergence in CI processes at an EL Education school. Based on this staff-driven shift, CI processes became clearer, tighter, and with more data-based results to consider more quickly and frequently.

Embedded Reflective Practices

Moving forward, with evidence of CTE, ECs for CTE, and a more coherent CI system in place at the school, the local problem of practice is now centered in how best to cultivate and capture educator-generated qualitative evidence of success in embedded reflective practices. Embedded reflective practices are collaborative processes where educator teams work together to examine evidence to inform their work. Evidence of impact is essential in developing CTE (Donohoo et al., 2018). These reflective practices can be the mechanism for sharing that evidence. “Embedded reflection in light of evidence helps to uncover cause-and-effect relationships (quality teaching causes student learning) and would therefore highlight firsthand mastery experience and vicarious experiences for teacher teams” (Arzonetti Hite & Donohoo, 2021, p. 14). Vicarious experiences, in particular, can support the development of CTE (Bandura, 1977, 1997;

Donohoo, 2017). This means clarity on these reflective practices is essential for developing and sustaining CTE across a school system. Embedded reflective practices around quantitative data visualizations and utilization of this data across school structures improved locally within RC 1. There are consistent and frequent opportunities, aligned with CI for equity processes, that support the analysis of quantitative data to mine for areas to grow and evidence of success. Qualitative evidence of success is generally shared at various times in alignment with overall data processes, but qualitative evidence in the form of educator stories is not a more structured and consistent element of the school's reflective practices yet. There is a great deal of potential to support CTE through the incorporation of a teacher storytelling intervention to share evidence of success as vicarious experiences to develop CTE.

Connections to RC 1

Although I initially believed there would be more to focus on with the quantitative data reflective practices, this problem of practice is less prominent locally at this time. In the local context, this element of the work has improved. In the larger context, there is not a great deal of clarity on how best to support embedded reflective practices utilizing educator-generated qualitative evidence of success. Teacher interviews as a part of RC 1 indicated that better systems are appreciated and that the work of developing CTE is still ongoing. Here are example statements of how CI for equity efforts with frequent, disaggregated quantitative data tracking had improved:

“Most supportive is, again the, um, that we figured out Data Studio and provided that data to us. Um. And I think even last year when we were tracking attendance

data and some of that or engagement, just the fact that we had some people on the team who were starting, you know, were starting, doing some of the work for us so, um, so that their brain power could go or my brain power could go more toward analyzing that data and making meaning of the data rather than just producing it.” (RC1, Interview 1, October 11, 2021)

“Anytime we can build habits around how we look at data, what we do with data, and have it look the same each time we look at it, like building that sort of reliable, like consistency is, is helpful to me...” (RC1, Interview 1, October 11, 2021)

This demonstrates how the CI processes were enhanced after RC 1 directly connected to how the quantitative data was considered and visualized. This example statement also demonstrated how the CTE work was ongoing and could benefit from further study:

“I also just think the fact that like this has been a common theme. We didn't talk about collective efficacy one day and read an article about it and then move on, but that we have, keep revisiting it, um, and we're, we're clearly, uh, very focused on it and not just giving it sort of a nod, um, it is what we're about right now and has been for the past couple of years. Um, like I know that I feel more attached to it, I feel like I understand it better, I feel a lot more buy in, now then, then I, I did in the beginning and so I think that, um, yeah, the more that we continue through the process that, that's only going to strengthen.” (RC1, Interview 2, October 29, 2021)

The respondent expresses the school-wide connection to the development of CTE over time. All three of these responses and other anecdotal information represent the feedback received from staff about building habits in looking at data internally and how this is connected to coherent, embedded reflective practices and the study of CTE. The quantitative data of mastery-based grades is frequently analyzed through an embedded reflective practice in alignment with the CI for equity processes. The staff could benefit from clarity in how qualitative data from teachers as evidence of success is collected and

understood in embedded reflective practices throughout the school's CI systems. In addition to the local opportunity to advance the sharing of qualitative evidence of success across the staff more effectively, the specifics of how to do this are not yet codified across CTE research (J. Donohoo, personal communication, March 16, 2022). In educational research and in much of the work around CTE overall, quantitative data is often at the core of reflective practices (Donohoo, 2013, 2017; Donohoo & Velasco, 2016; Goddard et al., 2015; Park et al., 2013; Valdez et al., 2020). This action research study is an opportunity to consider how best to create embedded reflective practices with qualitative data from educator storytelling within CI systems to develop CTE.

More Strategic CI

Our approach to CI allows for inquiry cycles that can be used to monitor progress to be conducted in classrooms, departments, or school-wide. Moreover, CI has helped staff to build the habit of thinking across a system and considering how a decision may affect multiple layers within it. The teachers and staff at the school already put forth a tremendous effort so CI at this school is not about a lack of engagement. Therefore, further implementation of CI should be “about getting them to work smarter” (Bryk et al., 2015, p. 27). Although steps forward were made locally to create stronger practices around CI documentation systems, visualizations, and sharing of quantitative data, a next step can be to focus on the effective sharing of qualitative evidence of success in the form of educator stories moving forward. When embedded reflective practices are not habit, they are not supporting an ease of use to best enable CTE. There is currently not a

systematized approach for shared teacher storytelling in relation to evidence of success or opportunities to relay vicarious experiences across the school staff together. The CI approach needs to afford opportunities to easily and strategically share educator-generated qualitative evidence of progress across the school to support CTE. Currently, the lack of these systems for frequent examination of educator-based qualitative evidence of success are hindering the sharing process and the attendant development of CTE.

Intervention—A Brief Introduction

A PD sequence was utilized to support a representative sample of staff in engaging in embedded reflective practices around the sharing of educator-generated qualitative evidence of success in alignment with an equity-centered approach to realizing the EL Education learning model. There were four 2-hour PD sessions on Zoom over a four week period in January-February 2023. The researcher ultimately determined the agendas for the PD sessions, but participant input was collaboratively incorporated into the design of these sessions. The content and configuration of the protocols were influenced by pre-survey data, by initial participant determination of our “problem,” feedback shared by the group in the session debriefs, and through individual exit ticket responses between sessions. I refined the PD sequence based on participant guidance. The sequence involved three primary components. First, I provided an opportunity for participants to revisit the concept of CTE with specific emphasis on the EC of embedded reflective practices. Then, participants engaged in a protocol to clearly and helpfully

“define the problem” through drawing and discussion (Gray et al., 2010, pp. 90-91). This supported participants to make their own meaning about the use of embedded reflective practices. It also informed the PD sessions and how this intervention can support addressing this “problem” as determined by the team and the researcher. Second, the participants engaged in protocols where educator-generated qualitative evidence of “success,” in the form of teacher verbal and written contributions, were shared and debriefed together. Essentially, participants engaged in an embedded reflective practice with qualitative evidence of “success.” Finally, and importantly, I developed and facilitated the last PD session to support participants in using the new qualitative data-gathering and sharing processes. This was done with a protocol to determine themes and make meaning from shared qualitative evidence. I anticipated this would build CTE beliefs and skills important to the improved functioning of the school and the CI for equity processes there. In addition, I believed the implications of this study would provide insights for how this sharing of qualitative evidence of success could contribute to the greater research on CTE and CI for equity. Details for the intervention have been provided in Chapter 3.

Purpose Statement and Research Questions

The purpose of this study is (a) to build embedded reflective practices with educator-generated qualitative data in alignment with existing CI for equity processes and (b) to provide collaboratively-designed PD to support teachers in using the qualitative data sharing processes with the expectation that CTE will be developed. In particular,

structuring these embedded reflective systems focused on educator-generated qualitative evidence of success so they are sustainable and coherent and providing attendant PD is likely to influence CTE. Conditions currently provide for the documentation and sharing of CI progress through defined structures, but the clarity, consistency, and flow of qualitative evidence of success in regular embedded reflective practices with teacher storytelling have not been defined nor sustained locally or in the larger context of CTE and CI. The research will be guided by the following research questions.

RQ 1: How and to what extent does the implementation of an improved engagement in embedded reflective practices with qualitative data as evidence of “success” influence the utilization of effective CI systems within the school program?

RQ 2: How and to what extent does the implementation of improved embedded reflective practices with qualitative data as evidence of success affect CTE?

RQ 3: How does engagement in an improved CI process and embedded reflective practices for CTE development influence views of leadership in the school program?

Dissertation Overview

This chapter introduced the purpose of the study in the larger and local context. Collective Teacher Efficacy (CTE) and Continuous Improvement (CI) concepts were discussed. The description of the educational program in the local context was connected to liberatory approaches in education as well as the EL Education learning model. The

next chapter will provide a more thorough review of the theories that will inform the research overall. They will be used to interpret and understand the methods and data analysis processes for this study as well as discuss results and implications. Chapter 2 will provide evidence for how CI and CTE can potentially develop educator practices that can positively influence an expanded definition of student achievement. In addition, it will emphasize how the specific focus on collecting qualitative evidence of success can support growth in the school program as well as contribute to the larger body of research about how this evidence is essential to supporting the development of CTE and CI. In Chapter 3, there will be a detailed description of the intervention itself, outlining the setting, timeline, and role of the researcher. Chapter 4 presents the results from this Mixed Methods Action Research (MMAR) study. Finally, Chapter 5 provides a discussion of the main findings, limitations, and reflections on lessons learned, future research, and implications of this research.

Chapter 2

Review of Scholarly and Practitioner Knowledge Informing the Study

This chapter will present a review of the literature that informs this study. It builds on the information provided in the opening chapter about the larger and local context for this research.

I have been examining how CI for equity processes can support the sharing of evidence which is a key driver of developing CTE. The school staff has engaged in CI to support equitable student achievement and shared leadership practices through a

liberatory approach to teaching and learning utilizing the EL Education learning model. There is evidence of CTE as well as processes for monitoring progress, examining quantitative data, and systematizing bright spots across the school organization. Nevertheless, the system for embedded reflective practices that focus on sharing educator-generated qualitative evidence of improvement from teachers directly and frequently is not yet developed. This is a missed opportunity for sharing vicarious experiences as well. In RC 1, a series of PD sessions and a more effective CI documentation system were created for quantitative data. To maximize opportunities to develop CTE, the next step will be to create structured practices through an intervention that supports teachers to engage in embedded reflective practices with the sharing of their own qualitative data in the form of storytelling. This will contribute to both the local and larger context. The two theoretical frameworks guiding my work are Collective Teacher Efficacy (CTE) and Continuous Improvement (CI). These core theories are at the foundation of this dissertation. These theories will inform the approach to the intervention in this participatory action research dissertation. They will also inform my data analysis processes, interpretations, and how I discuss implications for this research.

CTE and its development are based in self-efficacy theory. Bandura (1977, 1982, 1993) defined self-efficacy theory, which was based on social cognitive theory as individuals' beliefs about their abilities to enact behaviors necessary to attain certain levels of performance. Notably, research studies have shown positive correlations between teacher self-efficacy and student motivation, achievement, and self-efficacy as

well as positive teacher organizational behaviors, resilience, and enthusiasm for the profession of teaching (Tschannen-Moran & Woolfolk Hoy, 2001). Kuensting et al. (2016) demonstrate how teacher efficacy positively influences teacher instructional practices. Building on self-efficacy theory, Bandura (1997) defined collective efficacy in the context of education as how a group or system of educators could develop a collective sense of empowerment, which could influence student achievement. Additionally, CTE can refer to “the perceptions of teachers in a school that the faculty as a whole can execute the courses of action necessary to have positive effects on students” (Goddard, 2001, p. 467). This means CTE is about a mindset held across a team of educators throughout a school or school system.

A goal of my work is to ensure that these positive effects are truly aligned with a liberatory approach and an expanded definition of student achievement. Ideally, the team is building a collective belief in being able to support students to lead their own learning which is based in relevant opportunities to learn deeply with support for the whole learner overall (Berger et al., 2014, 2016; EL Education, 2018). This means I continue to refer to effects, impacts, and ideas of progress through that lens. Izadinia (2011) connects teacher self-efficacy and critical pedagogy to develop a way to measure and consider teacher efficacy in the development of equity-based practices in the classroom or school. This informs how CTE is situated within this specific school program and its commitment to liberatory approaches to teaching and learning. Limited scholarship connecting critical pedagogy and efficacy, particularly collective efficacy, exists. However, there is some

research contributing to how efficacy with critical pedagogy and culturally responsive practices can support more student engaged and liberatory approaches to education (Labone, 2004; Siwatu, 2007, 2011; Siwatu et al., 2016, 2017; Wheatley, 2005). Efficacy then can be connected to beliefs and actions that support learners through liberatory approaches such as critical pedagogy. Wheatley (2000, 2002, 2005) discusses the importance of teachers feeling efficacy with the sharing of power with students to support engagement which is an essential element of the school program. This means although I am utilizing efficacy theory and considering CTE for its positive effects, I am doing so in relation to how this can support teachers to build a liberatory-based classroom and school environment.

CTE draws on a commitment to collaboration across layers and levels within the school and school system. In my work, I have been trying to determine how clear evidence of progress that can foster the development of CTE can be shared through efficient CI structures. This CTE is meant to support a liberatory approach to education so these collective beliefs breed equitable outcomes. In determining how best to then measure this progress and these equitable outcomes with and for all learners within the school system, our school program turned to CI structures and mindsets. Bryk et al. (2015) outlined the principles and processes of improvement science, a CI-like paradigm where incremental goals were achieved by practitioners in educational contexts. These theoretical perspectives have guided the development of this action research study.

In the first section of this chapter, I will discuss the foundations of self-efficacy and collective efficacy. In the second section, I provide examples of CTE development in schools. I explain the origins of CI in the third section. Next, in the fourth section, I provide examples of how CI has been utilized in school contexts. Finally, I describe implications for how CI can influence the development of CTE within my action research project and more broadly.

Teacher Efficacy is a Foundation for CTE

Existing theories about teacher self-efficacy and CTE have provided insights into how individual and team beliefs have influenced teacher performance and engagement (Bandura 1977, 1982, 1993, 1997). Bandura (1977) initially situated teacher self-efficacy within general self-efficacy, defined as an individual's beliefs about personal capacity to achieve a certain level of mastery. Further, self-efficacy attitudes have affected resilience, stress levels in the face of difficulties, amount of effort put forth, and length of persistence for individuals (Bandura, 1997). These understandings of self-efficacy have been viewed as directly applicable to teachers working in the education profession. Teacher self-efficacy has been the foundation of how teachers have viewed their own abilities to influence their classrooms and student achievement. Because teacher self-efficacy has been found to influence teacher behaviors, attitudes, and beliefs, considerable efforts have been undertaken to apply this construct in schools to better support teachers so they can effectively support students. Further, Bandura (1982) explained how those with a sense of efficacy were inspired to take action when

confronted with obstacles. For example, say that teachers were confronted with overcoming barriers to equitable student achievement (across an expanded definition), then those teachers with higher levels of self-efficacy would be more likely to continue to pursue solutions to this challenge.

Teacher efficacy is an essential construct in understanding how a team of teachers or entire school staff can believe collectively in their abilities and skills in supporting equitable student outcomes. Berman and McLaughlin (1977) evaluated school-based projects related to Title III funding and discovered that teacher efficacy was the most influential factor in the success of these projects. Gibson and Dembo (1984) worked to create a measurement tool for teacher efficacy because of its importance in positively influencing individual teachers and students. Tschannen-Moran and Woolfolk Hoy (2001) emphasize the importance of teacher efficacy related to teacher instructional practices, mindsets, and students' own positive self-beliefs. These researchers worked to create an effective measurement tool for this construct. Tschannen-Moran and Woolfolk Hoy (2001) created the Teacher Sense of Efficacy Scale (TSES) to measure teacher capabilities that would be considered good teaching according to teachers. This survey included questions such as "How much can you do to help your students value learning?" and "To what extent can you craft good questions for your students?" (Tschannen-Moran & Woolfolk Hoy, 2001, p. 800). These questions helped provide insights into the current levels of the individual self-efficacy of teachers. Dellinger et al. (2008) developed the Teacher's Efficacy Belief System-self measurement tool because the authors believe there

is an important distinction to make between teacher efficacy and teacher self-efficacy when measuring these constructs. These scales were developed to focus on self-efficacy and its measurement.

Teacher Efficacy and Culturally Responsive Practices

Self-efficacy scales did not initially utilize an explicitly critical lens. Siwatu (2007, 2011) and Siwatu et al. (2016, 2017) considered efficacy in connection with culturally responsive teaching and learning. Culturally responsive teaching can be beneficial to student development and involves building authentic relationships with students to acknowledge strengths and support genuine connections between home and school (Gay, 2010; Hammond, 2016). Siwatu (2007) developed two measurements that incorporate culturally responsive concepts into the measurement of self-efficacy. The Culturally Responsive Teaching Self-Efficacy Scale (CRTSE) asked teachers to rate “I” statements such as “Use the interests of my students to make learning meaningful for them” and “Use a learning preference inventory to gather data about how my students like to learn” (p. 1093). The Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE) asked teachers to rate statements such as “A positive teacher-student relationship can be established by building a sense of trust in my students” and “Using my students’ interests when designing instruction will increase their motivation to learn” (p. 1094). Both scales consider a more critical lens with explicit connections to culturally responsive teaching practices and mindsets. In addition, Izadinia (2011) connected critical pedagogy to self-efficacy in developing the Teacher Sense of Efficacy Scale -

Critical Pedagogy (TSES-CP). The author determined four categories of efficacy for critical and social roles, instructional strategies, classroom management, and student engagement. Questions such as “To what degree can you invite students to contribute to the decisions made in the classroom?” and “How much can you do to help your students think critically?” (Izadinia, 2011, p. 148). This research connected the critical lens, in the form of culturally responsive teaching and critical pedagogy respectively, to the scales for teacher self-efficacy.

CTE

Individual teachers have demonstrated the power of self-efficacy and its potential for influencing students and student achievement. Goddard et al. (2000) explained how “the theoretical conceptualization of teacher efficacy, grounded in social cognitive theory, could be extended to the organizational level to explain collective teacher efficacy” (p. 502). The shared beliefs of teacher teams can therefore influence an organization’s ability to improve. Schools act as communities and CTE has been found to be a significant factor in supporting the efficacy, trust, and positive development of networks and neighborhoods overall as well (Sampson, 2012). Tschannen-Moran and Barr (2004) defined CTE as the collective perception of teachers at a school site that their efforts can be deeply influential. Therefore, CTE has been viewed as the school level ‘analog’ to individual teacher self-efficacy. By its nature, CTE affects and is affected by an entire school team. Hence, teams and organizations can benefit from a collective belief in their abilities. Abedini et al. (2018) explained,

According to Bandura's (1977, 1986, 1997) Social Cognitive Theory, collective teacher efficacy is teachers' beliefs in a school where the efforts of the faculty as a whole positively affect students. It is further believed that the collective belief system of schools can positively or negatively affect their quality of performance. High sense of collective efficacy enables teachers to consider challenging goals and to overcome difficulties. (p. 2)

Thus, the potential of building CTE and subsequent associated behaviors have had implications for how school systems support and speak about efficacy and its potential to collectively influence staff and students. Donohoo (2017) explained how CTE has been associated with productive behaviors, deeper implementation of school improvement, setting high expectations, receptiveness to new ideas, greater job satisfaction, less burnout, and positive attitudes toward professional education. As a result, CTE has had the potential to support growth for educators, teams, school systems, and students.

CTE can have elements of mutuality, as teachers can actively engage with their teams and contribute to how those teams exist (Ninković & Floric, 2018). Adams and Forsyth (2006) explain how environmental factors can also influence CTE development, which builds on how Goddard et al. (2000) frame the most important factors in CTE development as those that provide opportunities for individuals to experience past successes and failures themselves or vicariously. Bandura (1997) is the foundation for how CTE is considered by Goddard et al. (2000) when the authors are describing these factors that are most important in developing CTE. Donohoo (2017) explains how "when

school staffs see others who are faced with similar opportunities and challenges perform well, expectations are generated that they too can overcome obstacles” (p. 8).

Determining factors of CTE include mastery experiences and vicarious experiences defined respectively as an individual’s experiences of group success and failure and an individual’s experience of successes and failures experienced by other teammates. Social persuasion, or positive feedback about past success or current positive attitudes on a team, can also play a role in how individuals on a team of educators develop CTE. This is directly connected to how the sharing of these stories of success together can be impactful on CTE development in the local and larger context.

More recently, Donohoo et al. (2020) explained, “the significant influence CTE has on student achievement results from the productive behaviors on the part of the adults in schools that are characterized by high levels of collective efficacy” (p. 148). In this study, the researchers unpacked these ‘productive behaviors’ by conducting a survey with 136 teachers. Based on a factor analysis of survey data, the researchers found five related factors representing ECs for CTE. The five factors were empowering teachers, embedding reflective practices, cohesive teacher knowledge, goal consensus, and supportive leadership. Overall, these ECs are important while the dissertation research focus will be specifically focusing on the embedded reflective practices that can support the sharing of qualitative evidence of success to enhance CTE.

Collaborative Community Development

A staff that can demonstrate the mindset and actions associated with CTE also has potential to create a more equitable school ecosystem (Arzonetti Hite & Donohoo, 2021). If CTE directly addresses limiting beliefs and develops the structures to create the factors that consistently support the ECs for CTE. A school with the ECs for CTE sustainably implemented can benefit students and teachers. Moolenaar et al. (2012) suggest how CTE may be the mechanism for how teacher collaboration may positively impact student achievement. Although collaboration alone does not guarantee a successful school, students, or staff, individual educators could not share knowledge and support together without collaboration (Macinko & Starfield, 2001). Meyer et al. (2022) demonstrates how CTE can be a predictor of teacher collaboration. The author also discusses the need for more research about the relationship between CTE and collaboration. Although collaboration itself does not necessarily translate to an equitable realization of community, collaboration can reasonably be seen as an element of working together. As a. brown (2017) explains, transformational justice “relies on organic, creative strategies that are community created and sustained” as well as the acknowledgment of harm, alternative ways to address harm, and the transformation of the root causes of violence (p. 135). This community-based understanding of how to enact positive, justice-oriented progress implies a need for collaboration. If CTE can predict collaboration on staff and this collaboration can be rooted in the overall liberatory approach to education, then the collaboration can be for equitable outcomes, communication, and community-building. hooks (2003) explains, when discussing how people can best work across difference in

solidarity, specifically across racial difference, that there must be a “conscious, cooperative partnership that is rooted in mutuality. Striving to be mutual is the principle that best mediates situations where there is unequal status” (p. 63). Collaboration alone is not enough, but collaborative partnership in a school community rooted in equity-centered approaches to teaching and learning together in community can mean this necessary mutuality is realized. CTE can be a contributor to this kind of collaborative work.

CTE and Student Achievement

CTE has been shown to influence student achievement (Goddard et al., 2000, 2017; Eells, 2011; Tschannen-Moran & Barr, 2004). Notably, with respect to the influence of CTE on achievement, Abedini et al. (2018) explained,

One of the prominent organizational features associated with the academic development of students is collective teacher efficacy (Bandura, 1993, 1997). Hattie (2016), a researcher in education who searches for the answers to the important question ‘what impacts student learning the most,’ recently named collective teacher efficacy as the most influential factor. (p. 2)

Hattie (2016, 2023) was also building on Eells’ (2011) meta-analysis of studies connecting CTE and student achievement in education. Goddard et al. (2000) confirmed that CTE was a significant predictor of student achievement to an even greater degree than other student demographic information including SES. In addition, Goddard et al. (2017) specified how gaps in achievement (which can also be phrased as gaps in

equitable opportunity and support) can also be positively addressed when CTE is present on a teaching staff.

Student achievement, considered in the context of more traditional measures such as standardized test scores, has been linked directly to CTE. “Although conceptually different, the relationship between teacher efficacy and student outcomes has been replicated at the collective level. Empirical evidence suggest that teachers’ perceived collective efficacy is a strong predictor of school-level student achievement (Goddard, 2001, 2002b; Goddard & Goddard, 2001; Goddard et al., 2004a; Hoy et al., 2002; Tschannen-Moran & Barr, 2004)” (Moolenaar et al., 2012, p. 253). This is promising when considering how teacher belief can influence student performance, even if these studies are mostly focused on numerical, quantitative data as evidence of student success.

The impact and power of CTE can be considered influential beyond only traditional measures and is in this dissertation study. There is an emphasis on considering how the specific behaviors of teachers are influencing students directly when discussing CTE. As Donohoo et al. (2018) explain,

It is essential, therefore, to help educators make the link between their collective actions and student outcomes. To understand collective impact, teams need to determine if changes in classroom practice positively influenced student outcomes by examining specific evidence of student learning. They need to hear from students about their learning, their progress, their struggles, and their motivation to keep learning. They need to examine student artifacts such as assignments,

tests, portfolios, and other indicators of daily progress. With all these activities, the key is making the link between teachers' actions and student outcomes explicit, so that teachers understand that the factors behind student progress are within their collective sphere of influence. p. 3

The connection to student engagement, performance, and feedback, which is about student success more holistically, can all be linked to CTE. However, it does depend on how CTE is considered within the ecosystem of the school and how the school defines success overall. In the school site for this research, there is an equity-based approach to teaching and learning.

Fostering CTE has engendered greater internal accountability by teaching staff members. CTE, with suitable support structures, has led to internal accountability as individuals and teams have taken on collective responsibility for the success of all students (Fullan et al., 2015; Hargreaves & Shirley, 2009). Fullan et al. (2015) defined internal accountability as “the collective responsibility within the teaching profession for the continuous improvement and success of all students” (pp. 1-2). Hence, internal accountability was directly related to how teachers have built collective beliefs and behaviors including collective responsibility. Notably, Fullan et al. (2015) explained how school cultures that fostered individual and collective efficacy, as well as effective collaboration, additionally developed collective responsibility when they maintained, “responsibility for the success of all students is shared among all teachers and schools in

a community” (p. 8). Consequently, CTE had the potential to systematically influence all students’ achievement.

CTE and School Culture

When school staff believe in their collective abilities to support school development and student success, there can be a stronger culture of connection and collaboration. Caprara et al. (2003) attribute teachers having less stress and better job satisfaction to CTE while Tiplic et al. (2015) demonstrate that beginning educators can be less likely to exit the teaching profession when CTE is present. Although student achievement and attitudes toward it are important, the overall school culture and CTE’s role in it also play a role. Hoy et al. (2002) explain how “strong collective efficacy leads teachers to be more persistent in their teaching efforts, set high and reasonable goals, and overcome temporary setbacks and failures” (p. 90). On the contrary, when there is a lack of CTE across a school community, there can be a decrease in sustained effort, expectations, and performance (Tschannen-Moran & Barr, 2004). In addition, teachers may experience more stress when CTE is missing from a school community (Klassen, 2010; Lim & Eo, 2014). CTE can mediate against burnout and boost a team’s belief in their abilities to craft a better program for students and to achieve this goal in a school setting.

The Measurement of CTE

To measure CTE, several tools have been developed and others have emerged based on teacher self-efficacy assessments. This section is meant to provide the

supporting literature that demonstrates this construct of CTE has been measured and how these measurement tools have been developed and validated. To measure CTE, surveys by various researchers have been created and refined over time (Abedini et al., 2018; Donohoo et al., 2020; Goddard et al., 2000, 2015). The surveys sought to capture CTE levels and influences on CTE development. This section is meant to provide background knowledge about CTE measurement instruments which is related to the literature review. It is also relevant to Chapter 3 and the justification for the survey elements utilized in the methods of this research.

Goddard et al. (2000) initially created and tested the CTE scale, which was found to have reasonable validity and strong reliability. Building on the individual teacher efficacy scale created by Gibson and Dembo (1984), Goddard et al. (2000) focused their questions and tools on discovering group beliefs and feelings. Sample questions include: “Teachers in this school really believe every child can learn” and “If a child doesn’t learn something the first time teachers will try another way” (Goddard et al., 2000, p. 504). This means the CTE scale asks questions about the beliefs that are held collectively by the group or teacher team rather than any individual within the school program. The instrument itself is a survey with statements. Participants are asked to respond on a 6-point Likert scale from strongly agree to strongly disagree. This was also the Likert-scale format used by Gibson and Dembo (1984).

The CTE survey was developed, refined, and tested. Initially, in a field test, six teachers gave feedback on the survey instrument before it was piloted with teachers in 70

schools across five states. Usable responses, which were given from 66% of the schools sampled, then helped confirm the validity and reliability of CTE as a solo construct and shape the revision of the survey tool for use with the next sample. Items were culled and others were added after results were examined with a principal axis factor analysis with a varimax rotation. Criterion-related validity was checked when the researchers considered relationships between CTE and conflict in the school environment, teacher sense of powerlessness, trust in colleagues, and individual self-efficacy of teachers. The 10-item measure of teacher self-efficacy from Bandura (2000) was used to test the validity of the CTE scale. After the initial round of testing and development, the next round of the study utilized this survey within 47 elementary schools in one large midwestern urban school district using the revised 21-item Likert scale-based survey. Student achievement data was also collected. From the pilot and full study, results from aggregating site-level data and submitted to factor analysis demonstrate validity with the measure having a high internal reliability ($\alpha = .96$). Finally, Goddard et al. (2000) utilized this instrument to measure how increased student achievement could be correlated to the level of CTE in a school program.

Goddard et al. (2015) confirmed how teacher collaboration and principal instructional leadership can be indirect predictors of differences in student achievement at school sites. Before finalizing the model and measurements utilized in analyzing data results from measurement tools utilized in the study, the researchers engaged in descriptive statistics to confirm assumptions needed for valid multilevel structural

equation modeling. Exploratory factor analysis was initially deployed with teacher survey data to craft instructional leadership, teacher collaboration for instructional improvement, and CTE beliefs measurements. These elements were positively correlated, as predicted, and continued to affirm that effective measurements related to CTE were confirming that leadership plays an important role in supporting CTE development. This leads to the Enabling Conditions for CTE (EC-CTES) survey from Donohoo et al. (2020) which will be discussed later in this section. The importance of leadership crafting experiences and opportunities for CTE development is directly related to my own action research study and how a PD opportunity could positively influence CTE through a strategic embedded reflective practice with qualitative data sharing focused on teacher storytelling.

Abedini et al. (2018) employed semi-structured interviews to pose analytical questions to better understand CTE and its influences as well as to interpret survey results. Chosen through purposeful snowball sampling, 30 English language teachers' perceptions of CTE were studied through 30-40 minute interviews across educational institutions that included high schools, universities, and English language institutes. 15 English language educators also engaged in three 60 minute focus group interviews. Educator experience ranged from four to 20 years. Thematic content analysis of this qualitative interview data was utilized to consider common themes. Elements of CTE, such as instructional capability, the ability to create a positive climate, and the ability to collaborate with colleagues, were determined by the researchers. In addition, contributing factors related to CTE were determined. The teacher satisfaction in their employment, as

well as supportive leadership, were identified. “Participants acknowledged that the two most influential interrelated factors in improving and maintaining high level of collective efficacy beliefs in the educational context of Iran were administrative support and shared leadership” (Abedini et al., 2018, p. 10). These results further emphasize the importance of sharing leadership and providing leadership support for teachers and teacher collaboration to empower teachers. They also demonstrate the use of interviewing in determining the development of CTE.

More recently, Donohoo et al. (2020) examined ECs for fostering CTE and created the EC-CTES measurement tool. In this study, 136 teachers completed a survey about conditions that fostered the development of CTE. The survey specifically examined predetermined contextual predictors of CTE through the use of questions based on these conditions. A confirmatory factor analysis evaluated the proposed factor structure so the researchers could revise and then redo the survey in a field test. Finally, the new survey was developed in the second phase of the research. This instrument was validated using factor analysis. The researchers found five related factors representing ECs for CTE. The five factors were empowering teachers, embedding reflective practices, cohesive teacher knowledge, goal consensus, and supportive leadership.

The Enabling Conditions (ECs) for CTE

Building on the consideration of these ECs for CTE, and connecting them even more explicitly to equitable student achievement, Arzonetti Hite and Donohoo (2021) elaborated on each condition and how to foster them. These researchers provide the

context and information I am presenting about the ECs. They developed their “Model for Leading Collective Teacher Efficacy” in Figure 0.1 (p. xix). This is replicated in Figure 1 with copyright approval (Appendix A).

Figure 1

Model for Leading Collective Teacher Efficacy



Supportive leadership, as represented in its position wrapping around the other ECs in Figure 1, is both an EC for CTE and an overall condition that can foster the existence of the other ECs as well. This uniquely situates supportive leadership in a space that can elevate or deplete all other ECs for CTE. Empowered teachers, as an EC, can be defined as teachers having influence within the school program and an ability to share leadership. Cohesive teacher knowledge is referring specifically to knowledge related to quality instruction and assessment. This EC is about how aligned and connected the teachers are

in their expectations and understandings of what effective practices are across the school. Goal consensus means that teachers and teacher teams across the school program are clear on program-wide improvement goals. In addition, the goals are clearly developed in community with teachers so teachers are always embedded in the processes for improvement and the progress monitoring of goals.

Embedded reflective practices are the processes that unite teams in work together to examine evidence of success. These opportunities to reflect need to engage groups of teachers or entire teaching staffs. As Arzonetti Hite and Donohoo (2021) explain how embedded reflective practices can support mastery and vicarious experiences as, “Teachers come to realize the positive results of their own efforts, others’ efforts, and their combined efforts through processes that enable embedded reflective practices” (p. 14). These reflective practices allow teachers to connect and share that critical evidence of success to build CTE. This EC is ripe for focus and revision in the current school program. Although reflective practices are embedded now for the utilization, display, and engagement with quantitative data, there is not yet a system for the collection and sharing of qualitative evidence of success from educator-generated stories across the school and the teacher teams there. This is a missed opportunity for supporting teachers to benefit from those vicarious experiences which is a major contributor to CTE development.

Implications from the CTE Research

To better consider these matters, I provide some background on the school and how to use implications in the school setting.

The school system in this action research study relies on teams to support the development of the program since the school launched in 2014. The school is small and deeply interconnected which makes the beliefs and attitudes of individuals or departments highly influential. Strategic support of teams, formalized professional collaboration, and support from leadership for this work contribute to CTE (Goddard et al., 2015). Anecdotally, CTE itself and the conditions to support its development exist at the school site for this action research study, based on my knowledge of the school program. RC 1 also confirmed an EC of supportive leadership at the school site as well as elements of CTE overall. However, even with more embedded reflective practices that incorporate the sharing of quantitative evidence of success, there are still not consistent and effective systems for regularly sharing educator-generated qualitative evidence of success among the teaching staff together. Donohoo (2017) explains the importance of vicarious experiences about success in a specific school context and how this can positively influence CTE. Therefore teacher storytelling may provide an opportunity for vicarious experiences to occur together. In addition, success is not clearly defined in a qualitative sense and can be considered holistically when this evidence is shared among educators about how they experienced success, in the short or long term. Moosa (2021), in a CTE literature review, identified the consistent, direct, and positive relationship between quality PD and CTE development. Consequently, there is great potential to continue with a more formalized PD intervention to help CTE thrive within the school,

specifically around embedded reflective practices sharing qualitative data that comes from teacher storytelling.

Another implication is the necessity to adequately assess CTE and its development over time. Suitably measuring the construct of CTE would allow the school to determine where there are strengths in CTE and where there still may be weaknesses. This would ensure an appropriate, effective intervention. Although CTE is experienced and perceived across individuals collectively, it also is related to the individual experience with CTE. Goddard et al. (2000) explain how this indicates CTE is a multilevel phenomenon, from a methodological perspective, because it is experienced by the individual and involves collective perceptions. The authors elaborate by stating, “the effect of an individual teacher’s efficaciousness may be either attenuated or enhanced depending on the level of collective efficacy in a school” (p. 498). This means there must be an understanding of individual perceptions as well as the collective understanding of CTE on a team or system level. An example of assessing an individual perception would be, “When a student does better than usual, many times it is because I exerted a little extra effort” (Gibson & Dembo, 1984, p. 581). An example of assessing collective understanding would be, “If a child doesn't learn something the first time teachers will try another way” (Goddard et al., 2000, p. 504). These two examples illustrate the difference in how a personal perception could be different from a collective understanding to clarify the distinction.

Finally, the more recent work of Donohoo et al. (2020) and Arzonetti Hite and Donohoo (2021) discuss the five factors that influence CTE. As discussed above, these ECs are empowering teachers, embedding reflective practices, cohesive teacher knowledge, goal consensus, and supportive leadership. The use of the EC-CTES instrument or parts of it may be beneficial in assessing CTE and its development at the school, especially with consideration to the embedded reflective practices and how teachers at this school experience the sharing of qualitative evidence of success. If this can be systematized, while still acknowledging local context and an equity-centered approach to education overall, these practices can contribute to the scholarship and support practical applications in schools. In addition, if mastery and vicarious experiences are essential factors for developing CTE (Bandura, 1977; Donohoo, 2017; Goddard et al., 2000), sharing stories about positive progress can help teachers build on their own mastery experiences and learn vicariously from those of others on their team to increase CTE and to ideally enjoy its benefits. In speaking with Dr. Donohoo, a leading CTE researcher and author, there could be a need to explore how embedded reflective practices can support the effective sharing of educator-generated qualitative evidence of success in the form of storytelling (J. Donohoo, personal communication, March 16, 2022). This is a next step for the research and exploring the ECs for CTE and CTE in general.

Importantly, there is an implication with respect to equity for students. Specifically, if CTE can be raised to a sufficient degree, then teachers may be able to

draw on it to support an increase in all students' achievement, including the achievement of under-represented students. Arzonetti and Donohoo (2021) explain how the relationship between CTE and student achievement is strong and positive. CTE in a school program means increased motivation, persistence, and effort in implementing quality practices to support students (Donohoo & Katz, 2020). Eells (2011) examined the relationship between CTE and student achievement through a meta-analysis in her unpublished dissertation. The author's research demonstrated that CTE is positively and strongly associated with student achievement. The author additionally referenced how Bandura (1993) indicated how CTE had a larger effect on student achievement than SES and Goddard et al. (2004b) showed CTE "Even after accounting for the effects of social class and other school contextual factors (past achievement, urbanicity, and school size), our results indicate that collective efficacy makes a unique contribution to the explanation of achievement differences among schools." (p. 422). Hattie (2016, 2019, 2023) has CTE as the most significant factor influencing student achievement. The embedded reflective practices around disaggregated quantitative data that currently exist in the school program were a result of the participatory action RC 1 in connection to this dissertation. The dissertation will shift a focus to how teachers share their own qualitative evidence of success in relation to equitable student achievement overall.

CI

CI, which has been closely related to improvement science in the literature, has been defined as a system for approaching contextualized changes that can result in

growth in education (Bryk, 2020; Bryk et al., 2015; Hinnant-Crawford, 2020; Lewis, 2015). The general concepts of continually improving through measurable objectives in other nonprofit and for-profit settings have been similarly described before they became more commonly applied in education (Doerr, 2018; Langley et al., 2009; Provost & Murray, 2011). Lewis (2015) described the three basic questions CI was trying to answer when he wrote, “1. What are we trying to accomplish? 2. How will we know that a change is an improvement? 3. What change can we make that will result in improvement?” (p. 55). These questions served as the foundation for how CI was interpreted and utilized in this action research study.

CI has been inherently context-bound. In his writings on improvement science, Bryk and his colleagues (2015; Bryk, 2020) indicated interventions must be specific to the contextual setting. Markedly, Bryk et al. (2015) explained that those using CI acknowledged the complex reality of diverse school contexts “by focusing on the specific tasks people do; the processes and tools they use; and how prevailing policies, organizational structures, and norms affect this” (p. 8). Further, Bryk (2020) explained how the “improvement paradigm is especially well suited for attacking disparities in educational outcomes” (p. 10). This approach to supporting internal accountability and progress monitoring does rely upon both structures and mindsets. As Donohoo and Katz (2020) explain when discussing how CTE can influence quality implementation in school, these systems rely upon processes that demand

a critical mass of people in any given organization doing their best to apply and experiment with *what's supposed to work*, assessing impact relative to intended outcomes, learning about what worked and what did not work and why within respective context, and then making the necessary modifications accordingly. (p. 5).

This demonstrates how it is not just about the existence of the structures for CI, but also related to the educators' beliefs concerning any CI system.

CI and the Role of Evidence

Evidence has served as the foundation for CI. The EC of embedded reflective practices is also directly related to how teachers engage with data together to understand what is working and what is not. When those engaged in CI have seen evidence that their efforts have positively changed a vital outcome, they are likely to continue those efforts. When there are systems for how qualitative evidence of success is shared, similar to how disaggregated quantitative data is shared and relied upon in school systems, this can support an increase in CTE and CI systems across the school. A critical problem with respect to evidence is how to share evidence in meaningful ways to support CI.

Donohoo et al. (2018) explained how CTE was developed primarily through evidence of some effect. Therefore, successful systems and structures that afford opportunities to show and share that evidence have the potential to support the development of CTE. If evidence has been organized in a way to influence the development of CTE, it has the potential to raise CTE and student achievement.

Bendikson et al. (2020) stressed how the lack of support or direction and the lack of a clear strategy could be considered risks to goal achievement. Hence, an effective CI system should support teachers to easily access and reference their evidence of success.

Hannan et al. (2015) explained how engaging in CI challenged educators

to test their practice and critically engage with data, evidence, and documentation.

Schools that showed a willingness to embrace the use of data and evidence to drive and test changes in their practice were more successful in adaptively integrating the feedback processes into their routines. (p. 506)

The school has enhanced systems for engaging with quantitative data in embedded reflective practices and there are processes for collecting and analyzing qualitative evidence in general. However, the next step is to figure out how to effectively share qualitative evidence of success in the form of teacher storytelling to share vicarious experiences. This could continue to build CTE. Having routinely embedded reflective practices for supporting the sharing of this kind of qualitative data as evidence of success would support the school program to develop greater CTE across the school as well as ideally build a better school system with and for all learners within it.

Implications from the CI Literature

Effective CI implementation has implications for how practitioners (and researchers) could collaborate to consider contextualized solutions to complex educational problems. A functional system of CI engagement and documentation could build teacher self-efficacy and collective efficacy, which, in turn, could support increases

in student achievement. Determining specific influences on CTE within a school would enable the entire staff to seek solutions and believe in their ability to influence student success (Donohoo et al., 2018). This would be important because schools could then seek out ways to support teacher-led improvement efforts and build efficient structures to sustain them. As Bryk (2020) explains,

Thoughtful data investigations require a deep understanding of the work that educators and their students are engaged in, identification of critical questions embedded in their work, and the creative invention of specific analyses and visualizations that may illuminate possible system breakdowns. Doing this well requires the collaboration of practitioners and analytic staff to discern what kind of data, organized in what kind of way, might be most insightful. (p. 181)

The specific data of educator-generated stories as evidence of success shared across a teacher team to facilitate vicarious and mastery experiences in support of CTE development could be helpful with the local and larger context. My action research dissertation will work to build embedded reflective practices that are collaborative and about the sharing of this specific qualitative evidence of success.

Specifically, at the school site, the teaching staff engages in structures and systems to support equitable student achievement using CI. The CI work is embedded within a liberatory approach to teaching and learning and therefore is trying to improve upon the implementation and impact of the EL Education learning model and not just replicating a harmful status quo. Although the school currently has a CI system in place,

there has been feedback from practitioners about creating sustainable and efficient embedded reflective practices and systems around CI and data. In particular, at the school, the quantitative data visualizations and sharing of evidence of success were improved in RC 1. However, there is still an opportunity to enhance how teacher storytelling as qualitative data is shared and presented. In addition, as seen in the literature, there has been a positive link between using CI, sharing progress, and building CTE among staff members. Developing a more effective system that leads to better engagement in effective CI efforts would ideally support increased CTE. Structuring coherent processes for sharing educator-generated qualitative data through embedded reflective practices could positively influence the development of CTE, which could lead to more equitable student achievement.

The school is already a part of the national EL Education network, where ideas are shared frequently at local, regional, and national professional learning opportunities. Thus, another implication would be sharing this information with those in the national network if the intervention was fruitful, but with the caveat that individuals at those schools must determine the transferability to their own contextual settings.

Chapter 2 Summary

In summary, based on the information in this chapter, CTE has the potential to positively influence the school, the staff community, and equitable student achievement. CTE can help teachers view themselves as a part of system-wide solutions and involved directly in shared leadership practices at the school program. In order to develop CTE, CI

has been examined for how it may support the effective sharing of evidence of success for staff. RC 1 helped the school make strides in sharing, visualizing, and understanding quantitative data as a part of the EC for CTE of embedded reflective practices. A logical next step for the school and for the literature around CTE in general may be to consider how these embedded reflective practices can share this educator-generated qualitative evidence of success across the teaching staff as well. This could be an essential element for increasing CTE. Therefore, the planned intervention to further develop CTE through embedded reflective practices that engage with qualitative data of educator stories as evidence of success within the school's CI systems would be in alignment with the presented literature.

Chapter 2 has provided a literature review for this MMAR study. In the next chapter, the specific methods and elements of the collaborative intervention will be discussed in detail to explain how the research study was crafted and conducted. This will provide further information about the research, the role of the researcher, and how the intervention will be conducted and analyzed. Chapter 4 will then provide the results of the study and Chapter 5 will engage in a discussion about these findings and their implication.

Chapter 3

Methods

This chapter will provide an overview of the methods for this MMAR study. First, there is an introduction to this overall methods section. Next, the setting and participants

will be explained, as well as the role of the researcher. Then there will be a description of the intervention. The quantitative and qualitative strategies will be explained next before the final section outlines the timeline of the study.

This action research dissertation supports a practical focus on CI work in a public charter high school setting in America. System-wide CI processes, skills, and knowledge are based on the idea that improvement is necessary and that there are methods to obtain feedback to determine whether improvement is occurring (Langley et al., 2009).

According to Creswell and Guetterman (2019), an action research design must be in “the best interest of those facing the problem or issue being addressed in the action research” (p. 598). In addition, the authors explain how action research involves dynamic cycles of inquiry where reflection, data collection, and action are all connected throughout the process. This action research dissertation will be consistent with supporting the development of CTE, specifically the EC of embedded reflective practices with educator-generated qualitative data, as well as the effectiveness of the CI process at the school overall.

Action research embeds the researcher-practitioner in the work and learning. I am utilizing participatory action research that I hope to make emancipatory within a school community that believes in and creates equity-based practices with and for students (Herr & Anderson, 2005; Noffke, 2009). This means I have a commitment to supporting collaborative engagement with the school community where I will be engaging in research. I also know this school community already works to create democratic

conditions across the school environment. The goal of the research is to develop an understanding of how a shift in practice is understood in context. A critical approach to educational action research acknowledges that there is no single, perfect solution, but instead a way to approach finding collaborative and meaningful next steps forward through inclusive communication with stakeholders closest to the work (Carr & Kemmis, 2009). Action researchers have an obligation to understand their positionality, privilege, and power through critical inquiry. This allows for this positionality to be expressed along with the local context. I will discuss this further in the following section with specifics about my role as a researcher.

The research process itself relates to the concept of CI and its cyclical nature (Dick, 2014). This again encourages continual engagement and action within this work. This means there are ideas researched and situated in theory. These ideas for progress are tested for influence or impact within a local context. With a critical approach to action research, it is designed and implemented in community so results can be shared out together as a part of ongoing, collaborative work to implement change (Carr & Kemmis, 2009). Noffke (2009) emphasizes the importance of “the recognition that the professional dimension, too, is an important part of the power structures of education, and as such, it, too, is political” (p. 3). I see how Noffke (2009) and Herr and Anderson (2005) help acknowledge that action research is not apolitical action. I am committed to the potential of action research as action for change, in community, through cycles of inquiry with progress defined collaboratively and with a critical lens.

In RC 1 in the lead-up to this dissertation, I conducted a participatory action research cycle. The PD sequence involved three sessions that lasted about one and a half hours each over the fall semester in the 2021-2022 school year. This was an intervention happening staff-wide in embedded PD time that was already happening at the school program. In the first session at the end of September 2021, the concept of CTE was revisited in smaller groups using the Jigsaw protocol (School Reform Initiative, n.d.b). Several relevant articles were used to consider CTE, its definition, its importance, and how we foster it as a staff. In this PD session, Google Data Studio was also introduced as a tool for teachers to examine overall and teacher-specific mastery-based grades. This tool allowed for disaggregation of this grading data across demographic data like race/ethnicity, gender, eligibility for free and reduced lunch, and disability status through visual, graphic representations. The data could be examined school-wide or by drilling down into more specific categories like grade level, teacher, or class. The teachers were provided an overview of the data visualization system and then given time to explore it. They were tasked with identifying immediate bright spots based on their own data and also with providing suggestions to improve the effectiveness of the data visualization system. In the next PD session in mid-October 2021, using a “Storyboard” protocol, the staff worked to “envision and describe an ideal future in sequence using words and pictures” for CI by following the parameters for this specific structured process in smaller groups of about four before sharing out together as a whole group (Gray et al., 2010, pp. 71-73). This was important for each staff member to engage in the process of verbalizing

and imagining CI systems and processes to determine what would be most effective long-term for supporting CTE and equitable student achievement. Our Google Data Studio was again revisited in this session, with incorporated input from staff from the last session. For example, a teacher suggested that the ability to drill down to the specific student or students from the demographic data views would be helpful and this feature was added. There was another opportunity for staff to consider evidence of success in relation to CTE development. At the end of October 2021, teachers had the opportunity to engage with Google Data Studio in the final session through more individual exploration of the platform. Several updates to the Google Data Studio allowed teachers to compare their disaggregated grade data from one mastery-based grading update to the next. I conducted a pre- and post-survey to measure CTE and the EC of supportive leadership for CTE. I also engaged in two semi-structured individual interviews with two members of the teaching staff.

Building on RC 1, the dissertation RC 2 will again involve a PD sequence. It will include a sample of participants from the teaching staff engaging voluntarily in a mixed methods action research (MMAR) study utilizing this PD intervention as a means to build on the embedded reflective practices with qualitative data, as an EC of CTE.

Setting

As described in the local context section, I was the founding executive director of a public, charter high school that operates as its own LEA and serves about 185 students with 18 staff members in rural northern California. The school implements the innovative

EL Education learning model and has utilized a shared leadership approach to data-driven decision-making. This means the potential for CTE and elements of CI have existed since the school launched in 2014. There is a foundation for teacher-led reflection and progress monitoring as well as regular PD. Although I will no longer be formally working at the setting starting July 2022 after being there since the planning year in December 2013, I will support the school to take their next steps with CI and CTE by designing and implementing PD gatherings for a sample of participants. The PD will be offered remotely to a representative sample of volunteer participants after school on Zoom.

This school is situated in a predominantly white county (United States Government, 2022a). In the 2020-2021 school year, based on publicly available school data from the California Department of Education's DataQuest website (California Department of Education, n.d.), there were about 48% of students eligible for free and reduced lunch, about 20% of students with disabilities (in alignment with Individualized Education Plans, not including students with 504 plans), and there were less than 1% of the following student demographics: Foster Youth, Homeless Youth, and English Language Learners. The four-year adjusted cohort graduation rate was 100% in 2021 and 95.6% in 2022. Based on my internal knowledge of the school program (and this publicly declared goal and outcome), there is a 100% college acceptance rate and has been since the school's launch in 2017. This is a rural community in Northern California. The EL Education model is utilized in this school program and has been since its inception.

The intervention itself took place remotely, on Zoom, after school hours during four 2-hour PD sessions. The entire school community became familiar with remote methods of engaging in PD and classes during the Covid-19 global pandemic. All staff members are familiar with the mechanism for gathering remotely. This remote aspect of the intervention is necessary as I no longer live or am employed in the local community. The online setting will allow for the embedded reflective practice utilizing qualitative data to engage all teachers from their homes and enable me to stay connected to them through this work.

Participants

Participants in the Dissertation RC 2 were six staff members invited to engage with this action research voluntarily. (A seventh staff member engaged in the pre-survey only.) Participants self-reported demographic information in the pre-survey and this information is presented in Chapter 4 in the quantitative results section. This was a representative sample of staff who have taught before and engaged in building background knowledge of CTE and CI processes at the school for at least two years. This allowed their experience and background knowledge to inform their feedback about the embedded reflective practices with educator-generated qualitative data. I considered representation in years in teaching, race/ethnicity, and age. They would not receive any reward and would need to sign the informed consent. They would also agree to anonymously complete surveys and engage in remote PD gatherings with some being asked to participate in semi-structured interviews and a focus group. There could be

limitations to this data as it was provided to me as a former supervisor of every staff member. I was also no longer embedded in the day-to-day work of the school program. However, not being the participants' current supervisor will allow for more candor with the teaching staff who are testing this embedded reflective practice. Overall, this is a small staff with approximately thirteen full-time equivalent teachers and five full-time staff members who do engage in explicit CI work. The specific six participants at the school were determined by January 2023.

When referring to participants, I use the terms “staff” and “educator” to delineate anyone who is working at the school and the term “teacher” to describe anyone currently teaching classes at the school. In alignment with the liberatory approach, I am considering anyone who is employed by the school and interacting with young people in our community as having a positional authority and opportunity to educate through their words and actions. This is still taking the view of education as collaborative and liberatory while also acknowledging that within the small school program many staff roles involve elements of teaching or advising while teachers may also engage in what would normally be associated with a staff-based role. I am situating the idea of collective efficacy within a school program and across our staff team. Therefore, when I am referring to CTE I am considering the “T” more broadly to encompass all educators, as I define them, within the school overall.

Role of the Researcher

In RC 2, I measure current levels of CTE and the ECs of embedded reflective practices and empowered teachers. I am examining the connection between the CI processes with evidence of success and how CTE is supported and developed through an embedded reflective practice that examines teacher storytelling as qualitative evidence of success. I collected the pre- and post-intervention survey data using an online survey and conducted two individual semi-structured interviews and a four person focus group after the intervention finished. I led PD sessions as the intervention and developed these sessions collaboratively with participants. I collaborated with participants throughout the process of PD facilitation and feedback on this PD, which is standard for all PD that occurs in the school program. I analyzed the data utilizing the theoretical frameworks underlying this study and connected with participants throughout the process to offer optional check-ins and keep them updated. I will report on results publicly as a part of the existing research policy at the school and with the Board of Directors.

I see my role as an action researcher aligned with how Herr and Anderson (2005) explain that “an emancipatory interest orients the researcher toward the release of human potential and the investigation of ideology and power within the organization and society” (p. 19). This means I am not interested in upholding a harmful status quo in educational systems where stakeholder input and shared leadership across the program are not the norm. I am committed to supporting staff (and students) to see themselves as leaders. Ideally, this contribution can support a strong and inclusive ecosystem at the

school overall and encourage staff, especially those who are not always represented in educational leadership, to see themselves as capable of fulfilling those formalized roles (Caver & Livers, 2021). I know I say this as a white person with unearned privilege and power. I acknowledge that I have contributed to the lack of racial diversity in educational leadership as a white person (Castro et al., 2018; Gause, 2020; Magee, 2016). I have also contributed to adding more women to leadership positions in my past roles in education, in administrative and athletic director positions. This is significant when considering that opportunities for female leadership continue to be lacking across many industries in American society (Cain Miller et al., 2018). I see how I can use my white privilege to create systems that support shared leadership in mindset and practice. I can also engage with participants in a way that honors their feedback throughout the intervention process and share the research with them throughout the process of finalizing the dissertation. I see how I can experience a hybrid of working in liberatory practices and spaces while being complicit in structures that uphold my own power and privilege (Bhattacharya, 2016). Although I am no longer a school leader, I am in a position to be able to support school leadership and school ecosystems moving forward. I hope to learn from the ongoing work with CI and CTE at my former school site to inform my work as a leader moving forward. I see my own role as an action researcher as one of service or one that is working to support human potential, as outlined by Herr and Anderson (2005). I will define my understanding as one based on critical inquiry as well as emancipatory in nature.

My understanding of the school program comes from my positionality overall as well as my unique position within it. I was the founding executive director and sole administrator from December 2013 through June 2023. This means I was a contributor to all aspects of the school program with insight into board decisions, staff hiring and development, community building, and the framing of shared leadership. I was living in the community where I worked, although I did not grow up in that community. I was collaborating across the local and state education-related power structures and with community organizations directly. Although this can bring issues of being the supervisor or past supervisor of all participants within this research project, it also means I bring a great deal of knowledge about the school, community, and my colleagues. I planned and continue to plan to use this knowledge in alignment with the idea that I was consistently learning, seeking learning from diverse voices and sources, and acting in service of the community. I approached my leadership as an opportunity to serve within the idea of the school and community ecosystem. I saw a “responsibility to cultivate the soil and ensure equity and objectivity in identifying, deploying, and supporting the development of the seeds—paying particular attention to the ecosystem in which seeds are expected to flourish and making adjustments when and where necessary” (Caver & Livers, 2021, pp. 23-24). With this in mind, I believe my position within the school program could be seen as supportive of this continuing relationship and research with the school. I know and value the individual participants.

I endeavor to leverage my position and understanding of the school program to responsibly support the continued growth of the school and strengthening of the ecosystem. I know this means I bring subjectivity to this work. Ideally, I can use this subjectivity to help translate between the research and practice taking place. I am clearly within the network of the school even as I step out of it. As Small (2009) explains, my proximity and presence within this school ecosystem provided me with the opportunity to have built strong ties and social capital within this network. I am aware of this capital and how it can be used to support the school community if I am vigilant for my own bias. I am a white, straight, cisgender woman engaging in this research, with all the unearned and intersectional privileges that come from this identity. I come from a working class background and was able to move into private university spaces through scholarship and financial aid opportunities, as well as my unearned privilege, as an undergraduate. I continue to engage in the personal work of investigating my own privilege, considering how I can be culturally responsive and sustaining, and where I can inflict harm with my own bias in educational spaces (Benson & Fiarman, 2019; Campbell Jones et al., 2020; Khalifa, 2018; Singh et al., 2019). This is in addition to centering the work and learning of liberatory educators such as bell hooks. I am also careful to directly center the participant's learning by seeking and incorporating feedback throughout the intervention to shape the intervention itself. It is meant to be supportive of their learning, not just of my dissertation. I sought to make the work relevant to the local context with input that helped guide our work together as I considered its contribution to the larger context. The

work we are doing together involves their input, although I did not share and engage in the protocols with participants myself in the sessions. Indirectly, I see this work positively impacting students and the school community as a whole as I have laid out in this dissertation overall.

Intervention

The action taken was the facilitation of an after-school, online PD sequence. These four 2-hour PD sessions were developed to build CTE beliefs and skills with embedded reflective practices utilizing educator-generated qualitative evidence of “success” in alignment with existing CI for equity strategies. I am using the term “PD” as it resonates with our staff and provides context to the collaborative approach to PD we have engaged in regularly together as a team. In addition, it normalizes that this is about our professional collaboration together and can lend itself to easily utilizing our pre-existing cooperatively created norms, language, approach to protocols, and shared leadership. This initial, familiar framing will help mitigate barriers to entry to ensure more equitable engagement across the participants. This relates to the critical framework I am applying to my research. The goal is to ensure there is also a liberatory approach to this intervention as there is in the classrooms of the school. Freire (1970) explains how through dialogue, praxis, and true engagement together “in the precarious adventure of transforming and recreating the world” there can be real progress together across a community (p. 468). Although I am acting as the main facilitator to organize and host these sessions, the participants are helping to craft the future they would like to see at

their school program which will ideally inform the work of improving liberatory approaches to education through our findings together. Finally, in the initial RC 1, the themes that emerged after an intervention around supporting quantitative data systems and reflection were about the importance of opportunities to share successes as well as how teacher learning must continue to be supported in this area. This means this next round of research is building directly on the themes that emerged from the input staff provided formally in RC 1 and informally in the debrief of this work internally. RC 2 will involve an intervention based on their input to support the same development for qualitative data engagement in CI for equity work to develop CTE.

PD is a valid method of influencing beliefs and actions within the staff together when it is collaborative and supportive of iterative learning (Bryk, 2020; Bryk et al., 2015; Darling-Hammond et al., 2009; Guskey, 2002; Hord, 1997; Perez et al., 2007). Darling-Hammond et al. (2009) explain in their report and review of effective professional learning strategies, PD can be effective in supporting educator growth when it is strategic, collaborative, involving educator input and relying on educator decision-making, and ongoing with an investment in learning over time. In addition, specifically focusing PD on active learning strategies with collaborative dialogue, as this intervention will be, can support effective PD (Durksen et al., 2017) that can enhance CTE (Loughland & Ryan, 2022). My belief in PD is underscored by this research as well as my own experience with effective, collaborative, critical, and student-centered PD done in context at a school site. When PD is done in this way, I think “critical hope” can

be developed with educators (Duncan-Andrade, 2009, p. 191). I have seen how this work can support the development and maintenance of accountable teams, as defined by Platt et al. (2008), while also allowing for shared facilitation and the co-construction of knowledge. McDonald et al. (2013) and the School Reform Initiative (2021) (and former editions and versions of this work and these protocols) demonstrate protocols that have been a part of my teaching and learning career for the past fifteen years. In addition, Gray et al. (2010) and Himmele and Himmele (2021) (and former editions of this book) have informed how we create meaning and learn together in the classrooms at the school and in the work as adult learners. I am bringing in my own assumptions about professional learning based on my experiences and teacher feedback in our current program. I am bringing in my own beliefs that work should be collaborative, supportive, engaging with all learners, and for the purposes of addressing problems posed together in community. The reminder from hooks (1994) that the work of learning together can be a “practice of freedom” or used as a “platform for opportunistic concerns” (p. 12) continues to resonate. I endeavor to collaboratively ensure that the intervention is helpful in the moment, in context, in community and it is addressing liberation in the short and long term. I see the PD sequence as an opportunity to do this.

I see this connected, yet external, intervention working in tandem with internal PD on Fridays at the school site, which already exists for approximately two and a half hours weekly. Students have a minimum day on Friday so students are not in the building. In addition to Friday PD, 10 PD days for eight hours each occur when school is

not in session throughout the academic year. All non-teaching staff members are available to attend and individuals do attend PD by invitation. All teachers and teaching aides are expected to attend unless they are not working that day. Protocols are often used to support the work in PD sessions. Protocols for the school and the purposes of this study are “structured processes to support focused and productive conversations, build collective understanding, and drive school improvement” (School Reform Initiative, 2021). Therefore discussion, reading, and sense-making are often undertaken thoughtfully and with clear guidelines. The Covid-19 pandemic also normalized the use of teleconferencing over Zoom to engage in meetings and PD connections. The intervention PD gatherings will occur after school for two hours each, four times at the beginning of the spring semester in the 2022 - 2023 school year. These sessions will begin after the dissertation draft defense is complete in November 2022, starting in January 2023 and running through February 2023. Figure 2 below demonstrates the overall plan for the individual PD sessions and how the critical approach to this work was applied in each instance. This theory guides my research overall, as well as the approach to the intervention details.

Figure 2

Intervention PD Sessions

PD Session	Basic Content	Protocols	Critical Connection
1	<ul style="list-style-type: none"> •Building background knowledge about CTE Embedded Reflective Practices •Considering the gaps and opportunities for next steps in embedding reflective practices with educator-generated qualitative evidence of “success” 	<ul style="list-style-type: none"> •4 A’s (School Reform Initiative, n.d.a) – written coding of a text and sharing verbally •Draw the Problem (Gray et al., 2010, pp. 90-91) – drawing and sharing/debriefing verbally 	Participants will share in the facilitation of the protocols. The protocols allow for equitable sharing of voice. The collective defining of the “problem” helps the participants determine what we are trying to “solve” together.
2	<ul style="list-style-type: none"> •Revisiting CTE and embedded reflective practice framing •Practicing an embedded reflective practice with qualitative evidence of “success” •Using the protocol with an emphasis on educator-generated evidence of “success” 	<ul style="list-style-type: none"> •The Making Meaning Protocol: The Storytelling Version - MODIFIED (School Reform Initiative, n.d.c) –verbal storytelling and debrief 	This protocol allows for participants to envision a future together, utilizing their experience and deep understanding of their liberatory-based educational context. It was based on the pre-survey input, group debrief in the previous session, and individual exit ticket responses.
3	<ul style="list-style-type: none"> •Practicing an embedded reflective practice with qualitative evidence of “success” •Using the protocol with an emphasis on educator-generated evidence of “success,” but 	<ul style="list-style-type: none"> •The Making Meaning Protocol: The Storytelling Version - MODIFIED (School Reform Initiative, n.d.b) –verbal storytelling and 	Participants provided input about the protocol, its content and configuration, to help design the agenda for this session. Although storytelling will be at the center,

	through failure stories or times when failure occurred even if there was long term success or success from reflection on the failure	debrief What Comes Up Protocol - MODIFIED (McDonald et al., 2013, pp. 49-50)	they will determine how stories are shared together during this time. Participants chose to emphasize “failures” stories that were meant to share how they became long term success through reflection or revision.
4	<ul style="list-style-type: none"> •Practicing the data analysis element of an embedded reflective practice with qualitative evidence of “success” •Utilizing the same or new stories of “success” (short or long term), participants read each other's stories, code them for codes, categories, and themes •Looking at data to determine overall themes from shared stories (connected to our time together overall) 	•Data Analysis - MODIFIED (Donohoo, 2013, pp. 66-71) –written stories, written coding, with verbal discussion and debrief	Although I will organize the data, the participants will analyze it together. This protocol ends with each participant drawing conclusions before considering these as a group together.

The ECs for CTE were revisited together, specifically emphasizing that there is a shared understanding of embedded reflective practices. There was reflection on how these practices currently exist within the school program for quantitative data. Then, the emphasis was placed on how to bring in qualitative evidence of success in the work of embedded reflective practices. This gave participants a chance to interpret their world and tell their stories. During every session, there was an introduction and framing activity

and a debrief, allowing participants to provide feedback about each session in real time. This allows input from participants to influence the intervention itself as it develops. The intervention would therefore be a sequence of gatherings that allows for co-creation of knowledge and experience. The protocols listed in Figure 2 demonstrate a variety of ways participants will co-facilitate the work, share the dialogue, and be determining conclusions together. It is important to emphasize that this work will have joy and critical hope (Duncan-Andrade, 2009). As hooks (1994) expresses, “critical reflection on my experience as a student in unexciting classrooms enabled me not only to imagine that the classroom could be exciting but that this excitement could co-exist with and even stimulate serious intellectual and/or academic engagement” (p. 7). The protocols allow for engagement and immersion in sharing “success” as considered by the teacher existing within an equity-based approach to education in their own classrooms as they engage in a liberatory learning experience with their colleagues. As explained by Aguilar (2018), “how you interpret and make sense of events is a juncture point where emotional resilience increases or depletes” (p. 69). The work will be serious, but it will be about supporting participants to find stimulation in their critical inquiry together as they consider the most important stories to tell. In addition, their approach to storytelling can empower other educators and school systems to support their programs to become more equitable and more liberatory themselves.

In the first session, in smaller groups of three, the “4 A’s Text Protocol” was utilized to explore a reading more deeply (School Reform Initiative, n.d.a). The text was

recent and high-quality, written for practitioners on the topic of embedded reflective practices. The text was from pp. 79 and 85 of Chapter 5 in Arzonetti Hite and Donohoo (2021) which focuses on this specific EC for CTE. In each round of the protocol, participants shared a response to the prompts. Participants provided input about one “Assumption” made in the text, something they “Agree” with in the text, something they “Argue” with in the text, and something they “Aspire” to in the text. After participants engaged in each round of the protocol in small groups, a whole group debrief occurred. Application of the protocol concluded with a group-wide discussion of trends, implications for the school’s practice, and implications for the intervention itself. The debrief was documented on the team’s internal running notes for at least the duration of the intervention. This is important for each participant to engage in a process of verbalizing and imagining what embedded reflective practices with educator-generated qualitative data should look like in the future at the school program after the intervention is completed.

Next, this same intervention session involved having participants help define the “problem” being addressed by our intervention together. Although it is clear the school does not yet have a systematized, frequent approach to embedded reflective practices focused on educator-generated storytelling as qualitative data, there are many structures and systems as well as reflection opportunities for sharing information.

Quantitative-based embedded reflective practices are the norm already, happening bi-monthly in PD, and can work as a framework for staff to consider how best to

normalize and systematize the collection of qualitative evidence of “success” directly from teachers to support CTE development and enhance CI for equity processes.

Participants then engaged in a “Draw the Problem” protocol to “define the problem in a way that is not only clear but also compelling enough to make people care about solving it” by writing and drawing out the specific issues with the current embedded reflective practices (Gray et al., 2010, pp. 90-91). Individuals drew the problem first. Then, as a whole group, participants looked at the results of the protocol and discussed what may be most helpful in the next elements of the intervention. The pre-survey data, group feedback shared in this intervention session, and individual exit ticket responses were taken into account as the full intervention sequence was developed.

In the next two sessions, participants practiced sample embedded reflective practices using qualitative evidence of success in the form of educator stories. First, there was a structured approach to this collection of qualitative evidence through a modified version of “The Making Meaning Protocol: The Storytelling Version” (School Reform Initiative, n.d.c). This protocol allowed for staff to consider qualitative evidence of success within CI at the school program to share it using a story or the telling of a story. In the next session, there was an option for more general framing or to continue with a similar structure. The participants chose a similar structure but asked for the content to be more about sharing “success” stories that came from failure experiences. This sequencing helped participants experience a more structured opportunity to share qualitative data as more straightforward evidence of success before being allowed to choose to have the

same, a similar, or no protocol for the next session with either a similar or different framing of the “success” they would be sharing. Ultimately, participants did choose the same structure or the same protocol, although they chose to examine stories more based on initial “failure” versus clear success. This meant the same protocol was utilized with modifications and additional incorporation of some modifications from the “What Comes Up” protocol for the debrief (McDonald et al., 2013, pp. 49-50). This allowed the participants to engage in an embedded reflective practice with educator-generated qualitative data, but the evidence embraced a framing of this evidence of “success” as initially involving failure.

The fourth session then involved examining qualitative data using a collaborative inquiry approach to analyzing data (Donohoo, 2013). While the second and third sessions engaged in a protocol that emphasized shared verbal stories with verbal debriefs, the fourth session utilized a specific inquiry approach to examining the stories as data to be coded and categorized. It focused on the qualitative data of shared narrative stories that have been written down as text. The debrief in this “Data Analysis” protocol involved a more structured approach to making meaning from the stories themselves in order to ultimately determine themes from them (Donohoo, 2013, pp. 66-71). This allowed the participants to look at the qualitative information that would be shared in that session similarly to how they would examine quantitative data provided to them in the form of tables and graphs. This supports another round of practice in examining qualitative data through an embedded reflective practice using the educator stories as evidence. The

qualitative data itself came from the stories shared over the previous intervention PD sessions or a new contribution from the participants. They were able to choose to recycle or story or tell a new one with either framing (complete success or success with initial failure delineated). This data was organized and ready to be read by the participants, in accordance with Donohoo's (2013) "Data Analysis" procedures (pp. 66 - 79). The stories themselves were presented for examination as written text so participants could analyze written versions of the stories. This process moved participants through steps where they read the data and then described, classified, and interpreted it. The purpose of this PD session would be to consider how teachers might share this educator-generated qualitative data as they do quantitative data to "attach meaning and significance" to the data to "determine what is important" (Donohoo, 2013, p. 71). This would allow for a more standardized approach to considering qualitative evidence of success generated directly by teachers, similar to how disaggregated quantitative data is already examined within the school's embedded reflective practices at regular intervals.

At the end of this process, teachers collaboratively engaged in reflective practices sharing qualitative evidence of success through participant storytelling. This also allowed for potential vicarious experiences to be shared. Participants had the opportunity to learn more about this EC of CTE. They helped define the issue with the school's current embedded reflective practices in considering how qualitative evidence is sustainably shared and incorporated into the CI for equity systems. Their feedback and support in defining the issue, engaging in the intervention, and debriefing the process helped

determine the outcomes of this intervention. As hooks (2003) explains when discussing democratic educators, “we share knowledge gleaned in classrooms beyond those settings thereby working to challenge the construction of certain forms of knowledge as always and only available to the elite” (p. 41). This democratic approach to engaging with participants together allows for critical theories to guide how learners are situated in this participatory action research project. Participants are asked to be equitable contributors with the researcher in how the future is imagined and developed. The goal of the PD sequence is not to impart knowledge onto staff, but instead to support their co-creation of knowledge based on their deep understanding of their context and liberatory approaches to teaching and learning. The intervention focused on what may help teachers realize the strengths in their team and how this can help more teachers develop these strengths within a liberatory approach to education. However, this intervention is about focusing on the qualitative data that can reinforce the best of the work that is being done across the school to support and engage with students and families. Safir and Dugan (2021) advocate for a world where

...teachers share a commitment to cultivating the gifts and talents of their learners *and* they are given the time, tools, and trust to do it. They aren’t asked to batch process students who will be measured by white supremacist standards but to develop students who have the self-concept, competence, and agency to contribute to an ever-changing world. (p. 27)

The planned dissertation intervention ideally allows for just that, which requires a critical approach to how this collaboration is structured and conceptualized. Participants are given the space to consider how they are contributing to student achievement, defined holistically and with an expanded definition. Safir and Dugan (2021) are critical of external accountability measures, including top down, standardized test score-based CI, that exclude stakeholders and do this work to, instead of with, a community. Again, from the initial RC 1, themes emerged in the importance of opportunities to share successes as well as how teacher learning must continue to be supported. Teachers felt supported by using a better system for quantitative data collection (that is rooted in mastery-based grading data), disaggregation, and analysis. Their input helped dictate how RC 2 would involve this intervention based on their feedback to support the same for qualitative data. The specific intervention of utilizing embedded reflective practice of utilizing stories to tell about this success was developed. This collaborative inquiry process of gathering to share stories of qualitative evidence, rooted in liberatory practices, can support the school and the overall body of research about the development of CTE.

Learner Success

With Educators. This study is considering success, when shared by educators, as a more holistic view of this word. As explained previously and in alignment with the liberatory approach for and with all learners in a school program, success for educators is being defined by participants in real time. Success is being framed to participants as a way to share evidence of succeeding, but this succeeding may come from temporary or

long term failure. It may come from obstacles. It may come from the reflection on those obstacles to determine an ultimate success. This qualitative “success” with participants provides the ability for them to delve into the complexities and messiness of success as they are asked to produce evidence of this. Explanations of success with peers, especially those that have previous relationships, provides additional context to the success beyond just the knowledge of the existing school environment. This is connected back to the idea of vicarious experiences and how they can contribute to CTE development (Bandura, 1977; Donohoo, 2017). Donohoo et al. (2020) quote Ross et al. (2004) when explaining the importance of vicarious experiences as “heightened interaction among teachers provides opportunities to observe the contribution of the collective to individual success” thus, “increasing perceptions of their individual and collective success and expectations for the future (p. 167).” The success is therefore about something that felt successful to the storyteller. This means “success,” although not always in quotes, is representative of a more holistic view of the word for the purposes of this study. In addition, this all continues to be framed within the context of a liberatory approach to education (Duncan-Andrade, 2009; Freire, 1970; Freire & Macedo, 2007; hooks, 1994, 2003, 2010). Therefore success for educators within this approach to teaching and learning ideally centers equity as well.

With Students. When discussing evidence of success with students, either quantitative or qualitative, this intervention is putting that success in the context of overall liberatory approaches to education (Duncan-Andrade, 2009; Freire, 1970; Freire

& Macedo, 2007; hooks, 1994). It is also in the local context of EL Education and an expanded definition of equitable student achievement as defined by EL Education (2018) Core Practices. This means the realization of the EL Education model at the school site aligns with liberatory concepts. This expanded definition includes mastery of knowledge and skills, character and culture, and high-quality student work. This means that although traditional, standardized test scores can be nested within mastery of knowledge and skills, they are not centered as most important overall or even within that specific element of student achievement. Standardized test scores and quantitative data are not ignored, but they also are not the overt or covert focus of the school. This is important when considering how this intervention may support equitable opportunities, engagement, achievement, and success for and with all school community members. School leadership groups, student-led groups included, work to understand what is happening from the student perspective in the classroom and during instructional moments through surveys and informal interviews analyzed in a timely manner with results that include student perspective on next steps in alignment with Safir and Dugan (2021). This means any success discussed by and with practitioners is meant to support equity within the school program. Ideally, the school can become more equitable with a CI system and CTE development focused on examining evidence of success that is most helpful in supporting the practitioners who support students and families.

Within mastery of knowledge and skills, standardized test scores, mastery-based grades, and other quantifiable measurements of student academic mastery are considered.

This may be the aspect of the expanded definition of student achievement that is most directly connected to traditional or expected considerations of student success. As the majority of EL Education whole school and curriculum partners exist within the American public school setting, there is still a reality of standardized testing that exists. The specific school context in a California public charter high school also requires standardized tests be provided, with these scores connected to school accreditation, charter renewal, and school dashboard ratings. Mastery-based grades are also examined at the local school context. Although all EL Education schools do not use mastery-based grading, the local school program utilizes this method of considering academic and character mastery. EL Education encourages the use of mastery or standards-based grading because of the potential for transparency, greater accuracy, collaboration, and effective communication about progress with all learners in the classroom, teacher included (Berger et al., 2014). This method of supporting students to transparently understand progress together is in alignment with recommendations for how best to engage in grading assessments with students that are more transparent and based in a shared understanding (O'Connor, 2010). Mastery-based grading means student skills and knowledge are explicitly and separately assessed. At the local site, this occurs through an online system called JumpRope that is updated every other week to allow for greater transparency and shared understandings of progress and feedback. As Hammond (2015) emphasizes, feedback like this can support culturally responsive teaching practices as well as student empowerment. This feedback can then be a partnership with the teacher

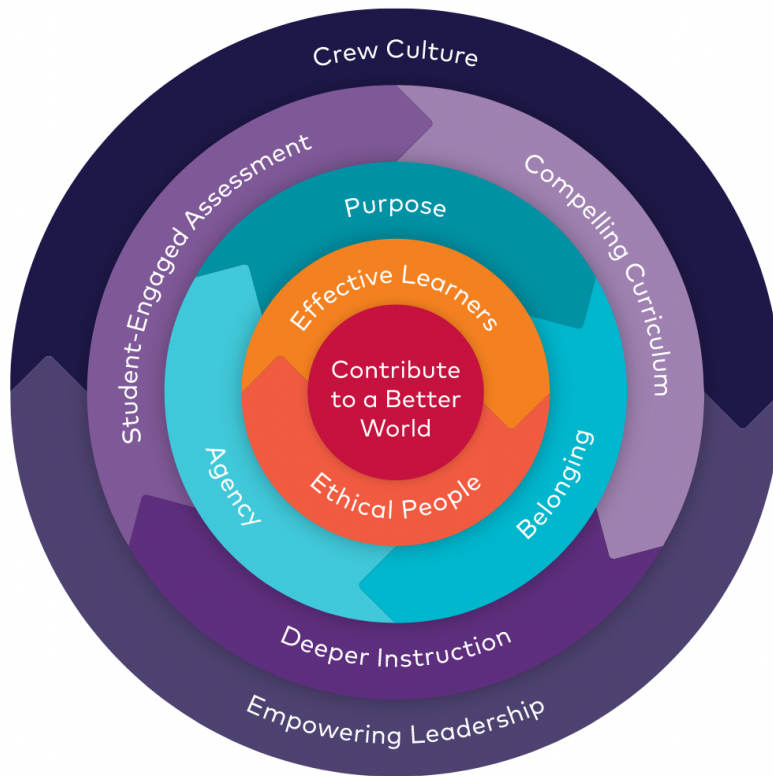
and student to work together toward mastery of content and skills, allowing for revision toward mastery and negotiations of what constitutes evidence of mastery. Lenz et al. (2015) emphasizes the importance of revision and how working with students to measure mastery through the revision and feedback process is essential for transforming learning. Although mastery of knowledge and skills still includes the problematic standardized testing measurement of student achievement (Boykin & Noguera, 2011; Dianis et al., 2015), this element of an expanded definition of student achievement also provides an opportunity for equitably considering student strengths in academic skill development toward problem-posing approaches to teaching and learning at this school program.

Although character considerations can be difficult to definitively measure, there is a commitment to supporting socioemotional learning and supportive measurement as an essential element to determining student success in EL Education overall and at this school program (Clark et al., 2020). It is not about punitive measurements to force dangerous compliance. Character development is about helping the whole student to learn and develop positive habits that support scholarship and civic engagement (EL Education, 2018). Character development and its measurement are an essential element of teaching and learning and reporting around student achievement and success within this school program. A true whole-child approach through relationships with students, families, and the community is essential because academic, social, and emotional learning can all be intertwined (Immordino-Yang et al., 2018; Nagaoka et al., 2014; Clark et al., 2020). Character redefines traditional measures of success and provides

opportunities for educators, students, and families to collaboratively engage in reflections on what is helpful for the community to teach and learn in regards to character development. Figure 3 below replicates the EL Education (n.d.b) character framework (and is utilized here in alignment with the EL Education (n.d.e) terms of use in Appendix A).

Figure 3

EL Education Character Framework



The framework for character development was created by EL Education (n.d.b). The description of EL Education’s entire approach to character development and measurement in Clark et al. (2020) provides a deeper understanding of how character is

considered in the context of student success. For example, collaboration is one of the main six character traits recognized by the school community and this habit can be practiced through smaller group projects with peers as well as larger final products that involve significant community partnership. As hooks (2010) explains, “envisioning a future of global peace and justice, we must all realize that collaboration is the practice that will most effectively enable everyone to dialogue together, to create a new language of community and mutual partnership” (p. 41). Therefore character development, with the learning and teaching about qualities like collaboration together, can be essential elements of student success. This is the vision for how character development is considered and can be approached in the school program to take steps toward a more holistic consideration of student success. This model demonstrates a nuanced and complex approach to emancipatory practices and considerations of character as an essential element of student achievement.

Finally, focusing on high quality student work when considering student achievement is an opportunity for students to engage in creating and contributing to the world. For EL Education, and in the school community, this means that authenticity, craftsmanship, and complexity are essential for considering the creation and measurement of high quality student work in relation to student achievement (Berger et al., 2016; EL Education, 2018). In particular, the authenticity element allows for students and staff to collaborate with community members and experts to engage with service learning and in fieldwork. This can support the creation of authentic student work that

can “demonstrate original thinking and voice, connect to real-world issues and formats, and, when possible, create work that is meaningful to the community beyond the school” (EL Education, 2018, p. vii). This is done consistently at the school program with students enacting land management plans with a local non-profit land trust, telling the story of community elders through mini-documentaries, designing and implementing watershed-improving mechanisms, etc. Student revision toward quality, and developing a school-wide ethic of excellence, can lead to students making positive and collaborative change in community (Berger, 2003). In addition, this is in alignment with engaged pedagogy practices as it assumes students have important contributions to make to the world (hooks, 2010). It also acknowledges how Freire (1970) advocated for problem-posing as a method to support students to engage in the real work of the world, to make it better, with a shared definition of progress in community. When this student contribution is rooted in effectively sharing an empowered commitment to building up themselves and their communities, this is an essential part of how student achievement can be considered.

Overall, when I refer to student achievement, success, or impact, I am considering the liberatory approach to education (Duncan-Andrade, 2009; Freire, 1970; Freire & Macedo, 2007; hooks, 1994, 2003, 2010) and an expanded definition of student achievement (EL Education, 2018). This also means student knowledge and strengths are considered. Student and family knowledge, especially that which comes from elements that can be marginalized or purposefully excluded, is essential to how learning,

achievement, and success are considered (Cervantes-Soon & Carrillo, 2016; Yosso, 2005). Although the local school context is in a predominantly white community and serves predominantly white students, there is relevance to how intersectional student and family identities across the school context may not be supported within traditional measures of student achievement such as standardized testing. This is not an attempt to appropriate critical approaches to considering student and family contributions from Black, Indigenous, Latinx/e, Asian American Pacific Islander, and other racially marginalized or purposefully excluded communities. However, it is relevant that racist and patriarchal considerations of knowledge and knowing harm all school communities and considerations of what is knowledge and who gets to share this knowledge. The ideal realization of the expanded definition of student achievement within the context of an EL Education school in general and this specific local context involves ensuring student identities and diverse strengths are welcomed and capitalized on to collaborate directly with the community as a whole to develop solutions together. All three dimensions are laid out in Table 1. Table 1 is based on EL Education's expanded definition of student achievement directly outlined in the EL Education (2018) Core Practices (p. vii). This expanded definition is explicitly addressed in other EL Education supported texts as well (Berger et al. 2014, 2016).

Table 1*The Expanded Definition of Student Achievement in EL Education*

Dimensions of Achievement	Students	Teachers and Leaders
Mastery of Knowledge and Skills	<ul style="list-style-type: none"> •Demonstrate proficiency and deeper understanding: show mastery in a body of knowledge and skills within each discipline •Apply their learning: transfer knowledge and skills to novel, meaningful tasks •Think critically: analyze, evaluate, and synthesize complex ideas and consider multiple perspectives •Communicate clearly: write, speak, and present ideas effectively in a variety of media within and across disciplines 	<ul style="list-style-type: none"> •Ensure that curriculum, instruction, and assessments are rigorous, meaningful, and aligned with standards •Use assessment practices that position students as leaders of their own learning •Use meaningful data for both teachers and students to track progress toward learning goals •Engage all students in daily lessons that require critical thinking about complex, worthy ideas, texts, and problems
Character	<ul style="list-style-type: none"> •Work to become effective learners: develop the mindsets and skills for success in college, career, and life (e.g., initiative, responsibility, perseverance, collaboration) •Work to become ethical people: treat others well and stand up for what is right (e.g., empathy, integrity, respect, compassion) •Contribute to a better world: put their learning to use to improve communities (e.g., citizenship, service) 	<ul style="list-style-type: none"> •Elevate student voice and leadership in classrooms and across the school •Make Habits of Scholarship visible across the school and in daily instruction •Model a schoolwide culture of respect and compassion •Prioritize social and emotional learning, along with academic learning, across the school
High Quality Student Work	<ul style="list-style-type: none"> •Create complex work: demonstrate higher-order thinking, multiple perspectives, and transfer of understanding •Demonstrate craftsmanship: create 	<ul style="list-style-type: none"> •Design tasks that ask students to apply, analyze, evaluate, and create as part of their work •Use models of excellence, critique, and multiple drafts to

work that is accurate and beautiful in conception and execution
•Create authentic work:
demonstrate original thinking and voice, connect to real-world issues and formats, and, when possible, create work that is meaningful to the community beyond the school

support all students to produce work of exceptional quality
•Connect students to the world beyond school through meaningful fieldwork, expert collaborators, research, and service learning

Teacher Collaboration and PD

PD is meant to be collaboratively designed and implemented to best support growth in each staff member, the overall team, and the equity-based work of the school program as a whole. PD is used as terminology that is common across schools. However, PD at this school is considered something done with the team and not to the team. Strategic PD that fosters purposeful teacher collaboration can support the development of CTE and, in turn, can support the achievement of all students (Abedini et al., 2018; Donohoo, 2017; Donohoo et al., 2018; Goddard et al., 2015). My proposed intervention would involve a PD scope and sequence meant to create stronger CI documentation processes *and* explicitly build CTE. Goddard et al. (2015) emphasized how “principals’ instructional leadership is a significant positive predictor of collective efficacy beliefs through its influence on teachers’ collaborative work” (p. 525). If I can deliberately model and build experiences to support CTE development, I can potentially contribute to a sense of CTE among staff members even if I am no longer the administrator at this school program. A positive and supportive culture must be emphasized because of its

potential ability to influence the entire school system. As Abedini et al. (2018) explained about participants in their qualitative study about collective efficacy beliefs:

They believed that establishing a supportive, positive, and interactive climate had to receive considerable attention by principals and other educational leaders. An educational system that is based on administrative support and shared leadership attempts to involve teachers in decisions making and social interactions around instruction. This establishes an educational climate in which continuous learning is encouraged because it fosters teachers' positive beliefs in the capability and the professional growth of the educational group. (p. 13)

This further justifies my intervention as it will be fully committed to providing supports and creating a climate where CTE is explicitly taught, valued, and encouraged. This will contribute to the effectiveness of a PD sequence.

Structures Supporting CI for Equity

Embedded within the PD sequence will be opportunities to develop effective and sustainable structures supporting CI. The intervention will involve practitioners collaboratively and deliberately revising current systems for embedded reflective practices that can support teacher-generative qualitative data sharing. In addition to opportunities to engage in a process for enhancing the current CI system, connections across departments and leadership levels may occur. As Goddard et al. (2015) suggested, "Leaders will need to provide time for teachers to collaborate frequently as well as to support formal structures for teachers' collaborative work. These formal structures may

include agendas or goals focused on specific aspects of instructional improvement” (p. 527). This demonstrates the importance of providing structures for practitioner collaboration and the ongoing CI work system-wide. Goddard et al. (2015) also advocated for principals to work in tandem with teachers to grow collective competence and efficacy because this is an essential driving force behind a productive school environment. This study justifies the use of strategic, ongoing PD to develop practitioner expertise through the support of shared leadership. Further, leaders and teachers would be advised to work together on exploring and determining solutions. As Donohoo et al. (2018) describe

Leaders can also influence collective efficacy by setting expectations for formal, frequent, and productive teacher collaboration and by creating high levels of trust for this collaboration to take place. ‘Productive’ means that teachers’

collaborative efforts can help to account for consequences in the classroom. (p. 3)

Notably, this emphasizes how purposeful teacher collaboration through a structured PD progression could be utilized for enhancing the effects of these cooperative efforts.

Specifically, if results of the CI demonstrate improvements in student achievement concurrent with better instructional practices, this work will be seen as productive. A strategic PD intervention can support CTE if this intervention prioritizes teacher cooperation around a system like CI, which emphasizes instructional and student achievement improvements (Bryk et al., 2017; Lewis, 2015). A contribution to the existing CI structures can be collaboratively developed through a PD intervention that

helps define and develop embedded reflective practices for qualitative evidence of success in the form of educator stories specifically.

The CI systems to support embedded reflective practices with quantitative data currently exist within the school structures. These are also more normalized when embedded reflective practices are discussed as an EC overall (Arzonetti Hite & Donohoo, 2021; Donohoo et al.'s, 2020). Quantitative data are coveted because of their measurability, and this data is often used to verify CI success. However, as Safir & Dugan (2021) explain, “what is measurable is not the same as what is valuable” (p. 12). The focus on qualitative data in CI systems through embedded reflective practices that mine for qualitative evidence of success in teacher storytelling allows every practitioner to make meaning, regardless of their proficiency in quantitative data analysis. This is important for the current school context of this intervention, to ensure all practitioners are supported to engage in CI work as well as find ways to measure their success across multiple data sources. As Hess and Fullerton (2009) emphasize, solely focusing on quantitative standardized testing data is not enough to transform school programs. In considering how this intervention may contribute to the overall body of research, it can provide supports for schools engaging in CI systems to consider the importance and contribution of educator stories as qualitative data when determining goals and evidence of success.

Structures Supporting Shared Leadership (and Empowered Teachers)

When supporting CI in schools, Hinnant-Crawford (2020) explains how “in order to improve with equity in mind, you have to think about ***who is involved*** in the improvement (whose voices have been considered in the definition of the program and the design of the solution) and ***who is impacted*** by the improvement” (p. 205). By having teachers help define the CI systems overall, and specifically help determine how embedded reflective practices that support educator stories as qualitative data should be developed, there is an explicit sharing of leadership. It is also using data that may be more or most familiar: stories. Therefore, the EC of embedded reflective practices is cultivated by the teaching team and not just those in hierarchical positions of authority. Implications for next steps involve how student and family voices are incorporated in any system that is being developed. Within the scope of this specific intervention, the focus is on teachers developing CTE within a school-based CI system.

Importantly, CI and CTE could be utilized to share leadership so that more members of the school community disrupt an oppressive and harmful status quo. CI for equity in this intervention within this school community is meant to help empower more people to see themselves as contributors to how the school could be led and how problems or disparities in equitable access, opportunities, and success could be addressed. Hinnant-Crawford (2020) explains her support for CI as “A southern Black girl raised by a southern Black woman with a heart for children, who believes that this is a tool that could aid me in my quest to decrease disparities in access to opportunities for children in

the margins” (p. 212). This is to emphasize that CI and CTE can be tools that support collaborative empowerment and school transformation, when applied with equity at the center and an emphasis on supporting all students and including all stakeholders. This intervention will specifically address empowering teachers as participants within the PD sequence to potentially develop CTE as they share qualitative data as evidence of success in the form of stories

Fostering Change

Theory of Diffusion. This intervention fosters change through its use of strategic and collaborative PD with practitioners to support effective CI structures and the growth of CTE. Rogers (2003) details the Theory of Diffusion and how an innovation or intervention is communicated through certain channels over time within a social system. The author explains how information is exchanged across individuals and communities. Within this theory of change, there are identified categories of adopters along a continuum from most innovative to least innovative: innovators, early adopters, early majority, late majority, and finally laggards. By facilitating strategic PD collaboratively with teachers, the social system would be influenced to support intervention adoption across categories. If the PD intervention allows for open communication and revision to existing systems, this can help even later adopters to consider the next steps toward implementation. In addition, this theory will be important as I am no longer employed at the school program, nor am I in a role with positional leadership at the site. Any innovation will be reported to the Board of Directors and shared with all school staff.

However, the participants within the research study will be in the best position to diffuse any potential innovation and learning throughout the school program.

This specific PD intervention would involve trialability. Rogers (2003) defines this construct as “the degree to which an innovation may be experimented with on a limited basis. New ideas that can be tried on the installment plan are generally adopted more rapidly than innovations that are not divisible” (p. 242). This supports the idea of having teachers try embedded reflective practices with qualitative evidence of success and experiment with shifts to ensure the entire team will adopt the most effective system collaboratively. Trying out new methods for incorporating more qualitative data into embedded reflective practices would then support teachers to consider the feasibility of the changes. Specifically, trialability may help connect laggards, or those who may be overtly the most resistant to engaging in the intervention and subsequent teacher-led innovations, by giving them the opportunity to try draft versions out before full implementation. In general, this change theory explains how the social network is key to supporting innovations and collaborative PD would be a mechanism for doing so.

Theory of Small Wins. The Theory of Diffusion demonstrates how a collaborative PD sequence would support connections across a social network and thus positively influence adopting behaviors. However, it does not directly address how the CI structure will build CTE. Weick (1984) explains the Theory of Small Wins and how,

The massive scale on which social problems are conceived often precludes innovative action because the limits of bounded rationality are exceeded and

arousal is raised to dysfunctionally high levels. People often define social problems in ways that overwhelm their ability to do anything about them. (p. 40)

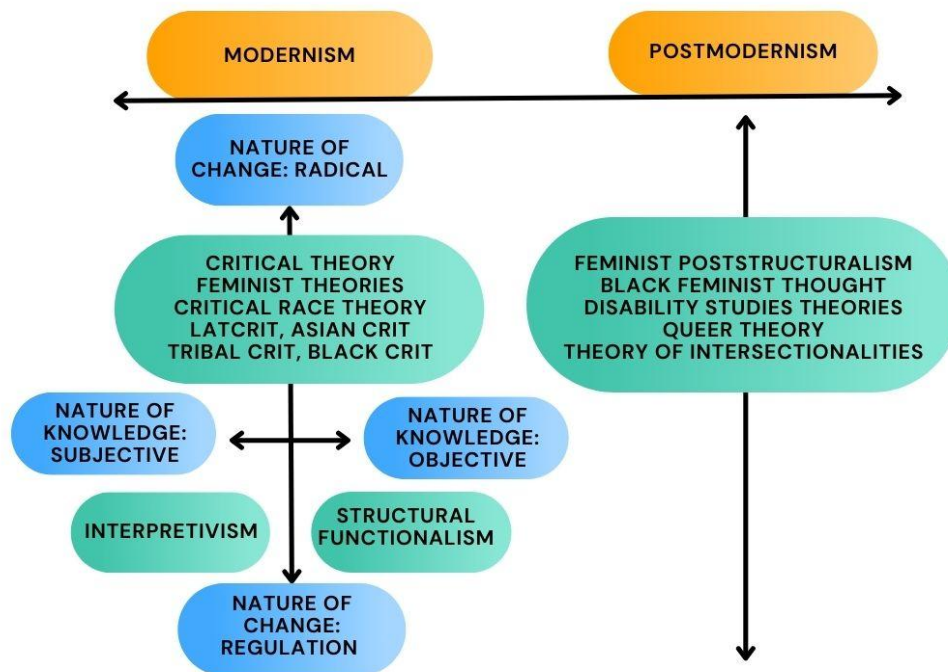
This is important because CI supports examining problems at the school in ways that will allow teachers to come up with their own contributing solutions. The proposed solutions are framed as an improvement idea that could be tested in a finite CI cycle. Goals or wins can then be most effectively framed as realistic with “tangible evidence of progress” (Bandura, 1997, p. 501). This is connected to the idea of small wins and how efficacy is developed. If the team of practitioners can effectively define the problems and solutions they are attempting to address through CI cycles, they may be less likely to become overburdened in considering next steps. Then small wins shared across the school team can be used as evidence to help build CTE (Donohoo, 2017). Emphasizing small wins will “build order into unpredictable environments, which should reduce agitation and improve performance” (Weick, 1984, p. 46). This means teachers could be more likely to find CI structures conducive to improvement and more able to share evidence effectively to enhance CTE. In justifying the use of CI, Hinnant-Crawford (2020) explains how complex, difficult problems in education rely on the people within the system who are enacting the changes and being impacted by those changes. Therefore, the planned intervention would be justified in supporting CI and its influence on CTE.

Critical Theory Epistemology. The idea that this work will diffuse through the sharing of small wins also relies on believing these wins and this diffusion are in service of liberation worthy of spreading. Capper (2019) emphasizes how “educators addressing

diversity and difference from an interpretivist epistemology perhaps unknowingly favor charity over justice” (p. 62). This means students who can be marginalized or have been historically, purposefully discriminated against may be further maligned by well-meaning educators who are not centering asset-based equity in their improvement methods. Figure 4, based on Capper (2019) Figure 5.1 (p. 68), demonstrates how critical theory is situated.

Figure 4

An Epistemology Framework



This demonstrates how a critical theory approach to this research firmly aligns with the idea that change is more radical and integrated. Furthermore, a critical theory epistemology does not delineate or separate leading change, decisions made about change, or leadership in general when considering these and their influence on the system

of education. This can be connected to how the EL Education (2018) Core Practices view the intertwined and collaborative nature of the work of education, the expanded definition of student achievement, and the approach to shared leadership. However, there must be a constant vigilance to ensure all elements of CI and CTE are rooted in the following critical theory tenets in system and mindset from Capper (2019):

Table 2

Critical Theory Tenets

Tenet	Brief Description
Acknowledge and relieve suffering and oppression.	The presence of power is assumed and interrogated.
Critique education’s perpetuation and disruption of power.	Education and its history, policies, and practices must be interrogated for who is oppressed and who is left out.
Reunite facts with values with a goal of social justice praxis.	Social change needs to be at the core of educational leadership practice with a focus on emancipating the oppressed.
Power between the oppressor and oppressed.	Power is shared.
Power disrupted via communication from equal participation.	There is hope for change through honest exploration, discussion, and open communication that democratizes interactions.
Leadership is political.	Leadership cannot be neutral with a true social justice orientation.

No learning model is a certainty in implementing practices that ensure leadership is distributed for equitable engagement and outcomes with a community. The work of

ensuring collaboratively shared leadership across the community is ongoing and particular to each school context.

I am approaching the work in this intervention and research sequence as work that has a critical theory epistemology. This means it is not neutral. It is aligned with the “critical hope” Duncan-Andrade (2009) describes when encouraging educators to be both aware of oppression and determined to engage with a justice orientation to the work of teaching and learning (p. 191). The goal of developing CTE is not to help teachers manifest a more powerful status quo, but instead it is an opportunity to continue to build shared leadership practices that empower teachers to reflect and collaborate while working through CI for equity. Bringing qualitative data as evidence of success from teachers directly into embedded reflective practices helps avoid clinging to harmful patterns and instead asks us to “Listen deeply. Trust the people. Act on what you learn” (Safir & Dugan, 2021, p. 217). This means evidence is considered with those who will be impacted by the implications of this data. It is about doing the work together. This is an approach that pushes for transformational opportunities to build a better school together, in community.

Quantitative and Qualitative Strategies

I am conducting this mixed-methods action research study using a pre- and post-survey (Appendix B), two semi-structured individual interviews (Appendix C), and a semi-structured focus group interview (Appendix D). I measured embedded reflective practices as an EC of CTE in connection with the CI systems we are utilizing at the

school site. I will also measure empowered teachers as an EC of CTE and CTE overall as this is connected to shared leadership. I engaged in MMAR quantitative and qualitative data analysis. I use combined mixed methods data analysis. This compares “quantitative and qualitative results” with a goal “to provide more credibility to the overall study conclusions and to achieve valid meta-inferences” that inform the intervention’s evaluation (Ivankova, 2015, p. 246). The themes that emerge from the qualitative interviews and focus group are compared to the quantitative survey results with these two concurrent strands. I synthesized these findings by comparing the quantitative survey results with the qualitative interview and focus group data to consider the effectiveness of the intervention and implications of this work. This aligns with combined mixed methods data analysis in an MMAR study (Ivankova, 2015). This allows for an initial separate analysis of the quantitative and qualitative data before comparing these results to consider the research questions. Overall, the data is considered and analyzed utilizing the CTE and CI theories. This means these theories will be used to analyze the data and consider conclusions and implications of this research.

Quantitative Strategies—A Brief Introduction

In RC 2, I utilize electronic pre- and post-surveys. There is a familiarity with electronic surveys and all teachers have their own school-issued laptops. There is precedent in the current school program for how this information is then used to better support staff members. The survey had 18 multiple-choice items that utilized a 6-point Likert scale. There were also two open-ended questions. In addition, demographic

information was asked in the pre-survey and the number of PD sessions attended was asked in the post-survey. The complete survey questions for Cycle 2 are in Appendix B. I included questions from the final version of Donohoo et al.'s (2020) EC-CTES, questions from Goddard et al.'s (2000) CTE Scale, and two open-ended items. Donohoo et al. (2020) identified five constructs as enabling CTE including empowered teachers, embedded reflective practices, cohesive teacher knowledge, goal consensus, and supportive leadership. I focused on measuring the ECs of embedded reflective practices and empowered teachers. The open-ended items may influence semi-structured individual and focus group interview questions for participants. Survey research is a popular design in education (Creswell & Guetterman, 2019). These authors additionally emphasize how a survey is often utilized to describe trends and determine beliefs and opinions. I am using a survey with quantitative items to determine trends in beliefs, ideas, and opinions among a representative sample of participants. These quantitative survey items are then compared with the qualitative narrative data to affirm the study's mixed methods approach to participatory action research.

The appropriate descriptive statistics were utilized to identify an attitude toward the ECs of embedded reflective practices and empowered teachers for CTE as well as overall beliefs about CTE in general. Therefore, I present the mean and standard deviation to describe the scale results (Salkind & Frey, 2020). A one sample *t*-test was conducted and results will be provided to consider the existence and significance of differences between pre- and post-survey results. These survey results were from five to

seven respondents. I do not consider how demographic variables such as gender, race/ethnicity, age, and years teaching at the school program may influence CTE development as this could mean anonymity is not preserved in explaining the data for such a small sample size in a small community. I considered the limitations of this quantitative data as having such a small sample and using a Likert-Scale which may not clearly define each response objectively and can restrict respondents' choices.

The timeline for survey implementation is presented in Table 3. This will allow for the measurement of teacher beliefs before the intervention and after the intervention to consider how it may have influenced those beliefs. Another potential limitation, however, is that Donohoo et al.'s (2020) EC-CTES survey is recent and only initial validation was demonstrated in its development.

Qualitative Strategies—A Brief Introduction

Two semi-structured individual interviews and a semi-structured focus group interview with four participants were conducted to gather qualitative data. The interviews were audio-recorded and transcribed. The content was saved and archived in the form of audio files and transcriptions. Furthermore, there were at least two open-ended questions on the survey. The resulting data was analyzed. Appendix C and Appendix D provide semi-structured individual and focus group interview questions, respectively.

Interviewing is a popular approach in qualitative educational research (Creswell & Guetterman, 2019). Further, according to Brinkmann and Kvale (2015), the qualitative interview “attempts to understand the world from the subjects' points of view, to unfold

the meaning of their experiences, to uncover their lived world prior to scientific explanations” (p. 3). The interviews were connected with the goal of determining the most effective systems for engaging in embedded reflective practices that share educator-generated qualitative evidence of success in developing CTE. The interviews ideally support consideration of the participant point of view in suggesting additions to these practices with educator stories as qualitative data in the CI systems at the school program. This intervention and data collection and analysis processes can empower the teachers to consider how they can share their input and leadership within the school program in and around these initiatives.

Qualitative data from the semi-structured interviews were used to clarify or reinforce patterns. The qualitative interviews and content were initially coded, codes were gathered into categories, and then emerging themes were identified in alignment with Saldaña (2021) and Charmaz (2014). Similarly to Abedini et al. (2018), thematic content analysis will be used to explore emergent themes. Categorizations and coding were reviewed in several phases in the analysis process. Moreover, the emergent themes will be compared to existing literature. The second cycle coding method of focused coding was deployed as it helps clarify the most significant codes to figure out which ones should become the focus of deeper analysis (Saldaña, 2021; Charmaz, 2014). This qualitative data was then compared to the quantitative survey results. The thoughts and feelings of participants were coded to determine where there is potential consensus as well as reinforcement and/or divergence from the quantitative results. Transcription was

reviewed multiple times to ensure basic accuracy. It is intended that the qualitative data from the interviews would complement the quantitative data collected through the surveys.

Research Timeline and Procedure

I followed the timeline for my research procedures as described in Table 3. The Board of Directors approved the continuation of the dissertation research at the March 2022 board meeting. I began to initially share about this research project with participants starting in the fall of 2022. I focused on current staff members at the school program who have taught before and have experience with CI and CTE work over at least two years at the school. I utilized email to invite them to participate in this research. I collected pre-intervention data using an online Google Form pre-survey in fall 2022. The intervention was implemented through a series of PD sessions that took place virtually, after school. Post-intervention data collection in the form of a survey, interviews, and a focus group occurred before post-intervention data analysis and considerations of implications. Table 3 lays out the timeline, actions, and procedures for the study.

Table 3

Timeline and Procedures of the Study

Time Frame	Action	Procedures
March 2022	March Public Board Meeting: School Board Approval for future research cycles at the school site	•The researcher provided public documents for the public board packet for the dissertation Cycle 2 research as well as presented publicly about the potential research at the regular March board meeting. It will also allow for public comment and

		public review of overview documents •The researcher submitted a review of RC 1 as well.
November 2022	•Dissertation Draft Approval at ASU •ASU IRB Approval	•The researcher sought and received approval for this dissertation RC 2 from the dissertation committee and then IRB
January 2023	Participant determination	•Ten educators were initially asked via email if they would potentially like to be voluntary participants in the study. •Participants were provided with Institutional Review Board (IRB) paperwork to determine who will ultimately be voluntary participants in this action research study •Signed IRB consent was procured and archived •Voluntary participants, of course, could opt-out at any time.
January 2023	Cycle 2: Pre-intervention data collection	•Pre-intervention data collection occurred through an online survey
January 2023	Cycle 2: Pre-intervention initial data analysis	•Conducted initial qualitative analysis based on the pre-survey •Conducted initial quantitative analysis based on the pre-survey
January 2023	Preparation of Intervention resources	•PD draft agendas, protocols, and resources were prepared.
January - February 2023	Intervention Implementation through a PD sequence	•The researcher facilitated four collaboratively-designed PD sessions as an intervention to support the development of CTE •The sessions were pre-planned, weekly, after school for two hours each on Zoom
February 2023	Cycle 2: Post-intervention data collection	•Cycle 2 post-intervention data collection through an online post-survey, semi-structured interviews, a semi-structured focus group interview

February - March 2023	Cycle 2: Post-intervention data analysis	<ul style="list-style-type: none"> •Conducted initial qualitative analysis •Conducted initial quantitative analysis
March - April 2023	Cycle 2: Post-intervention data analysis	<ul style="list-style-type: none"> •Conducted final qualitative analysis •Conducted final quantitative analysis •Reviewed data analysis with participants as appropriate to finalize the analysis •Conducted synthesis of quantitative analysis and qualitative analysis
April - May 2023	Final Dissertation Draft Prepared	•Engaged in the revision process with the dissertation committee
May 2023	Dissertation defense	•Defend dissertation
June / Aug 2023	Dissertation sharing with school program in alignment with school research policy	<ul style="list-style-type: none"> •The researcher will provide public documents for the public board packet for the review of the dissertation Cycle 2 research. It will also allow for public comment and public review of overview documents •School staff will be provided information about the research as well.

This outline demonstrates the timing of the intervention, data collection, analysis processes, and the presentation of the dissertation. Participants have collaborated throughout the dissertation process as well. The research will be shared with the school in alignment with the school’s research policy and with a goal of continuing to support the community.

Chapter 3 Summary

This chapter has presented the overall methods for the research. The setting, participants, role of the researcher, intervention, and basic analysis processes were

described. This chapter concluded with the timeline for the study after explaining the overview for each element of the methods that were utilized to conduct this MMAR study. The next chapter will provide an overview of the quantitative and qualitative results. These results will be considered separately before being analyzed together in the following chapter. Finally, findings and implications will be discussed in Chapter 5.

Chapter 4

Data Analysis and Findings

In this chapter, I share results from the mixed-methods action research (MMAR) study of embedded reflective practices addressing qualitative evidence of success as educator stories for the development of CTE in the context of CI for equity. The collaborative intervention involved four 2-hour professional development (PD) sessions that happened electronically on Zoom. The data sources include the pre- and post-intervention surveys, two post-intervention semi-structured interviews, and a post-intervention focus group.

Overall, the theoretical frameworks are utilized to present quantitative data from the surveys and then qualitative data from the interviews and focus groups. Qualitative and quantitative data are then synthesized and analyzed through the lens of the CTE and CI for equity frameworks in alignment with the concurrent MMAR design. Data are presented and analyzed in connection to the RQs from this study. Below are the research questions again.

RQ 1: How and to what extent does the implementation of an improved engagement in embedded reflective practices with qualitative data as evidence of “success” influence the utilization of effective CI systems within the school program?

RQ 2: How and to what extent does the implementation of improved embedded reflective practices with qualitative data as evidence of success affect CTE?

RQ 3: How does engagement in an improved CI process and embedded reflective practices for CTE development influence views of leadership in the school program?

The purpose of these RQs is to consider how the intervention of PD sessions with embedded reflective practices focusing on qualitative data as educator stories may influence CI for equity practices, CTE development, and views of shared leadership or the empowerment of teachers.

First, I will explain how I addressed an MMAR design. This section will indicate how I sequenced the multiple strands of my research in alignment with the concurrent multistage, multistrand MMAR design with a combined approach to data analysis (Creswell & Guetterman, 2019; Ivankova, 2015; Teddlie & Tashakkori, 2009). Therefore, both quantitative and qualitative data is collected before the intervention to gather baseline data and to inform the intervention itself. Qualitative and quantitative data is again collected after the intervention. Each of the multiple data strands (qualitative and quantitative in surveys, interviews, and a focus group) is concurrently collected and

analyzed together at each stage (pre- and post-intervention). Figure 5 demonstrates the visualization of this design and how This meets the goal of a concurrent MMAR design to “simultaneously collect both quantitative and qualitative data, merge the data, compare the results, and explain any discrepancies in the results” (Creswell & Guetterman, 2019, p. 551) and “to compare quantitative and qualitative results to obtain complementary evidence in difference types of data and produce well-validated conclusions” (Ivankova, 2015, p. 128). Overall, the data will be analyzed through the lens of the CI and CTE frameworks. These are the guiding frameworks for this study and will be used as a way of understanding the data and making meaning from the data. Thinking with theory can be a way of imagining how a theory or theorist would be utilized as a way to interpret relationships, words, and actions in research (Jackson & Mazzei, 2012; Qualitative Inquiry SIG, 2018). Second, I will present the quantitative data strand from both the pre- and post-intervention stages and provide an initial quantitative analysis separate from the qualitative analysis. Quantitative data analysis occurs through a one sample t-test after mean and standard deviations are shared in the results, with the guiding frameworks supporting analysis. Third, I will present the qualitative data strand from both the pre- and post-intervention stages and provide an initial, separate qualitative analysis. The qualitative data from the interviews and focus group were analyzed in alignment with Saldaña (2021) and Charmaz (2014) by initially coding the data through the lens of the CI and CTE frameworks, gathering codes into categories, and then identifying emerging themes. I will synthesize these qualitative and quantitative data strands from both the pre-

and post-intervention stages to determine the overall data analysis in this chapter. In this synthesis, I will continue to analyze this synthesized quantitative and qualitative data through the lens of the CI and CTE frameworks. This synthesis will act as the prioritized analysis and the one that will ultimately drive the subsequent implications and discussion. Finally, I will summarize the data analysis in Chapter 4.

Meeting a Mixed Methods Action Research (MMAR) Design

The MMAR design involves “the methodological and procedural steps that characterize a traditional mixed methods research study, but differs from it in the specific purposes of the reconnaissance or evaluation phases of the action research cycle” (Ivankova, 2015, p. 63). The identification of the problem, in MMAR, involves investigating and studying this problem in context with the goal of improving it through engagement in an intervention for that site or context specifically. Also, ideally the learning in MMAR develops into policy or is helpful in positively influencing how the context can best operate more equitably moving forward. This helps systematize the work as a part of the essential goal and purpose of MMAR when considered in relation to the frameworks of CTE and CI for equity in this study.

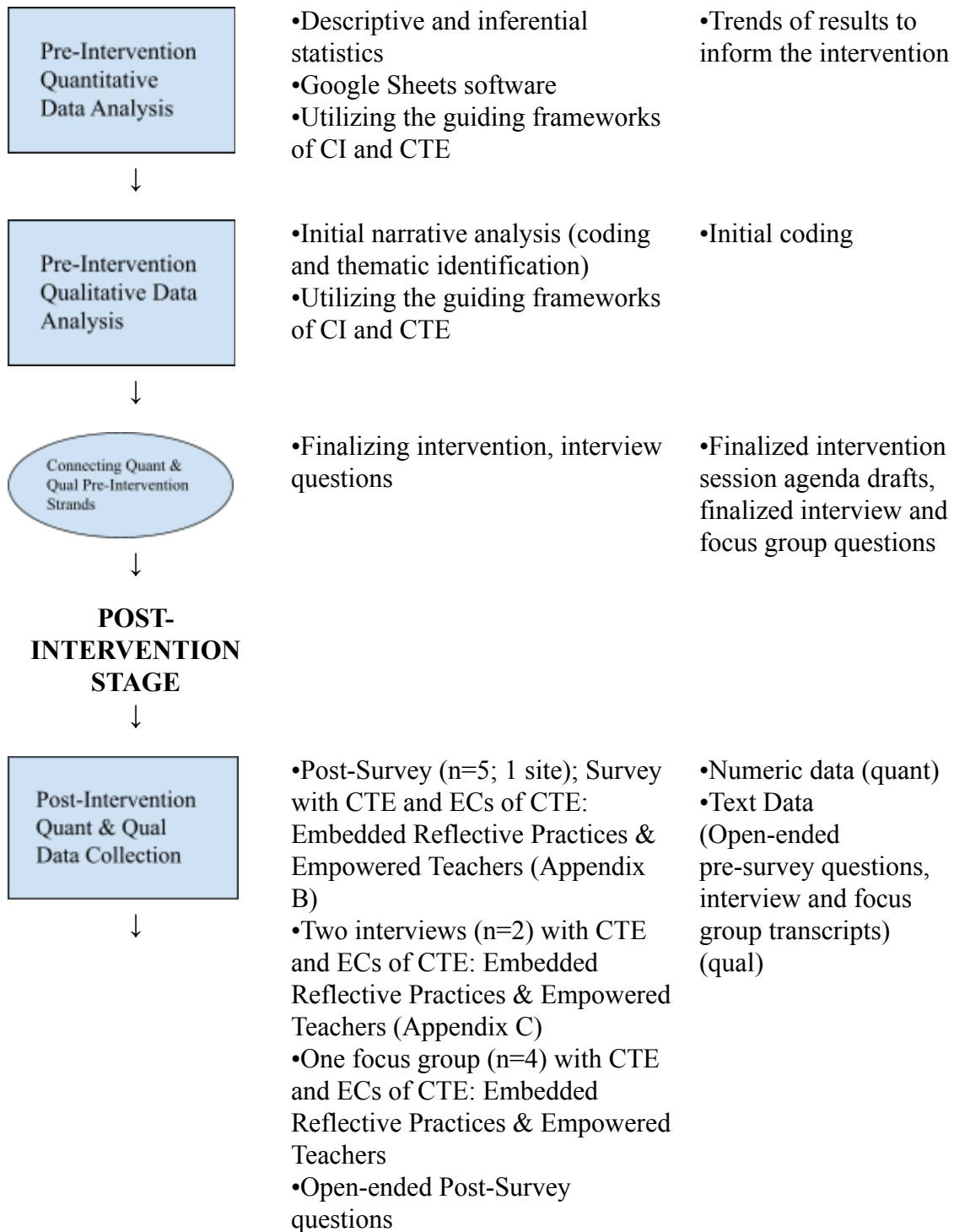
The following Figure 5 demonstrates the visual sequencing of the strands and stages in my MMAR. The initial pre-survey collected demographic data as well as quantitative data that was analyzed to inform the intervention itself. The pre-survey text data from open-ended survey questions also helped inform the intervention PD sessions, but was not formally coded initially. Figure 5 exhibits how the work develops through an

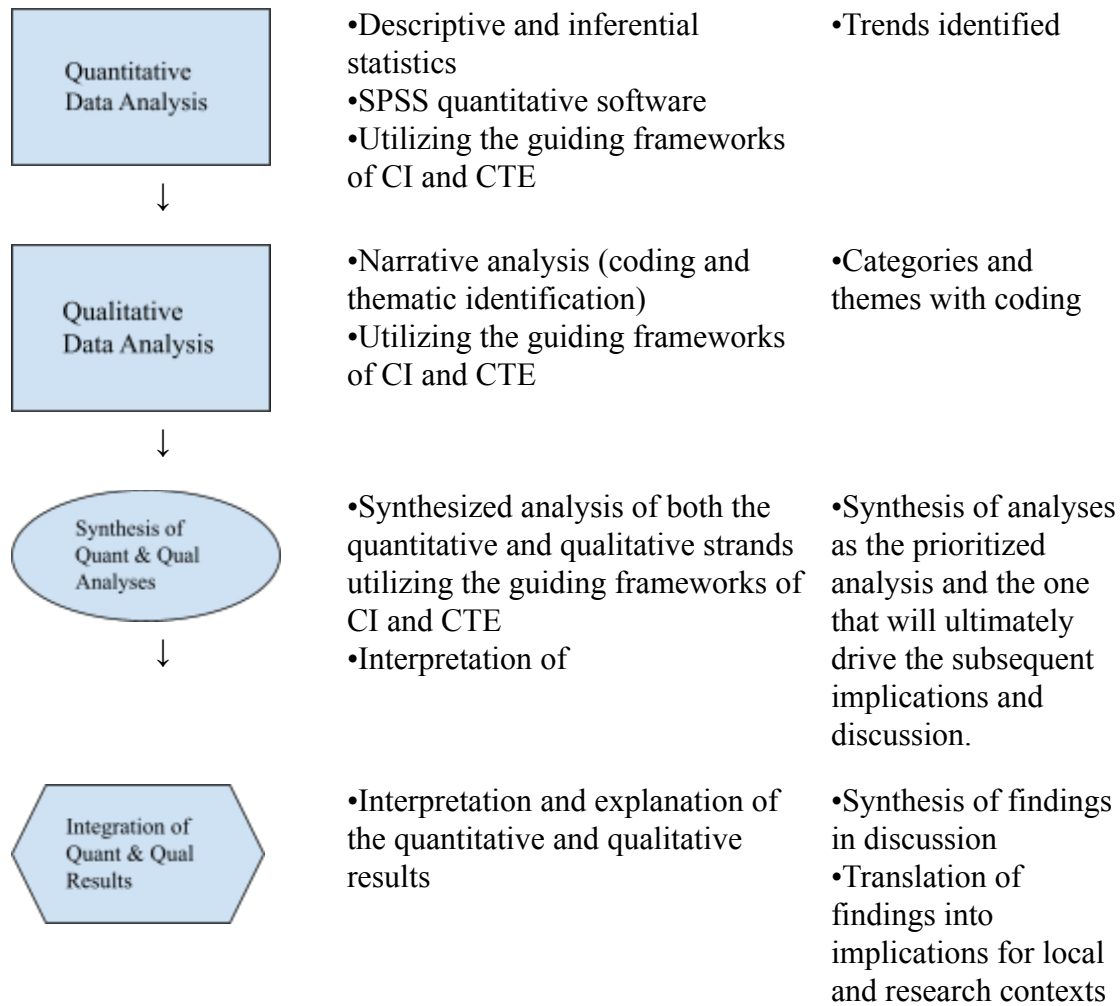
initial pre-intervention stage with the pre-survey. The post-intervention stage then involves the post-survey (with quantitative data and open-ended questions providing text data for qualitative analysis), two semi-structured interviews, and a focus group. Pre-survey open-ended responses were also reviewed for coding at this time. The quantitative and qualitative results are incorporated for final, synthesized analysis before presenting implications in the final chapter. Ivankova (2015) explains how the integration of the quantitative and qualitative information is an important element of MMAR to ensure the study purpose is addressed and all components connect appropriately. This means the initial quantitative strand analysis and the initial qualitative strand analysis are preliminary with the synthesis of the quantitative and qualitative strands across both stages acting as the prioritized, final analysis taking precedence as the basis for implications and discussion.

Figure 5

Visual Diagram of a Concurrent Quant + Qual MMAR Study Design

Strand	Procedure	Product
<p style="text-align: center;">PRE-INTERVENTION STAGE</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Pre-Intervention Quant & Qual Data Collection</p> </div> <p style="text-align: center;">↓</p>	<ul style="list-style-type: none"> •Pre-Survey (n=7; 1 site); Demographic Data, Survey with CTE and ECs of CTE: Embedded Reflective Practices & Empowered Teachers (Appendix B) 	<ul style="list-style-type: none"> •Demographic data (quant) •Numeric data (quant) •Text Data (Open-ended pre-survey questions) (qual)





I engaged in MMAR quantitative and qualitative data analysis. I used a combined approach to mixed methods data analysis. This compares “quantitative and qualitative results” with a goal “to provide more credibility to the overall study conclusions and to achieve valid meta-inferences” that inform the intervention’s evaluation (Ivankova, 2015, p. 246). The themes that emerged from the qualitative interviews and focus group are compared to the quantitative survey results with these two concurrent quantitative and

qualitative strands across both the pre- and post-intervention stages. It is a way to consider how the quantitative and qualitative results diverge or converge (Ivankova, 2015). I synthesized these findings by comparing the quantitative survey results with the qualitative interview and focus group data to consider the effectiveness of the intervention. This aligns with combined mixed methods data analysis with multiple strands and stages in an MMAR study (Ivankova, 2015). This allows for a separate initial analysis of the quantitative and qualitative data before comparing these results to consider the research questions. I will discuss the quantitative results and analysis. I will then discuss the qualitative results and analysis. Both will be connected to the RQs, the underlying theories of this study, and the intervention itself. Finally, the quantitative and qualitative data analysis will be synthesized. This synthesis is the driving data analysis for the study and will underscore the subsequent discussion and implications.

Quantitative Results and Initial Analysis

The quantitative data are from the pre- and post-intervention surveys administered to participants. The survey questions and associated constructs are in Appendix B. The surveys asked questions (multiple choice and open-ended) addressing the constructs of CTE along with embedded reflective practices and empowered teachers, which are identified as ECs of CTE (Donohoo et al., 2020). The pre-survey also included demographic questions to support the collection of quantitative descriptive statistics. Utilizing Google Sheets software, the data was prepared and organized so it could be analyzed and visualized. The Likert-scale responses were shifted to be in alignment with

their numerical indication of positively agree. The small sample size was considered, as well as the inability to align pre- and post-survey results directly for every respondent due to having different respondents in the pre- and post-survey as well as a lack of alignment with pre- and post-survey unique identifiers. The quantitative results specifically focus on how the intervention may have affected CTE development (RQ 2) and views of leadership (RQ 3). The quantitative results measure participant beliefs about CTE and the EC of empowered teachers in connection to these two RQs. The quantitative results contribute to understanding these RQs while the qualitative results will also contribute to these RQs as well as RQ 3 which addresses how the intervention may influence the use of effective CI systems at the school.

The pre- and post-intervention surveys were used to assess the effectiveness of the intervention to address the quantitative aspect of this MMAR study. The online survey, through Google Forms, provided a straightforward way for data to be collected from participants prior to the intervention and upon its conclusion. The pre-survey was able to collect information about the baseline for participants with CTE overall and the ECs of embedded reflective practices and empowered teachers. The survey instrument utilized a 6-point Likert scale and was based on Goddard et al.'s (2000) CTE Scale and Donohoo et al.'s (2020) EC-CTES. The pre-survey link was sent to participants via email who had indicated interest in the study and signed the Recruitment Consent Form (Appendix E). All pre-survey responses were received prior to the start of the intervention PD session. The post-survey link was provided in the intervention agenda (Appendix H) as well as

emailed to participants who had attended one or more PD sessions in the intervention. This post-survey was begun by participants after the conclusion of the final PD session and concluded before the focus group occurred. Participants finished their survey while interviews were occurring. The surveys would have taken approximately 25 minutes each to complete. Participants could complete the survey on any device that could connect them to the internet and this Google Form. The quantitative data was preserved in its original format to protect the integrity of this quantitative data. This data was then copied to a Google Sheet so that further quantitative analysis and visualization could occur. In addition, the data was uploaded to Statistical Package of Social Science (SPSS) Statistics software version 28 for further analysis and visualization, particularly related to conducting the one sample t-test to analyze the difference among means in the pre- and post-surveys.

The quantitative data is analyzed through the lens of the theoretical frameworks guiding this research. The constructs of CI and CTE act as the basis for the quantitative data that is being collected. The survey is asking for quantitative ratings connected directly to the concepts underscoring this study, with more emphasis on CTE. This means the data being collected will provide insights into these frameworks and their presence in the school. These frameworks then act as the lens for how the quantitative data is analyzed and presented. The focus of the quantitative data strands, from the pre- and post-surveys, is to consider participant beliefs about the constructs of CI and CTE.

Therefore, the quantitative data will be provided through the lens of these frameworks when the data is analyzed and presented.

I will lay out the quantitative data results and initial analysis here. Next, I will lay out the qualitative data results and initial analysis in the next section. Then I will synthesize the qualitative and quantitative data analysis, with further emphasis on using the conceptual frameworks of CTE and CI for equity as the lens for this analysis. In the next chapter, I will discuss the overall findings and implications based on this data.

Limitations with Quantitative Data

I consider the limitations of this quantitative data as using a Likert-Scale which may not clearly define each response objectively and can restrict respondents' choices even with each number of the scale clearly delineated. Fowler (2013) addresses how these measures are ultimately subjective and not fact-based, even if there are measures taken to increase validity and reliability. Also, due to a respondent in the pre-survey who did not engage in the intervention as well as a respondent in the post-survey who utilized a different unique identifier, there was an inability to match the pre- to the post-survey results. This meant there was also not a way to look at survey data that just represented those who engaged in the intervention. Overall, there is a small sample size having five to seven respondents for quantitative analysis. This also can mean wider changes in variability when a single response or respondent is shifted. Due to the limitations of the quantitative data itself and in alignment with MMAR, these quantitative results will be connected to the qualitative results so that findings from both data streams will be

included in the final data analysis. It is important to integrate any quantitative results about the construct of CTE and its ECs with the qualitative results.

Participant Quantitative Data

Although ten current staff members who had taught or were teaching currently were invited to participate in this study, seven potential participants signed the Recruitment Consent Form (Appendix E). These seven potential participants in the intervention took the pre-survey. Of the seven respondents, six participated in one or more of the PD intervention sessions. Of those six who participated in the intervention and were invited to complete the post-survey, five responded to the post-survey. In addition, of the five post-survey respondents, one of those participants utilized a new “unique identifier” at the outset of the post-survey which did not match up to any identifier or partial identifier used in the pre-survey. This means I was unable to determine who did not participate in the intervention in order to exclude their data from pre-survey results (without violating anonymity). The pre-survey results will therefore contain results from someone who did not partake in the intervention PD sessions or the post-survey. During the time of the intervention, the school began experiencing an unexpected staff shortage and staff members were covering classes regularly that were beyond their general workload. This was mentioned by participants and named as having an effect on engagement in the study.

Survey Results

The quantitative data from the survey results provide demographic information and responses to questions based on a six-point Likert-Scale rating. The demographic data will be discussed before the rest of the survey data is presented.

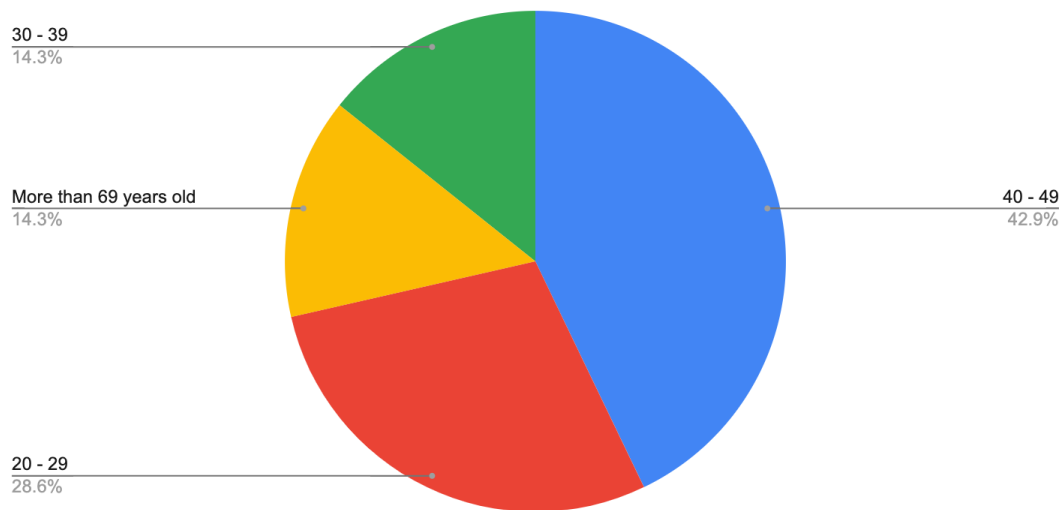
Demographic Information

Ten staff members currently employed by the school were invited to engage in the intervention with seven staff members expressing their intent to fully engage with the research. These seven signed participant waivers and were in touch over email about engaging. All had been teachers at some point in their educational careers, even if they currently were not teaching full-time at the school. All seven took the pre-survey, but only six attended at least one session. The invitation was based on past connections with the work we engaged in at the school connected to CTE. For these returning staff members, there was a baseline understanding of CTE and CI for equity processes. This meant educators brand new to the school in 2022 were excluded from the invitation. In addition, engagement with the past cycles of action research was a consideration. School leadership, instructional coaches, and teachers were all represented in the participant group. Part time contracted and full time staff were represented, although staff who had never taught or did not regularly observe classrooms were excluded from the invitation to participate. Overall at the school, there were 18 total staff members, which includes 10 teachers, when the intervention began in January 2023. Of the seven initial participants, one did not engage in any PD sessions, one engaged in 1-2 PD sessions, and five engaged

in all four PD sessions. All seven took the pre-survey. Of the seven participants, 71.4% identified themselves as female, 28.6% identified themselves as male. The participants' were predominantly white, with 14.3% identifying as Hispanic or Latinx or Spanish Origin of any race. The participants were asked about their time in education and their time specifically spent working at the school site. 57.1% have been working in education for more than 12 years while 42.9% have been working in education for 5-8 years. 28.6% have been working at the site for 9-12 years, 28.6% have been working at the site for 5-8 years, and 42.9% have been working at the site for 1-4 years. The participants range in age from 20-29 to older than 69, with Figure 6 providing the full age range of participants.

Figure 6

Age of Research Participants



The school itself is in a predominantly white county in a predominantly white town. According to the United States Government (2022a), 92.7% of the county where the site is located identifies as white. According to the United States Government (2022b), 75.8% of the country identifies as white. This means the racial and ethnic makeup of the area, as well as the participants, is not representative of the country as a whole, although it generally demonstrates a representative sample from the predominantly white community that the school serves. The seven initial participants in the survey are a generally representative group from among the overall staff demographics in the school and the local community.

The demographic data was provided as an overall snapshot of who was involved in the intervention. However, no further demographic data will be utilized to identify participants more specifically. This is to ensure anonymity with who was involved in the study and who provided which input for this dissertation. Due to the small sample size within a small school community, aligning even two identifiers for a participant could mean identifying that participant. It is essential to ensure that no one can be identified within this study. Therefore, demographic data will only be generally reported and not connected to survey data more specifically in order to protect participants.

Quantitative Survey Data

The Survey Instrument. The presence of CTE was measured on a six-point Likert-Scale using items from Goddard et al.'s (2000) CTE Scale. The ECs for CTE of embedded reflective practices and empowered teachers were measured on a six-point

Likert-Scale using items from Donohoo et al.'s (2020) EC-CTES. Respondents were asked to indicate their agreement to a series of statements on a 6-point Likert scale from *strongly disagree* to *strongly agree*. The survey questions are in Appendix B. Table 4 presents the numbered questions and their corresponding constructs.

Table 4

Survey Constructs and Numbered Questions

Construct	Questions
Embedded Reflective Practices (as an EC to CTE)	<ol style="list-style-type: none"> 1. School leaders regularly acknowledge the accomplishments of individuals within the school. 2. School leaders regularly acknowledge the accomplishments of teams within the school. 3. The faculty continually re-examines the extent to which teaching practices support the learning of all students. 4. The faculty examines multiple sources of evidence when considering student progress and achievement over time. 5. Teachers regularly seek feedback from students and use it to adjust their instruction.
Empowered Teachers (as an EC to CTE)	<ol style="list-style-type: none"> 6. Teachers are entrusted to make important decisions on school-wide issues. 7. Teachers are provided authentic leadership opportunities. 8. Teachers have a voice in matters related to school improvement. 9. Teachers' ideas are valued. 10. Teachers' expertise are valued.
Collective Teacher Efficacy (CTE)	<ol style="list-style-type: none"> 11. If a child doesn't learn something the first time teachers will try another way. 12. Teachers in this school are skilled in various methods of teaching.

- 13. Teachers in this school really believe every child can learn.
 - 14. If a child doesn't want to learn, teachers here give up.
 - 15. Teachers here fail to reach some students because of poor teaching methods.
 - 16. Teachers here don't have the skills needed to produce meaningful student learning.
 - 17. Teachers in this school have what it takes to get the children to learn.
 - 18. Teachers here are confident they will be able to motivate their students.
- All Constructs (open-ended)
- 19. When talking with other teachers, what parts of the conversations or interactions help you grow your collective efficacy?
 - 20. Do you have anything you would like to add?
-

For the Likert-scale based responses on the survey instrument, I utilized questions from existing survey instruments that were directly related to the RQs. The CTE scale, developed by Goddard et al. (2000), has been refined and tested for reliability and validity by Goddard (2002a), Goddard (2002b), and Goddard et al. (2004a). The EC-CTES scale, developed by Donohoo et al. (2020), is a more recently developed survey. It was created through appropriate procedures by Donohoo et al. (2020) and found to be valid and reliable. It has since been found to be a valid and reliable measurement tool by C.M. Anderson (2021) as well. Both studies, however, indicate that further research on this tool is needed to continue to test its utilization across settings and populations. In addition, I took measures to increase the likelihood of reliability and validity of the survey in alignment with Krosnick (1999) by using straightforward

language that the participants were familiar with and by identifying the full Likert-scale ratings and not just the endpoints on the scale. In order to increase the likelihood of validity, I also focused on increasing reliability by avoiding ambiguity in the questions, providing a standardized way of presenting the questions, and using the same rating scale for all questions (Fowler, 2013). The participants invited to engage in this study were also familiar with the concepts of CTE and CI for equity due to their time at the school and engagement in past cycles of research related to these constructs.

Presence of CTE at the Site. The appropriate descriptive statistics help identify an attitude toward the ECs of embedded reflective practices and empowered teachers for CTE as well as overall beliefs about CTE in general. Therefore, I will utilize mean and standard deviation to describe the scale results (Salkind & Frey, 2020). The teacher ratings in the pre- and post-surveys indicate a generally positive response for the presence of CTE and the ECs for CTE of embedded reflective practices and empowered teachers. In the pre-survey, the overall mean response was 4.82 (SD = 0.97). This initially informed the study by confirming that there is a presence of CTE within the school program. The interview and focus group questions remained in alignment with the idea that the school was engaging with CTE and CI for equity and CTE did exist at the school. The PD sessions provided some opportunities to build background knowledge, but based on the pre-survey data, this was treated more as a reminder than an introduction.

In the post-survey, the overall mean response was 4.77 with an overall standard deviation of 0.81. For both the pre- and post-surveys, the overall modes and overall

medians are 5 (on a 6-point Likert scale). This means the participants were on average “agreeing” more than “disagreeing” with the presence of CTE and its ECs of embedded reflective practices and empowered teachers. The pre-survey mean compared to the post-survey mean results for each question are in Figure 7. **Figure 7**

Mean Pre- and Post-Survey Results

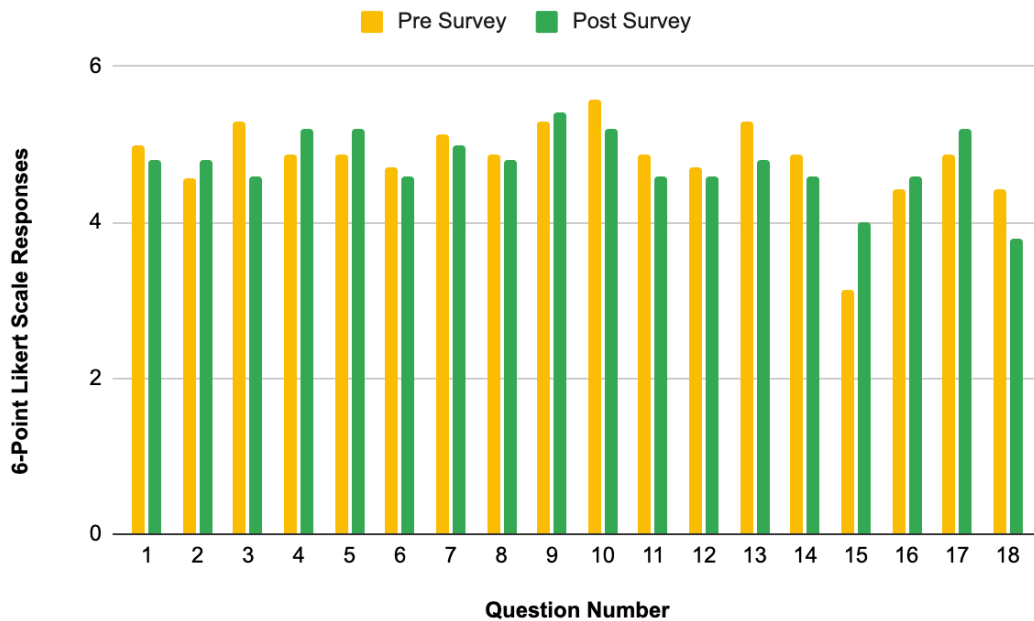


Figure 7 demonstrates that general acknowledgment on the survey for the existence of CTE and the ECs of empowered teachers and embedded reflective practices at the school. All questions have a mean above three with only two questions having a mean below four.

Descriptive Statistics. Although the means and overall standard deviations demonstrate a presence of CTE, there is not a clear shift in the presence of CTE overall or

in each construct from the pre- to the post-survey. Table 5 provides the means and standard deviations of each of the three constructs examined on the pre- and post-surveys.

Table 5

Pre- and Post-Intervention Surveys, Means and Standard Deviations (SD)

Components SD	Pre Mean (n=7)	Pre SD	Post Mean (n=5)	Post SD
Embedded Reflective Practices (EC for CTE)	4.91	0.85	4.92	0.91
Empowered Teachers (EC for CTE)	5.11	0.96	5.00	0.65
Collective Teacher Efficacy (CTE)	4.57	1.00	4.53	0.78

For embedded reflective practices there is a +0.01 difference from the pre- to the post-survey. For empowered teachers, there is a -0.11 difference in the mean. For CTE, there is a -0.04 difference in mean. The difference between the means of each of the three constructs from the pre- to the post-survey ranged from -0.11 to 0.01 which suggests similarity in the sub-components used to measure CTE and its ECs of embedded reflective practice and empowered teachers as demonstrated by the pre- and post-intervention survey results.

The majority of the questions on the pre- and post-survey had a range of one or two (28 out of the 36 total questions). This means there was generally a low range or difference between the highest rating and lowest rating on any given question. Only two of the questions had a range of 4 which was the highest range on any question in the pre-

or post-survey. Five would have been the greatest possible range. The largest difference in range from pre- to post-survey was on Question 6: Teachers are entrusted to make important decisions on school-wide issues. The range was four for the pre-survey and one for the post-survey. The means remained similar (4.71 to 4.60 with SDs 1.38 to 0.55). This was the question with the most change in range to indicate more similarity in the post-survey responses. This aligns with how much shared leadership and examples of empowered teachers were discussed in the intervention itself and the post-intervention focus group.

Teacher Agreement. Some questions had more teacher agreement than others. Overall, Question 11 (If a child doesn't learn something the first time teachers will try another way.) and Question 17 (Teachers in this school have what it takes to get the children to learn.), both from the pre-survey, had the lowest amount of variability of any items on the surveys as demonstrated by having the lowest standard deviations and ranges of 1. Figure 8 demonstrates the standard deviation of each question on the pre-survey and Figure 9 illustrates the standard deviation of each question on the post-survey.

Figure 8

Pre-Survey Question Mean and Standard Deviation

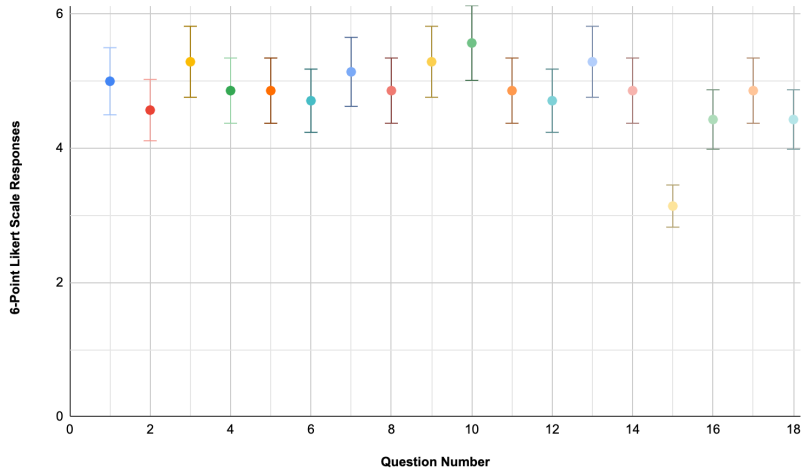
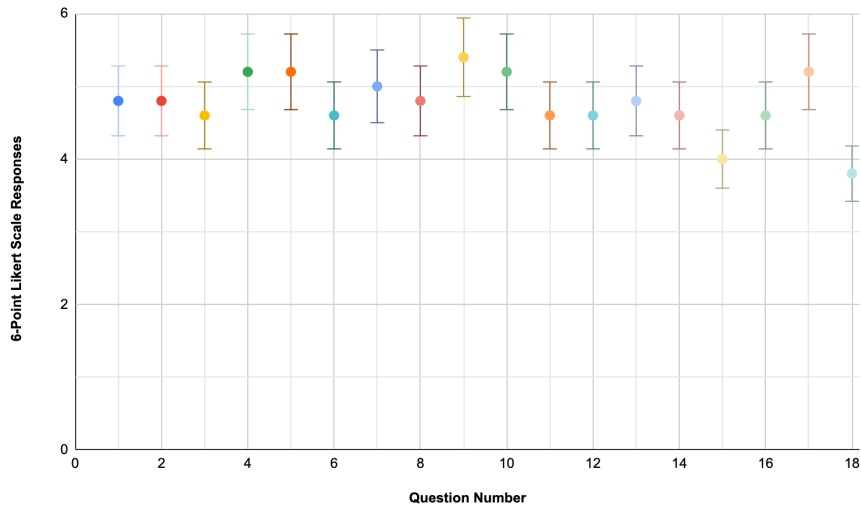


Figure 9

Post-Survey Question Mean and Standard Deviation



Quantitative Analysis for Significance

One sample *t*-test: The one sample *t*-test is used to compare the results from the pre- to the post-survey. This test is used because the pre- and post-survey responses cannot be matched to each respondent due to non-participation in the intervention PD sessions by a pre-survey respondent as well as the changing of a unique identifier by a respondent from their engagement in the pre- to the post-survey. In addition, a participant in the intervention PD sessions did not engage in the post-survey. Therefore, the one sample *t*-test was utilized to consider the effect of the intervention on the development of CTE and the ECs of embedded reflective practices and empowered teachers. The mean post-survey score for the five respondents over all eighteen questions is 4.77, which was compared to the mean pre-survey score of 4.82 with the one-sample *t*-test. In the context of this analysis, the hypothesis made was that this intervention could potentially positively influence CTE and the ECs of embedded reflective practices and empowered teachers. The results do not reveal support for the hypothesis ($t = -0.29; p > .05$). The effect size is -0.06, which is considered to be a small effect size. Overall, this means the quantitative data alone cannot demonstrate that the intervention had a significant influence on CTE development of the participants.

Quantitative Data Summary

In summary, the quantitative survey data does not demonstrate that the intervention significantly influenced participant ratings of CTE or the ECs of embedded reflective practices or empowered teachers. In relation to RQ 2, addressing how the

intervention may have had a potential influence on CTE, the quantitative results were not conclusive. In relation to RQ 3, considering views of leadership, the quantitative results do not demonstrate a significant shift in respondent's ratings for the EC of empowered teachers. Separate from qualitative data, the quantitative data alone demonstrates similar ratings of CTE and the ECs of embedded reflective practices and empowered teachers from the pre-survey to the post-survey. This is in alignment with the idea that CTE is present in the staff community, based on explicit engagement with the concept of CTE and a focus on creating the ECs at the school site before this intervention or any cycles of research were introduced. Also, the questions about CTE are asking for perceptions about the entire staff and only a sample of staff were represented by the participants. The quantitative results do not indicate that there was an increase for participants in CTE and the ECs of empowered teachers and embedded reflective practices for CTE. Although the means of pre- and post-intervention surveys show a -0.05 decrease overall, the construct of embedded reflective practices did increase by 0.01 from the pre- to the post-survey. Embedded reflective practices were the main focus of the intervention's PD sessions. The quantitative findings suggested that exposure to the PD sessions as an intervention did not result in statistically significant differences in the constructs of CTE and the following ECs of CTE: embedded reflective practices and empowered teachers.

There was a demonstration in participant responses that CTE and the ECs of embedded reflective practices and empowered teachers did exist however, with the means demonstrating consistency in respondents' agreement on the pre- and post-surveys. This

means the quantitative data indicates that CTE generally exists in the school community along with the ECs of empowered teachers and embedded reflective practices. In addition, the questions had overall low variability with range and standard deviation, meaning there was generally alignment across responses.

Although the survey results do not indicate that the intervention increased ratings on the surveys, the lack of consistent engagement across the pre- and post-survey as well as the lack of consistent use of unique identifiers may have been a contributing factor. I could have helped remind participants of how the unique identifier was created and utilized on both the pre- and post-survey as the same. A one sample *t*-test where scores could have been matched may have provided clearer results, comparing pre- and post-survey data directly from those who engaged in the intervention. Although there is demographic data for all of the participants in the pre-survey, the lack of consistent unique identifiers does not allow for this data to be matched to all of those who responded in the post-survey. In addition, anonymity was the foremost goal in considering what could be revealed by providing any identifying information in connection to survey ratings. This meant identifying ratings connected to demographics could potentially identify the respondent in such a small sample size in such a small community. That is why further analysis broken down by demographics was not conducted for the sample of four participants who had aligned scores in the pre- and post-survey with demographic information and engagement in the intervention. In the

next section, qualitative results and analysis will be provided before the qualitative and quantitative findings are analyzed together in relation to the research questions.

Qualitative Results and Initial Analysis

The qualitative data are from two semi-structured interviews with two separate participants and one focus group with four participants. The full interview and focus group protocols and questions can be found in Appendix C and D, respectively. There were also open-ended pre- and post-survey responses. The surveys asked an open-ended question addressing what helps grow CTE in participants as well as a second completely open-ended question about what else a participant may want to add. These questions were on the pre- and post-surveys and the full survey instrument can be found in Appendix B. The qualitative data were based on texts which were transcripts from the interviews and focus groups as well as texts written by the participants themselves from the surveys. I will lay out the qualitative analysis and themes here. I will interpret the data using the theories that undergird this study. I will summarize the qualitative results and analysis. Then I will synthesize the qualitative and quantitative data analysis. Finally, I will provide a summary of the qualitative and quantitative data and analysis. In the next and final chapter, I will then discuss the overall implications based on this data.

The qualitative data was appropriately collected and stored. The two semi-structured interviews were arranged directly with each individual being interviewed. They were scheduled based on a mutually agreed upon time. The interviews were scheduled for and ran for about 45 minutes each. The focus group was scheduled based

on similar timing to the PD intervention sessions themselves. The focus group was scheduled for and ran for about one hour. Questions were provided from the outset of the intervention by being linked into the shared agenda for the PD sessions. The overview of the agenda can be found in Appendix H, the interview protocol and questions can be found in Appendix C, and the focus group protocol and questions can be found in Appendix D. The interview and focus groups took place on Zoom. The cameras were turned off during recording, recording was mentioned in the Recruitment Consent Form (Appendix E), and participants were asked for verbal consent for recording again as the interviews and focus group began. A basic transcript was captured and then reviewed multiple times for accuracy. The transcripts were created by the researcher. The audio recording and transcript source materials were stored separately from the created, formal transcription document. Similarly, the open-ended survey question responses were stored in a separate document to preserve the integrity of the source data. The qualitative data was collected in alignment with IRB approval (Appendix F) processes.

The qualitative data is analyzed through the lens of CTE and CI for equity, the theoretical frameworks guiding this research. These constructs helped guide the qualitative data that was being collected and acted as a basis for the questions that were asked in the open-ended survey questions, interviews, and focus groups. This means the qualitative data being collected will provide insights into these frameworks based on participant responses to questions that are based on these concepts. These frameworks then act as the lens for how the qualitative data is analyzed and presented. The focus on

the qualitative data strands has the most input coming from the post-intervention interviews and focus groups with some additional text data from open-ended survey questions in the pre- and post-surveys. The analysis of this qualitative data will be conducted through the constructs of CTE and CI. The qualitative analysis will therefore provide themes, based on categories and codes, that have been deduced in alignment with these theoretical frameworks. Qualitative data is analyzed through the lens of the frameworks and then presented in alignment with the constructs of CTE and CI for equity.

I will lay out the qualitative data results and initial analysis in this section. Then I will synthesize the qualitative and quantitative data analysis, with continued emphasis on using the conceptual frameworks of CTE and CI for equity as the lens for analysis. In the final chapter, I will discuss the overall findings and implications based on this data.

Limitations with Qualitative Data

Although the qualitative data collection processes were conducted in alignment with the IRB processes and the study's purpose, there are limitations to this data and its subsequent analysis. The qualitative interview and focus group questions were developed from existing measurements of CTE. However, unlike the quantitative survey data, the qualitative interview and focus group questions were *based on* Goddard et al.'s (2000) CTE Scale and Donohoo et al.'s (2020) EC-CTES, and not pulled word for word from these existing and tested measurement tools. The interview and focus group questions were created for the purposes of this study. They were developed using concepts familiar

to the participants with clear language and reliability in mind, but they were not repeatedly tested or developed in advance of their use in this study. In addition, a qualitative interview participant also engaged in the four person focus group. Although I am mindful of this in providing evidence for a category or theme, this means there is a participant in the focus group and the interview process who has more input than other participants. Also, the participants overall only represent a sample of the school program and not all of the members of the staff team. Although this sample is generally representative demographically, it includes staff who have been at the school program for longer than two years, skewing the group to represent more “veteran” staff members.

Although I am no longer the administrator of the school program, I still am a former manager and potential reference for the current employees of the school and thus the participants of the study. In addition, the intervention PD sessions and the focus group did not include only peer-level participants. This could mean employees may have felt reticent to provide their ideas about shared leadership, teacher empowerment, and CI for equity systems at the school program. This can also mean more favorable responses toward concepts in the study may have been provided in alignment with a social desirability bias as the researcher is asking these questions directly in a focus group or interview setting (Fowler, 2013). This was mitigated for in ways described in the section on the interview and focus group protocols, but these limitations are important to name as the data itself is examined.

Finally, in connection to my positionality and overall assumptions about this work, I am not objective. There are general criticisms of coding and this approach to qualitative data analysis. I can specifically see how coding can be seen as reductionist or a way to pretend to be objective when I am considering the rich input provided in the interviews and focus group from people I know well and care about deeply in relation to my own dissertation (Saldaña, 2021). The processes I use to interpret the data are not objective. I will name that here as a limitation while also acknowledging that my own insider understanding of this school context can act as a strength for how I make meaning. Because I know this setting and the participants, I can potentially engage more authentically and collaboratively than if I had no experience with this context. I see participants as collaborators in this research (Carr & Kemmis, 2009). This is, again, both a strength for my MMAR study but should also be named as a potential limitation in connection to subjectivity. I will provide more details about the processes for understanding this qualitative data in the next sections.

Participant Qualitative Data

As described in the overall participant section in Chapter 3, the participants in the PD intervention sessions were a representative sample of the overall staff at the school even if they included generally more “veteran” staff in the program. The participants were from various roles in the school currently, but had all taught before. If the participants were not currently teaching, they were engaging in classroom visits and/or instructional coaching currently at the school. This ensured everyone had been a teacher,

even if they were not currently teaching in the classroom. The focus group and interviews also represented all but one participant in the intervention. The participants in the focus group involved three people who attended all four PD sessions and one person who attended two of the PD sessions. One of the invited members of the focus group was unable to attend. This meant not every participant was represented in the interview and focus group data. This means five of the six participants in at least one session of the PD-based intervention are represented in the interview and focus group data. Having almost all of the participants represented in the qualitative data from the interviews and focus group does provide qualitative data and insights into the perspective of most participants.

Qualitative Interviews and Focus Group Data

The qualitative data from the survey results provide insights into participant beliefs and ideas about CTE, its ECs, and CI for equity. The transcripts provide the words for analysis. I agree with Saldaña (2021) when the author explains how “heuristic fluidity is necessary to prioritize insightful qualitative analytic discovery over mere mechanistic validation” (p. 13). To me, this means there is an active meaning-making happening in the process of considering what the transcript or words are saying. As the researcher, I am utilizing this coding as a methodology to understand the qualitative information. I am not trying to summarize through my use of codes, but instead actively distill information. As Saldaña (2021) explains, “qualitative codes are essence-capturing” and I created my codes with this in mind (p. 13). The next step after creating these codes was to develop

categories which resulted from examining and naming connections among certain codes. Finally, themes were determined through a synthesis of categories. Utilizing inductive analysis, which is aligned to how I best process information, allows me to create an in-depth understanding of connections between and insights from the data (Bhattacharya, 2017). At every step of the process, I am inserting my own interpretation on this data in order to analyze and then share this analysis. As Saldaña (2018) reflects on qualitative research, he suggests that at its core it is “an iterative, cyclical, oscillating, and reverberative journey. Researching is multidirectional multimodal multitasking” (p. 2039). This means I considered the act of qualitative data analysis as a process over time. I am utilizing the lenses of the theories around CI for equity and CTE to conduct the analysis of the qualitative information. In the next section, I will explain the more specific procedures utilized to determine codes, categories, and themes.

The Interview and Focus Group Protocols and Instruments. I engaged in a process of inductive analysis to make meaning of this data. The protocol for the interviews (Appendix C), the focus group protocol (Appendix D), the survey instrument with open-ended questions (Appendix B), and the Themes, Categories, and Codes with Analytic Memos (Appendix G) are provided. The collection, storage, and preparation of the data is addressed in the above Qualitative Results and Analysis section. In this section, I will explain how I engaged in the inductive analysis process to determine codes, group those codes into categories, and eventually name overarching themes.

To fully prepare transcripts and begin analysis, I relistened to the full interviews and focus group multiple times. I read and reread open-ended survey responses, which provided some written information (eight contributing statements) in the pre-survey and less written information (three contributing statements beyond four expressions of gratitude as some form of “thank you”) in the post-survey. I followed along with transcripts and updated them if I caught any discrepancies. Once I felt the transcripts were accurate and I had sufficiently listened to the interviews and focus groups, I began the inductive analysis process by identifying codes. I kept an electronic methodological journal throughout this process and have provided the finalized themes with demonstrations of the rich text features utilized in Appendix G. I include some of the analytic memos there as well, though the full extent of the journal is preserved separately as a part of the audit trail. By not attempting to give every insight and memo, I am aligning my sharing of this process within this dissertation itself with the ideas laid out by Conostas (1992). I will attempt to appropriately outline how I engaged in this process and provide necessary, public evidence. This will not be exhaustive, nor will it encompass every element of the thorough, educating cycles of inquiry. It will provide insight to how I arrived at this qualitative analysis.

I first identified codes as a way to distill information. I made meaning with these codes and did not expect them to directly correlate to exact or copied words every time. I looked for patterns, made notations directly on the electronic transcripts (not source documents) and then wrote down the codes with analytic memos. The second cycle

coding method of focused coding was deployed as it helped clarify the most significant codes to figure out which ones should become the focus of deeper analysis (Saldaña, 2021; Charmaz, 2014). These codes are ultimately nested under categories and then themes in Appendix G. I put codes together into categories and nested these codes under the categories themselves. This came from reviewing the transcript documents, the analytic memos created with the codes, and the theories that were acting as a foundation to this study. This meant I was utilizing my own analytic memos throughout the process as a way to generate meaning, make connections, and consider outcomes (Bhattacharya, 2017; Charmaz, 2014; Saldaña, 2021). Once I defined categories, I looked for larger, overarching themes. I did this by cycling through the codes and categories and adding analytic memos and connections. I also pulled direct statements to nest them under the codes and categories as I considered the emerging themes. I documented this in my own methodological journal with the timeline and cycles. The majority of this coding took place over a two month period as I concluded the intervention and began making meaning of the interview and focus group qualitative information. I analyzed the themes by “synthesizing the analytic work from domains and taxonomies developed thus far” (Saldaña, 2021, p. 240). This means I reexamined coding and categories, but did not completely recode data from scratch as I considered theme creation, development, and analysis in subsequent reviews of the transcript data and methodological journaling.

In determining the themes and engaging in the inductive process, I was vigilant for how my own bias could be influencing the responses. I framed the interviews and

focus group as an opportunity for participants to provide input and purposefully did not interject frequently or engage in back-and-forth with participants. This meant I was not providing substantial engagement that could potentially influence participant responses during the actual interviews and focus group. In addition, from the beginning of the study, we utilized familiar school norms (present in the intervention agenda outlined in Appendix H) meant to support engagement and equity and referred to them throughout together. I was open about the research process, shared my draft dissertation and the EdD journey overall, and situated myself as a learner in this space. Although I had former positional authority, I sought to build an environment for participants to provide authentic input into how we could learn together. I believe this is evident in the responses and qualitative data itself where people offer astute critiques of the intervention as well as grapple with implications and next steps together. I was vigilant for how I could possibly be othering or dismissing participant engagement with my own presence, expressions, or language (Bhattacharya, 2016). In considering the reliability and validity of the qualitative research process, I focused on my research questions with the data analysis and utilized the theories of CI for equity and CTE to examine and make meaning from the qualitative data.

Qualitative Themes

In this section, I will outline the themes and provide the underlying categories. This section acts as the initial qualitative data presentation and analysis through the lens of CTE and CI for equity. This section provides a separate qualitative initial analysis. The

subsequent synthesized analysis of the quantitative and qualitative data strands across the stages of the study through a combined approach will go into further detail about how the qualitative themes and quantitative numerical results were analyzed directly in relation to the guiding theoretical frameworks in this study. Appendix G has the full themes, categories, and nested codes with basic analytic memos for the themes. The qualitative data were initially coded, codes were gathered into categories, and then emerging themes were identified in alignment with Saldaña (2021) and Charmaz (2014). The final themes are in all capital letters throughout this document and are identified in Appendix G as: THE IMPORTANCE OF SHARED LEADERSHIP AND COLLECTIVE OWNERSHIP, STORYTELLING BUILDS CONNECTION, NEEDS VULNERABILITY, and ONGOING REFLECTION TO SUPPORT CI FOR EQUITY. I utilize the following identification methods for the statements provided by participants: RC 2 Interview number, Focus Group Respondent (FGR) number, or Pre- or Post-Survey Response, followed by the date. Table 6 provides a breakdown of the themes with nested categories as well as aligned statements from participants and my own assertions.

Table 6

Themes and Categories based on Codes with Example Statements and Assertions

Themes and Categories	Example Statements	Assertions
Theme One: THE IMPORTANCE OF SHARED LEADERSHIP AND COLLECTIVE OWNERSHIP	“I don't think I've ever, um, worked in a workplace that was more supportive of that, of allowing me as a teacher to take on authentic leadership, and there are multiple venues for that.” (RC2 Interview 2, February 15, 2023)	The intervention provided an opportunity for participants to consider their views of

- Category: Shared Leadership
- Category: Missing Full Staff Team Presence

“... [B]ut it felt, while it was so valuable to work with a team I already feel very close to, I, I throughout our sessions was constantly sort of considering and thinking about, um, staff members that I think could have really used this time.” (RC2 FGR 3, February 27, 2023)

supportive leadership, their role as empowered teachers and the equitable sharing of leadership and ownership of the school program.

Theme Two:
STORYTELLING
BUILDS
CONNECTION,
NEEDS
VULNERABILITY

- Category: Vulnerability
- Category: The Power of Storytelling

“And what can I do to lift that achievement up? Um, I think model vulnerability through the leader like when a, a, certain leader that used to teach at the school with which I work would talk about, ‘I don't get this either’, ‘let's do this together’. Um, that is an important modeling, because it's vulnerability, but it's not lack of competence. It's important, that line for a leader, to still be demonstrating high competence, so that the team has trust in the leader. But it's, it's, it's still that leader as vulnerable.” (RC2 Interview 1, February 14, 2023)

The sharing of qualitative data (i.e. stories) provided an opportunity for participants to build further connection and was enabled by existing, modeled, and shared vulnerability.

“And it feels really validating to hear from other people who have had decades more experience than I have. But still can reflect on those moments that were really difficult and still make positive, um. I don't know, make, make positive results out of those, and continue to, to grow.” (RC2 FGR 2, February 27, 2023)

Theme Three:
ONGOING
REFLECTION TO
SUPPORT CI FOR
EQUITY

“...the impetus, at least in the past, has been really put on the, onto the teacher. So, instead of making that assumption of like well, these students are doing badly because of this identity marker, it's like, ‘How am I as a teacher, um, not

CI for equity is an existing, embedded system that requires ongoing reflection together to

<ul style="list-style-type: none"> •Category: Continuous Improvement (CI) For Equity •Category: Reflection 	<p>meeting the needs of those individual students?’ Um, and, and we reflect on that in different ways, we use, um, continuous improvement tracking over the course of the semester, um, to reflect quarterly on what students, you know, what successes we have, um, and then what, kind of, our areas for growth are and things that we want to work to improve.” (RC2 Interview 2, February 15, 2023)</p> <p>“I’d just add, like a, a guided element to it. It felt like almost like a meditative guide, uh, someone was guiding us on like a meditation of our work, um, in which we were given space, time, and prompts to, uh, explore our, our practices and our, in our work...It’s like, oh, it’s just really cathartic to, to, to be here together and to talk about our, our journey as educators.” (RC2 FGR 1, February 27, 2023)</p>	<p>examine diverse data sources in service of supporting all learners thrive.</p>
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These themes emerged through a thorough qualitative data analysis process based in the constructs of CTE and CI for equity. These themes act as an analysis of the qualitative data as they make meaning from the text data provided by participants. Appendix G provides the themes, nested categories, and nested codes with some analytic memos to represent a distillation of my own methodological journaling that occurred throughout this analysis process. These themes demonstrate an in depth analysis of the qualitative input from participants based on the constructs of CTE and CI for equity.

Themes were considered in connection to the research questions as well as analyzed through the lens of the theories of CTE and CI for equity which act as a foundation of this study. This qualitative data was analyzed to understand how CTE overall and the specific ECs for CTE of empowered teachers and embedded reflective practices may have been influenced through this intervention. As Donohoo et al. (2020) explain, “To properly support school leaders in nurturing CTE then, knowledge of the status of the ECs for CTE within their schools is necessary to identify areas of strength and opportunities for improvement” (p. 158). This means that qualitative data analysis was guided by this desire to understand the status of CTE and its ECs within the school program through the lens of the research questions. The goal was to determine the status of CTE and its ECs in connection to the research questions about CTE development, views of leadership, and CI for equity systems.

Here I will briefly describe the themes in relation to the constructs of CTE and CI for equity. The more in depth combined approach to the synthesized analysis of the quantitative and qualitative data together will demonstrate further, more explicit connections to how CTE and CI for equity were utilized as the lens for analysis.

Although the importance of shared leadership is generally present across the school program through the implementation of the EL Education learning model that holds this tenet at its core (EL Education, 2018), the qualitative results further demonstrate the theme of **THE IMPORTANCE OF SHARED LEADERSHIP AND COLLECTIVE OWNERSHIP** in how frequently and robustly participants reference this

ideal. This element of CTE is directly connected to the CI for equity processes that exist at the school and allow teachers to both converge around shared goals and diverge in some of the flexibility they are supported to have to achieve these goals (Kushner & Rochowicz, 2022). Goddard et al. (2004a) explain how, “When teachers have the opportunity to influence instructionally relevant school decisions, collective conditions encourage teachers to exercise organizational agency” (p. 10). At this school program, CI for equity provides the structures for staff influence and decision-making based on shared data. The CI for equity processes have also developed over time as the staff learned together about having a more narrow focus (Caillier, 2020). The intervention introduced a new embedded reflective practice that involved qualitative evidence of “success” as educator stories in considering reinforcement of individual and shared mastery for staff. With CI for equity, this theme emerged: ONGOING REFLECTION TO SUPPORT CI FOR EQUITY. This is in alignment with the idea that CI for equity is cyclical, ongoing, and involves iterating to seek desirable outcomes (Bryk et al., 2011; Bryk et al., 2015; Deming, 1986; Langley et al., 2009; Lewis, 2015; Taylor et al., 2014). The third theme that emerged was STORYTELLING BUILDS CONNECTION, NEEDS VULNERABILITY. This was connected to the idea that the work and leadership is shared when engaging in CI for equity, but the specific qualitative evidence felt like a vulnerable storytelling process. Further analysis in connection to these theories is also outlined in the section where the quantitative and qualitative data are synthesized in the analysis.

Intervention Effectiveness

In addition to the overall themes determined by the qualitative analysis, there was qualitative evidence for the effectiveness of this intervention in relation to the RQs of this dissertation and still based in the constructs of CTE and CI for equity. Further exploration of this will be provided in the qualitative and quantitative synthesis section, but I will outline here how the qualitative data support the idea of the intervention's effectiveness in positively influencing the development of CTE in relation to CI for equity for the participants themselves. The following are example statements about the intervention:

I, I loved hearing their stories, both the failures and the successes. I think that whole experience, um, built the trust, um added to the, added to the tightness of the connection... (RC2 Interview 1, February 14, 2023)

It's the small example, but like, um, identifying my locus of control, or, or maybe, um, sphere of influence at, at this school, um, being like *really* like, I feel like the most moves that I can do can happen at the grade level teams. Um, teams that I meet with every week. (RC2 Interview 2, February 15, 2023)

And for me it was just this, like really powerful reminder all of our sessions felt like this like consistent, (utterance) not consistent, but like, every time we met, I felt like I walked away with just more of a bigger picture, um, kind of like, yeah, a reminder of why I do what I do. (RC2 FGR 3, February 27, 2023)

...I learned a lot. I think that you know, being part of the Core Council, and like developing, um, PD and things like that, I, it gave me a different perspective, um, on what areas we could be emphasizing. (RC2 FGR 4, February 27, 2023)

These statements provide insight into the perceptions of participants in regards to the intervention itself. These statements demonstrate that the intervention did contribute to connection, collective beliefs of efficacy, and action-oriented improvements. They can be used as evidence to understand how this intervention was meant to be situated as a way to

intentionally build CTE together within the existing context. As Donohoo (2018) explains, “Policy makers, leaders, and staff developers’ efforts toward successful reforms might be better served by strategically and intentionally considering how to foster CTE throughout the conceptualization, design, delivery, and assessment of change initiatives” (p. 340). The intervention was a change initiative that was developed with this concept in mind and qualitative data suggests it may have positively influenced CTE, shared leadership, and CI for equity practices in participants.

Qualitative Data Summary

In summary, the qualitative data demonstrate the following themes after careful analysis processes were conducted over time in relation to the constructs of CTE and CI for equity: THE IMPORTANCE OF SHARED LEADERSHIP AND COLLECTIVE OWNERSHIP, STORYTELLING BUILDS CONNECTION, NEEDS VULNERABILITY, and ONGOING REFLECTION TO SUPPORT CI FOR EQUITY. These themes were developed based on the underlying theories of CTE and CI for equity in relation to the RQs of this study. I am purposefully providing greater evidence for the qualitative themes in the next section as part of the synthesis of qualitative and quantitative data aligned with the theories that support this research. The following section will provide further qualitative analysis with statements as evidence for these themes and how they connect to the quantitative data in relation to the underlying constructs. It will outline a synthesis and analysis of the quantitative and qualitative data together, in alignment with a combined approach to analysis in an MMAR study.

Synthesized Quantitative and Qualitative Analysis

I will examine both strands of data together utilizing the theories of CTE and CI for equity. This synthesized analysis will act as the basis for implications and discussion and is prioritized above the initial and separate quantitative and qualitative analyses provided previously. Creswell & Guetterman (2019) explain the options for how to synthesize and therefore compare the qualitative and quantitative initial analyses. The authors further clarify how quantitative and qualitative results can be presented “side by side” with “the quantitative statistical results” provided first before “qualitative quotes to either confirm or disconfirm the statistical results” (Creswell & Guetterman, 2019, p.552). I will present qualitative data with quantitative data together to present a combined, synthesized analysis of the overall data across these strands and the stages of the research. I will present areas of alignment across both quantitative and qualitative data strands as well as consider where there is divergence. The qualitative data about the development of CTE and the ECs of embedded reflective practices and empowered teachers will provide further context for the quantitative survey data that was collected. The themes from the qualitative data will be compared to the quantitative survey results. The goal of the data analysis was to address the research questions about whether the intervention supported CI for equity systems (RQ 1), influenced CTE development overall (RQ 2), and views of leadership through empowered teachers within the school program (RQ 3).

In the next section, I will specifically address the data through the CTE lens. Next, I will address the data through the CI for equity lens. Finally, I will end this chapter with a summary of the synthesized quantitative and qualitative analysis. This synthesized analysis will act as the foundation for the implications and discussion in the final chapter.

Interpreting the Data with CTE

The Presence of CTE at the Outset

There was the presence of CTE as well as empowered teachers and embedded reflective practices as ECs of CTE at the outset and conclusion of the study. This was evidenced by quantitative data in the pre-survey showing a general positive presence of CTE on the Likert-scale based questions directly based in the constructs of CTE and CI for equity and qualitative data in the pre-survey in the form of open-ended questions responses. In the quantitative data analysis section, this was explained with how in the pre-survey the overall mean response was 4.82 (SD 0.97). Open-ended pre-survey responses as qualitative data also demonstrated an understanding of CTE and its presence in their own behaviors and the behaviors of their peers:

For me collective efficacy grows when I listen carefully, ask questions to clarify and probe and find places of agreement to begin moving forward.” (RC2 Pre-Survey Response, January 23, 2023)

Conversations that help me build and grow collective efficacy are generally about creative projects and ideas we are excited about and require collaboration and shared leadership to accomplish. (RC2 Pre-Survey Response, January 20, 2023)

Sharing use of successful protocols and curricula. Raising up a teacher after an observation when they are successful. Personal & team acknowledgements in morning circle. Questions from other teachers that indicate their belief in my

expertise (ex. "I wonder if I could ask you some questions about that protocol you used, I'd like to try it!"). (RC2 Pre-Survey Response, January 21, 2023)

This initially informed the study by confirming that there is a presence of CTE within the school program. The respondents were able to name what explicitly develops their CTE at the school site, as evidenced by the above statements. These statements are connected to the underlying construct of CTE as “when staffs see themselves as highly efficacious, they ascribe failure to their use of insufficient strategies and/or not enough effort” (Donohoo, 2017, p. 11). These statements share participant descriptions of behaviors and beliefs about their own development of CTE. In addition, I have knowledge of the school program, the work done to explicitly build CTE, and the liberatory implementation of the EL Education learning model that focuses on shared leadership and stakeholder empowerment overall. This helped underscore the importance of providing a reminder of CTE and not focusing on the basics of CTE when beginning the intervention PD sessions. It confirmed that this construct is present. This was based on an initial analysis of pre-survey quantitative and qualitative data strands in the first stage of analysis to support the development of the intervention and post-intervention data collection tools. Again, this data affirmed an existence of CTE at the school site based on participant responses at the outset of the intervention.

CTE Overall at the Conclusion

First, in considering data around CTE development overall in connection to CI for equity systems and how they are co-created and led, there was evidence from the

qualitative data that participants were identifying the intervention as influential. In considering Goddard et al. (2004a) and how they describe that “collective expectations for action are indeed a powerful aspect of a school’s operative culture and its influence on individual teachers,” the following statements from participants back up both this expectation for action with CTE overall and how it aligns with the collaboratively led CI processes at the school (p. 9):

Because if your team isn't ready to tackle that like, it's one thing if you are as an individual, an educator in your own classroom, or whatever, or your Crew, or whatever data you're, you're looking at, and then it's another if you have your whole, all your, all your colleagues and all your grade-level teams, um, willing to engage with it meaningfully. (RC2 FGR 3, February 27, 2023)

And, and, um, getting everybody in a place where, to use the words of some of our sessions, like everybody, has the intent to improve...And through these opportunities of honest reflection and then the meta like of (sss sound) like using the protocols, and then having the conversations really identifying, um, next steps, um, in, in, in inspiring the intent to improve across my teams, and being willing to be vulnerable and honest about those things with my teams, um, to, to bring us to a place where we're able to engage in meaningful and useful embedded reflection. (RC2 Interview 2, February 15, 2023)

So in grade level team meetings, um, at least like one of my grade level teams, I felt like introducing some reflective practice to that, as mentioned before, with like an example of success...(RC2 Interview 2, February 15, 2023)

These statements from the focus group and interviews demonstrate how the participants were developing their perceptions of CTE overall and already considering implications for next steps with their entire teams. CTE and CI for equity systems rely on this collective engagement of the staff and this “intent to improve” (RC2 Interview 2, February 15, 2023; RC2 FGR 3, February 27, 2023). Based on the quantitative data, there

was no significant change in perceptions of the presence of CTE or the ECs of empowered teachers and embedded reflective practices from the pre- to post-surveys. This means the quantitative data demonstrates the presence of CTE, but not a significant shift in perceptions while the qualitative data demonstrates CTE developments and positive shifts in described actual practice based on the intervention. This can be related to how the participants felt a shift among themselves and could name how the intervention and their colleagues who engaged in it may have developed CTE or indicators of CTE. The quantitative-based survey questions were asking for participants' perceptions about the entire staff and their overall CTE. Therefore an overall, school-wide CTE may not have been influenced as indicated by the quantitative results while the participants themselves, among themselves, may have increased their collective efficacy together (with an intention to bring more support and learning back to the rest of the team). Although the quantitative data is not conclusive, the qualitative data demonstrates this importance of collective efficacy development and this is aligned with the qualitative theme that emerged of THE IMPORTANCE OF SHARED LEADERSHIP AND COLLECTIVE OWNERSHIP. This explanation is not yet getting into the discussion or implications, but it is analyzing the qualitative and quantitative results together through a combined approach with the lens of CTE. When addressing CTE beliefs in supporting student learning, Goddard et al. (2015) assert that "school environments may be most productive when principals work collaboratively with teachers to develop collective expertise" (p. 508). This intervention was an opportunity

for the participants to collaborate across current and former hierarchical positions with qualitative evidence especially demonstrating how it was successful in doing so. The synthesized data streams demonstrate shared perceptions of participants' abilities to collectively impact and engage at the school site.

Engaging with the Entire Team

The participants in the interviews and focus groups did indicate that there was a limitation to how this intervention supported the development of CTE at the whole school level. They named that not having the whole team involved with the PD sessions was not as helpful when thinking about the entire team's collective belief in their own abilities. The participants explained there was greater trust in the specific group of participants because they are engaging with people here that they "know really well" (RC2 FGR 2, February 27, 2023) or "I already feel very close to" (RC2 FGR 3, February 27, 2023). Participants had worked together for at least two years already. This meant that although participants did directly connect to the idea that this intervention could contribute to the building of CTE and experience ECs of CTE for embedded reflective practice and empowered teachers, these constructs were more present among the participant group itself than necessarily across the entire school staff community together at that time. Quantitative data aligns with this idea as well. There was no overall improvement in perceptions of CTE or the ECs of embedded reflective practices or empowered teachers from the pre- to the post-surveys.

Participants explained how this limitation could be expected as every staff member in the school community did not engage (and was not invited by the action researcher) to engage in this intervention. This invitation process should be attributed to my own invitation and not anyone based in the school program. The following statements demonstrate how effective CI systems (RQ 1), CTE development (RQ 2), and views of leadership with empowered teachers (RQ 3) were less effectively influenced by the intervention without the entire team being present:

They [the PD sessions] shone a light on the need for that to be...[I]t's a matter of, um, raising questions, um, creating a grapple, a, a situation that is something that people will chew on for weeks and figure out how to support the rest of the teachers in the school in moving forward. (RC2 Interview 1, February 14, 2023)

And then the least effective part (utterance) was like, despite it being super great, to do this with people that I know really well and feel really comfortable with, um, it would have been, I think, helpful to see how this can read vulnerability in people that I don't know as well, and like emulating like new members of a team, and things like that. (RC2 FGR 2, February 27, 2023)

...[B]ut it felt, while it was so valuable to work with a team I already feel very close to, I, I throughout our sessions was constantly sort of considering and thinking about, um, staff members that I think could have really used this time. (RC2 FGR 3, February 27, 2023)

Yeah, I would just say, like, this experience feels like, uh, pretty powerful shared experience of the continuous improvement work of [school name], and just knowing, yeah, kind of reverberating some of the points just that, not the whole team wasn't, the all the staff obviously wasn't here. (RC2 FGR 1, February 27, 2023)

I feel like for me, wh, what, I feel like, uh, I, I'm I got a lot out of this whole process. Got a lot. That's the thing that I feel like, I need, we need to or want to, um, work on and figure out is a lot of what [participant name] pointed out is this gap, of how to bring staff that are not as, bought in or empowered, or you know, put into this leadership role how to bring them closer to them, closing that gap. And that's what I would say like, hmm, I wonder, wonder what would work?

(RC2 FGR 4, February 27, 2023)

This aligns with the theme of: THE IMPORTANCE OF SHARED LEADERSHIP AND COLLECTIVE OWNERSHIP, which directly connects to CTE, as the participants are explicitly naming the importance of having their whole team present as they consider implications for moving this work forward from the intervention across the CI for equity systems and overall at the school. In addition, the quantitative evidence does not demonstrate an overall increase in CTE and the ECs of empowered teachers and embedded reflective practices which does make sense in alignment with the idea that this intervention was not staff-wide and these participants were asked to make assumptions about their entire teacher team when responding to these survey questions (ie. Question 13: Teachers in this school really believe every child can learn.). The participants named this limitation to the intervention. It demonstrates a connection to a major theme and how CTE is considered as a theory. Goddard et al. (2000) explain how CTE is a multilevel phenomenon experienced by the individual and involving collective perceptions. This connects to how the participants may have increased their CTE, but quantitative data did not indicate a significant shift in CTE across the whole school program. This means the data could indicate that this intervention was helpful, but in considering CTE across the entire staff team, it does not necessarily increase overall CTE in and of itself beyond the participant group. However, because individuals can be affected by the collective, the qualitative evidence supporting a shift in CTE for participants may contribute to the overall CTE at the school over time if this is sustained and applied.

CTE in Action

CTE is about teacher perceptions of their whole team's abilities to enact positive change (Bandura, 1977, 1986, 1997). The intervention only impacted the participants directly. Although qualitative data demonstrated some positive impact in regards to CTE development for these participants, the quantitative data showed no significant impact across the participants when considering CTE across the whole staff. However, the participants' perceptions may demonstrate an intent to take action or descriptions of actions already taken. Participants did explain that they were already applying what they felt they learned about CTE and its ECs in their interactions across the entire staff.

Participants stated:

All of that is connected to like encouraging, and like having conversations with our colleagues to step up if we feel like, um, they, could use encouragement to do so. (RC2 FGR 3, February 27, 2023)

I think specifically the idea of well, what's an accountable team? That was a training that some people had. But other people didn't, was, it's a matter of let's bring our team of teachers up so that we're all operating on the same page. (RC2 Interview 1, February 14, 2023)

So a, a, a reframing of existing systems? Um, and then with that same team again yesterday, I proposed and got some, um, feedback from my team around the idea of bringing back the, um, learning walk, teacher co-observation, um, just like essentially, like being able to see each other teach. And I explained to my staff like, reflected honestly that, like this is something that we used to do, used to be kind of required, um. This is not going to happen at the whole school level, but I'd like to do it with this team, and the feedback that I got from that was like, please, like, let's do that. (RC2 Interview 2, February 15, 2023)

This description of action and intention to act demonstrates CTE application. The qualitative data indicates participants wanted to take what they learned to develop CTE

across the staff overall through different means. As Goddard et al. (2000) explain, “In a school with a high level of collective teacher efficacy, teachers are more likely to act purposefully to enhance student learning. Such purposeful actions result from organizational agency that influences a school to intentionally pursue its goals” (p. 502). This does indicate how the team believed they were empowered enough to act and had the skills to successfully engage in these actions. It shows a belief in CTE enough to invest more energy and resources in explicitly developing CTE across the entire staff. It shows a belief in participants’ own abilities. Donohoo et al. (2018) explain how successful school teams believe in each other’s abilities to succeed. This confidence in their own abilities to facilitate learning together as well as their confidence in their colleagues’ abilities to learn and develop CTE are indicators of CTE in and of themselves.

Empowered Teachers as an EC for CTE

In association with RQ3, addressing views of leadership in relation to the intervention, the theme connected to empowering teachers emerged: THE IMPORTANCE OF SHARED LEADERSHIP AND COLLECTIVE OWNERSHIP. When explaining the EC of empowered teachers, Donohoo et al. (2020) describe how “When teachers feel disempowered, efficacy is diminished. Whereas, on the other hand, when leaders empower teacher teams by providing them decision-making power on important issues related to school improvement, not only is professional capital built, but

also efficacy becomes enhanced” (p. 159-160). The below statements demonstrate how participants believe they share in important leadership decisions and mindsets:

...in terms of my efficacy it, it is a very empowering feeling to know that I am trusted to make decisions to be part of a team, and, and it makes me a better colleague and uh certainly a stronger crew member in terms of supporting, um, new teachers who come on and, um, and just being part of that collegial team. Not necessarily, um, an accountable team, but a collegial team. (RC2 Interview 1, February 14, 2023)

...the questions from admin when those things are, are proposed are most often like, “Okay, what, what support do you need to make that happen?” Um, not like, “Explain to me in 500 words why this would be a useful experience?” Like there is a trust implicit, in, um, the staff that what they're doing is for the best interest of students, um, It's, it's an assumption of the best, and I, I think that that assumption of the best and respect as a professional allows teachers not only to do those, to take on those authentic leadership experiences, um, with students and families and staff, but also, um, just allows them to know that it's possible, so, um, even if they're not actively doing those things like, I, I think that most teachers here would feel that they were able to embark on whatever experience they needed to and be a leader and planner and, uh, organizer of that experience without, um, the doubt of like whether they'd be supported by admin. (RC2 Interview 2, February 15, 2023)

I would say yes, (utterance). I mean I did, and again I go back to my experience from the beginning, working at so many different schools. And you know, staff members have, have opportunities to take on like coaching, or, or you know, the club, um, leader and what not. But I think because we are a smaller school, uh, almost every staff member, I feel like has an opportunity to, to take on a leadership role. (RC2 FGR 4, February 27, 2023)

I would say yes, absolutely, um, I think [school name], or our school has systems in place, that, um, even just in like weekly team meetings, um, you know, we have a facilitator, um, staff, certain staff are given the opportunity to, you know go to PD and, or all staff can, you know, take that opportunity if they want to seek it out, and then come back and share what they've learned with, with their colleagues. There's Core Council, right? So there are like different, I would say, like varying degrees in which teachers can take on leadership roles... (RC2 FGR 3, February 27, 2023)

These statements indicate that staff feel collective ownership, shared leadership, and apply this idea to taking action and engaging in leadership at the school.

Specifically in addressing the construct of empowered teachers as an EC for CTE, participants explained that being able to have the time and space to share their stories allowed for feelings of greater empowerment related to CTE as was explained in the section about CTE overall. The support of school leadership to engage in this collaborative research project also provided evidence of support for empowering teachers. In addition, participant knowledge that they will be able to apply this learning across the staff demonstrated that teachers were feeling empowered. There was no clarity on the greater presence of empowered teachers outside the context of the intervention as the quantitative post-survey data did not demonstrate a significant change in perceptions about this EC. Although the participants did not explicitly explain the overall empowerment within the school context, it was evident that they believed that further learning, and potentially even change from that learning, could be achieved. As Bandura (1982) explains, “Should change be difficult to achieve, given suitable alternatives people will desert environments that are unresponsive to their efforts and pursue their activities elsewhere” (p. 141). This means there was support for the intervention and responsiveness from school leadership for the continuation of work related to developing CTE and enhanced CI for equity systems across the entire teaching team.

Although there was not an explanation of the exact support and empowerment beyond the intervention, I have knowledge of how the school allows for teachers to

engage in decision-making, curriculum development, PD facilitation, and input on other important aspects of the school program. There was also an absence of qualitative data as statements about *not* being able to engage further in this work or quantitative data to indicate a lack of CTE across the staff or the EC of empowered teachers. No participants mentioned that their engagement with this learning and teaching across the staff would be prevented in any way. It was not expressed that next steps would be thwarted or undermined if the participants wanted to engage further with this work across the teacher team. There was instead the implied ability to continue to collaborate around CTE and CI for equity paired with the explicit naming of the intention to do so. As Holanda Ramos et al. (2014) explains about how CTE can be developed through teacher empowerment in schools, “A collaborative environment of work offers opportunity for the teachers to share their experiences about teaching,...to obtain feedback from colleagues and make a good use of resources from technical and administrative support in the teaching-learning process” (p. 186). The quantitative and qualitative data demonstrate how the participants do feel empowered with the existence of this EC. Although the quantitative data does not demonstrate that the intervention led to an increase in this EC, the qualitative data provide examples of how teachers perceive and express their more specific abilities to be empowered with support.

Embedded Reflective Practice as an EC for CTE

In connection to RQ 1 and RQ 2, which specifically address the embedded reflective practices with qualitative evidence of “success” and interpreting the data

through the lens of CTE, participants conveyed the importance of sharing this kind of data. The theme of STORYTELLING BUILDS CONNECTION, NEEDS VULNERABILITY emerged. The qualitative evidence of success shared through an embedded reflective practice became an opportunity for the sharing of stories within the intervention. The quantitative data again demonstrates the presence of the EC of embedded reflective practices, but there is no significant shift from the pre- to the post-survey. This makes sense in the context of how the intervention did not engage the full staff and the survey with quantitative data is asking about the entire staff and their beliefs and actions. However, the qualitative data provides evidence that the intervention was helpful in developing embedded reflective practices. The following statements demonstrate the basis for this theme:

For me, I think it was helpful to really listen to other people's stories and learn from them... (RC2 FGR 4, February 27, 2023)

I think, um, (utterance) realizing that (utterance) as we're sharing our stories and our successes, each individual's idea of us a, a success, um, ev, everybody recognized that people process or interpret success differently or failure differently, um, which is helpful if you're building efficacy in a team. Right, cause everybody's different, we're human beings. We're not computers that can pin point one thing or another accurately. So, having that perspective from people on, in regards to success and failure, was interesting to learn. (RC2 FGR 4, February 27, 2023)

I would say, having the opportunity to retell some stories that other people had heard. But through different lenses or different perspectives. I found to be really helpful, like just, um, knowing that everyone on the, the call kind of knew the who, what, where, when, why, of the, the memories we told, we chose to bring back up, was I think this offers a, a on ramp to go deeper it's not like well, I work at a school called [school name], and we do bleh bleh bleh, like we already have such a strong foundation, similar to what everyone else has said, that, it allowed us to be productive in our time. (RC2 FGR 1, February 27, 2023)

And it feels really validating to hear from other people who have had decades more experience than I have. But still can reflect on those moments that were really difficult and still make positive, um. I don't know, make, make positive results out of those, and continue to, to grow. (RC2 FGR 2, February 27, 2023)

And it's like, um, yeah, guided support to become more vulnerable, can become an, like intensely powerful thing...(RC2 FGR 3, February 27, 2023)

The focus on embedded reflective practices throughout the intervention allowed for an emphasis on what this construct is and how it can best be utilized. The construct of CTE helps explain how the participants are considering their own success and failure through their engagement in embedded reflective practices in the intervention. Arzonetti and Donohoo (2021) explain, “When teams of teachers engage in reflective practice, it helps to uncover beliefs and assumptions that drive actions and shift causal attributions for success and/or failure” (p. 79). This means the qualitative data may indicate that the embedded reflective practice was influential in the development of this EC. The quantitative data, however, diverges from the qualitative data and does not indicate a significant shift in participant ratings of this EC. Although the quantitative data did not demonstrate a significant increase in the existence of this EC across the staff, the qualitative data provided insights into how they were considering embedded reflective practices moving forward.

Participants were used to engaging in embedded reflective practices connected to quantitative data through school processes related to CI for equity. The construct of CTE was helpful in understanding the following statements about the participant’s current

collaborative inquiry processes with quantitative data, which align with the tenets of the EC of embedded reflective practices (Arzonetti & Donohoo, 2021). The following statements demonstrate how the engagement in embedded reflective practices with quantitative evidence through CI for equity processes is a part of the school program already:

And I do wonder if, if the shift um just looking at data from Data Studio, or just like number data and incorporating more storytelling if that would, if that would, um, have more buy-in from those staff members. I think storytelling is very empowering. (RC2 FGR 4, February 27, 2023)

...the data we look at through like Data Studio after grade checks...(RC2 FGR 3, February 27, 2023)

Um, if you have the benefit of Data Studio, and you have a [staff member name] in your life, your world is even more data rich and can be used to reflect on how students are achieving. (RC2 Interview 1, February 14, 2023)

So using data from Jump Rope, our...full-time grading system, um, we input that data every two weeks, um, for character and academic mastery in our classes. And then it is ran by our, uh, tech manager through Google Data Studio and we're able to see trends, um, in grades of, you know, across demographics... (RC2 Interview 2, February 15, 2023)

This engagement with quantitative data in this way was also influenced by RC 1 and input from the staff throughout the roll out of using Google Data Studio to more easily and frequently visualize mastery-based grading data across student demographics to support teacher and student learning. This supports how the embedded reflective practices were present as evidenced by quantitative and qualitative data, although the intervention was the first opportunity where qualitative evidence of “success” from educator stories was the focus.

CTE Interpretation Summary

The following is a summary of the synthesized analysis of the quantitative and qualitative data through the lens of the CTE construct. In considering the quantitative and qualitative data together, both the survey results and the interview and focus group themes indicated the existence of CTE on staff. As explained previously, there was a distinction made within the qualitative data that indicated the participants felt greater CTE among the participants. The quantitative data also supported this as there was no significant change from the pre- to post-survey in participant perceptions of CTE across the entire staff. Although participants provided evidence for the intervention being supportive of CTE development, they also indicated that their long-term relationships and trust in their fellow participants played a major role in their willingness to engage in the intervention and in their beliefs of CTE among their participant colleagues. In addition, engaging in this intervention together meant that the rest of their team did not get to experience this connection and growth. This was a major drawback to the intervention and study as a whole based on data collected. When participants discussed their CTE development in the focus group, they were open about how the ability to share stories of success, which mentioned adversity or temporary failure, was most effective in supporting their development of CTE. The next section will present the synthesized analysis of the quantitative and qualitative data through the lens of CI for equity.

Interpreting the Data with CI for Equity

CI for equity and its presence in the school program was evident in the post-intervention interview and focus group qualitative data. This construct was not explicitly asked about in the pre- and post-survey quantitative data, but the quantitative data around CTE and its relation to CI for equity practices is relevant and therefore a part of the synthesis of analyses here. This means there will be a greater emphasis on the qualitative evidence in this section, but it remains a synthesis as the quantitative evidence does inform this overall, combined analysis.

The Presence of CI for Equity

The existence of CI for equity practices was identified based on qualitative data from participant responses in interviews and focus groups as well as the overall quantitative survey results. The quantitative survey ratings were explicitly based on the CTE constructs, however both ECs of embedded reflective practices and empowered teachers can be aspects of CI as well. There was an overall positive rating of CTE and these ECs by participants, although there was no significant shift in these ratings from pre- to post. Qualitative data provide more specific evidence of this existence of CI for equity as well. Combined, the data affirm the presence of CI for equity at the school.

ONGOING REFLECTION TO SUPPORT CI FOR EQUITY emerged as an overall theme from the qualitative analysis. As Doctor and Parkerson (2016) re-emphasize from the Carnegie Foundation for the Advancement of Teaching, work with CI is “possibly wrong and definitely incomplete” (para 10). This is the nature of the

ongoing work to support CTE, CI, and equitable support, opportunities, and achievement across an expanded definition. Embedded reflective practices in particular benefit from revisiting evidence to consider impact and progress as well as a placement into regular, ongoing routines (Arzonetti & Donohoo, 2021; Donohoo et al., 2020). As demonstrated by the statements below, interpreted through the construct of CI, the participants provided evidence of the above theme and how CI for equity exists routinely within the school system:

...the impetus, at least in the past, has been really put on the, onto the teacher. So, instead of making that assumption of like well, these students are doing badly...it's like, "How am I as a teacher, um, not meeting the needs of those individual students?" Um, and, and we reflect on that in different ways, we use, um, continuous improvement tracking over the course of the semester, um, to reflect quarterly on what students, you know, what successes we have, um, and then what, kind of, our areas for growth are and things that we want to work to improve. (RC2 Interview 2, February 15, 2023)

I mean it, I, I particularly at our school, right? Um. The goal's set at the beginning. It's very intentional. Everybody knows clearly what it is, um. And then we present on that goal at the end. So, I think, it does give you direction, and empowerment to like, you know, in a way kind of out do yourself, eh, from year to year like, "How am I collecting data? How am I presenting the data? How am I really impacting my practice?" You know. Uh, that's why goals are helpful or needed. Without a goal, you don't have direction, and I think when you set a goal for the entire staff, and it just helps kind of steer that boat in the direction you want. (RC2 FGR 4, February 27, 2023)

I feel empowered. I feel like I have an understanding of data and continuous improvement...(RC2 FGR 3, February 27, 2023)

...I think goals and visions can be really nebulous...when they're just created at like a managerial or administrative level. But through the process of continuous improvement, we, as teachers, are able to see our direct impact towards attaining that goal, and how, how it impacts our systems and our students and our, uh, all of our stakeholders, so I think it's like the, the accountability piece that helps us, like [participant name] said, to feel ownership over those goals, and I do feel

empowered by, by that. (RC2 FGR 2, February 27, 2023)

I think I don't know, like, it's almost like not even a question at [school name]? That, like, I don't know just all of our teams and all of our systems are set up to solve problems. And, the, I feel like the, the assumption at the door, for, like any new staff member at [school name], is like we're never gonna get it right perfectly. And so it's always gonna be this process of continuing to get closer to the thing that we want to be. And I think that assumption alone, and that framing, is like when, when we noticed something in the data. It's like, instead of like, "Oh, is this something that we can solve?" It's like, "What, which of the levers am I gonna pull? Is it a Crew thing? Is it a classroom thing? Is it a grade, level thing?" Like, "Which of those levers am I gonna pull to try to improve that in some way?" So I think it's, it's just that, like continuous improvement lens on the data, um, so that we know it's like, it's this ongoing process. (RC2 FGR 2, February 27, 2023)

Participants are therefore able to discuss CI for equity and how it is applied. The construct of CI helps interpret these statements as evidence of how a practice of CI and reflection "reinforces individuals' identity as members in an improvement community that works in common ways" (Bryk, 2020, p. 166). Participants emphasized how ongoing learning was at the core of CI for equity and it was a common practice. Interpreted through the lens of CI for equity, these statements demonstrate how the participants see this work as continuous, iterative, and with an eye on moving the work forward constantly (Hinnant-Crawford, 2020). The quantitative ratings affirm the existence of CTE and the ECs of embedded reflective practices and empowered teachers as well, which are related to how CI for equity exists at this school site.

CI for Equity and Vulnerability

Qualitative data explicitly demonstrate the presence of CI for equity practices and quantitative data affirm the presence of ECs for CTE that can indirectly contribute to CI

practices. The qualitative data provide further evidence for how CI for equity takes vulnerability. However, the quantitative data does not provide further insight to affirm or deny this qualitative evidence. The synthesis of the quantitative and qualitative data strands in relation to vulnerability and CI for equity will initially be discussed here to present the synthesized analysis before being discussed more fully in the next and final chapter.

Embedded reflective practices are directly related to how CI for equity can occur. It is a mechanism for CI practices. The embedded reflective practices are formally named as an EC for CTE (Donohoo et al., 2018). However, they are also deeply connected to effective CI for equity practices. As Kushner and Rochowicz (2022) explain,

Within CI cycles is the need for many decisions to be made, and the way those decisions are made, by whom, and for what purpose will determine how much these methods can actually build teacher teams' sense of collective efficacy. (para 12)

CI can be a mechanism for achieving a more equitable school program when the staff are included in the processes of determining structures and making meaning. hooks (1994) emphasizes how she establishes in her liberatory classroom that they are “a community of learners together” to position herself as a learner willing to be equally committed to learning in this community (p. 153). CI for equity, situated in this way, is the lens through which the immediately prior statements about CI for equity routines and the following statement about vulnerability explicitly are interpreted. The above participant statements

about the presence of CI demonstrate that the structures exist to examine school-based data. The existence of CI is evident in the qualitative data from participants, specifically about CI for equity and in the quantitative data addressing the existence of ECs of embedded reflective practices and empowered teachers, as discussed above. The way CI for equity is framed at the school program, based on the above statements, seems to suggest there is a commitment to being collaborative learners together. The above statements by participants also demonstrate a commitment to how teachers see themselves in relationship, together, trying to improve as a community. Specifically, this idea is shared as participants name how their role is to consider what they can do or how they can best learn to improve. The following statement explains how CI for equity processes connect to vulnerability as well:

I think, like we were talking about like, intent a lot, in one of our meetings, and like intent to improve and like vulnerability and those things feel like, that is what's at the, the root of this like gap that (utterance) like what, what we're talking about, right, is like, um. Yeah, it's like one thing to say, you want to improve, or you have the intent to improve, but that's like a deeply, it's a deeply vulnerable thing to process data, um, that is telling you that you're not [improving], right? And so I think it's, um, somehow tapping into the vulnerability piece, I think, is key to, to like figuring out how to begin, how we can begin to shift, um, that gap that we're talking about here...the important thing, the reason I say all that is like, I think that vulnerability comes with...this embedded reflective practices experience...And it's like, um, yeah, guided support to become more vulnerable, can become an, like intensely powerful thing, I think, with uh, a team. (RC2 FGR 3, February 27, 2023)

This participant shares how deeply vulnerable it can be when an educator is faced with how they are not succeeding or even creating inequitable classroom practices. As Bryk & Schneider (2002) explain, “organizational change entails major risks for all participants”

(p. 33). Of course those inequitable practices must be addressed, but there is an acknowledgment here of how to support all staff to be able to do so effectively and vulnerably. CI for equity can work in tandem with CTE to support a team to believe they can get better and to be comfortable sharing when something is just not working. Khalifa (2018) explains how CRSL can be achieved through meaningful collaboration and the sharing of power with the staff, community, students, and families that the school serves. This is vulnerable work and the qualitative data explicitly affirms that. The participant's statement is directly connected to this idea, when interpreted through the lens of CI for equity. Hinnant-Crawford (2020) explains how "it will take methods that can handle the complexity [of a complex educational system] to understand how to dismantle that system" (p. 207). As the participant emphasizes, this does take vulnerability to face these educational systems and an individual's role within them. The qualitative data demonstrate this acknowledgment of vulnerability within the complexities of CI for equity practices.

Quantitative and Qualitative Data and Analysis Summary

In summary, the quantitative data and qualitative data have been described and analyzed. They were analyzed through the lens of the constructs of CTE and CI for equity in alignment with the research questions. The data demonstrate that there is an existence of CTE at the school. The intervention introduced specific protocols to explicitly support the development of embedded reflective practices with qualitative data as evidence of "success" from educator stories to consider in tandem with quantitative data through CI

for equity processes. The CI for equity processes were referenced in statements from participants in the focus group and interviews in relation to this intervention and how it is shining a light on this collective need for that “intent to improve” (RC2 Interview 2, February 15, 2023), (RC2 FGR 3, February 27, 2023) as a way to frame the work they are all doing together at the school program. The qualitative evidence of “success,” in the form of shared stories across a teacher team, were helpful for participants to vulnerably connect together. The element of shared leadership was named by participants to demonstrate that there are beliefs that teachers are empowered at the school and continue to be as evidenced by how participants were naming next steps and implications from this intervention to bring the entire team into the work of sharing qualitative stories as evidence along with their current, embedded reflective practices with quantitative data. Overall, although the quantitative data did not show a significant increase in CTE or the ECs of embedded reflective practices or empowered teachers, the qualitative data demonstrate the intervention influenced how participants viewed their work together, their overall CTE as a full school staff team, and their engagement in CI for equity. The quantitative data aligns with the category from the qualitative data that addresses how the entire staff team was not present for the intervention. Therefore perceptions of the entire staff did not significantly change in the quantitative data from the pre- to post-survey. Participants were naming how this intervention influenced their practices and further fueled their desire to support students, equitably and relentlessly. As Kushner and Rochowicz (2022) explain

In order to build the collective efficacy of teacher teams, school leaders and CI coaches must tend to the balance of convergence and divergence that result in teachers improving the quality of their implementation of shared practice across teams while continuing to take risks, try new approaches, and make decisions for and with the students in their classrooms. (para 12)

This means the CI for equity processes must also rely on CTE with the ECs of embedded reflective practices and empowered teachers. It is about the structure and mindset of CI for equity, as well as how CTE is present for educators to believe they can engage in change processes that will allow for equitable, holistically defined success across the community. The qualitative data demonstrates that the intervention did influence how the participants view their shared practices in CI for equity, their CTE across the team, and how their own role in collective leadership can contribute to the school program.

Chapter 4 Summary

Chapter 4 reported the quantitative and qualitative data and analysis through the lens of CTE and CI for equity of Cycle 2 of this participatory action research dissertation. The initial quantitative data and analysis were presented. Then, the initial qualitative data and analysis were provided. Finally, the synthesized analysis of qualitative and quantitative data was presented. The data was analyzed together through the underlying constructs of this study in connection to the research questions. This is in alignment with an MMAR approach, specifically with a concurrent multistage, multistrand MMAR design with a combined approach to data analysis (Creswell & Guetterman, 2019;

Ivankova, 2015; Teddlie & Tashakkori, 2009). The next chapter provides a further discussion of these findings and implications for the local and larger context.

Chapter 5

Discussion

In this chapter, the main findings aligned to the RQs and the purpose of this study will be discussed. This discussion and these implications build on the synthesized quantitative and qualitative analysis provided in Chapter 4, which began the consideration of the data as interpreted together through the lens of the underlying constructs for this study. This discussion is based on this synthesis and privileges the quantitative and qualitative combined analysis. The intersection of CI for equity and CTE development will be examined. Reflections on personal lessons, future revisions, and implications of this research will be shared. Finally, a conclusion for this research will be provided.

The purpose of this study was (a) to build embedded reflective practices with qualitative data as educator stories in alignment with existing CI for equity processes and (b) to provide PD to support teachers in using the qualitative data gathering and sharing processes with the expectation that CTE will be developed. In particular, it is likely to influence CTE when these embedded reflective systems utilizing educator-generated qualitative evidence of success are structured sustainably and coherently. Conditions currently provide for the documentation and sharing of CI progress through defined structures, but the clarity, consistency, and flow of qualitative evidence of success in

embedded reflective practices with educator stories have not been defined nor sustained locally or in the larger context of CTE and CI for equity. The research was guided by the following research questions.

RQ 1: How and to what extent does the implementation of an improved engagement in embedded reflective practices with qualitative data as evidence of “success” influence the utilization of effective CI systems within the school program?

RQ 2: How and to what extent does the implementation of improved embedded reflective practices with qualitative data as evidence of success affect CTE?

RQ 3: How does engagement in an improved CI process and embedded reflective practices for CTE development influence views of leadership in the school program?

In this chapter, I will explain the main implications of this research. Data collection and results processes were discussed fully in Chapter 4. As a reminder, quantitative data was collected from the multiple choice questions on the pre- and post-surveys. Qualitative data was collected from the open-ended questions on the pre- and post-surveys, semi-structured interviews, and a focus group. I synthesized the data in Chapter 4 through the lens of CTE and CI for equity. These theories informed the approach to the intervention, data and analysis, and how I will interpret and describe the implications. I will start this chapter with the discussion of the complementarity of the quantitative and qualitative data. Based on this data and the theoretical frameworks that

underscore this study, I then discuss the main findings aligned directly to the research questions. I share the overall limitations, before highlighting the intersection of CTE and CI for equity. There is a discussion of personal lessons learned and reflections on future revisions for this study. Finally, implications are discussed for the local context and larger body of research before the brief conclusion.

Discussion of the Complementarity of the Quantitative and Qualitative Data

Both the quantitative and qualitative data were based on and connected to the constructs of CTE and empowered teachers and embedded reflective practices as specific ECs of CTE. These were developed and based on the guiding theories of CTE and CI for equity. The synthesized analysis in the previous chapter provided a comparison of the data. This section will provide an overall discussion of this analysis.

The teacher ratings indicate a positive response for the presence of CTE and the ECs of embedded reflective practices and empowered teachers for CTE. The interview and focus group themes that were identified also demonstrate the existence of CTE on the staff as something explicitly taught and learned over time. The survey ratings, along with interview themes, demonstrate a consistent presence of CTE and the existence of embedded reflective practices and empowered teachers as ECs both before and after the intervention. The data complement each other in demonstrating the presence of CTE and these two specific ECs through both quantitative survey results and the qualitative data sources.

In connection to the perception of the presence of CTE, based on quantitative survey and qualitative interview and focus group data, there was general alignment by the participants about their perceptions of CTE's presence on staff. This was demonstrated by lower ranges and standard deviations when looking at the quantitative data as well as the statements made by participants in the qualitative data. There was not great divergence in how the participants were rating their overall staff levels of CTE. Participants also expressed how they could see connecting the work of the intervention to the rest of the staff for everyone on the team to experience the opportunity to share their evidence of "success" through qualitative data or storytelling. This means the data demonstrated that the participants thought the whole team would benefit from this work in an acknowledgment of how CTE development needs to be done collectively.

The data seem to diverge along the quantitative and qualitative lines in regards to the development of CTE across the whole staff and among the participants, respectively. The quantitative data demonstrate no significant change from the pre- to post-survey in the development of CTE and the ECs of embedded reflective practices and empowered teachers across the whole staff. The qualitative data, however, indicates that the participants are showing elements of developing their CTE in relation to the intervention. Even with the acknowledgment that the whole team was not present within the statements from participants in the qualitative data analysis, the participants expressed how they were positively influenced by the intervention in regards to their CTE, empowerment, and in their embedded reflective practices. This can be explained as the quantitative

questions were asking participants to rate their perceptions of the entire staff team and the intervention did not include all their colleagues. The qualitative data collection processes allowed for participants to reflect on their own participation, their collective engagement in the intervention, and their perceptions about CTE and CI in the context of this study. This is in alignment with how Goddard et al. (2000) explain how CTE is a multilevel phenomenon, from a methodological perspective. Therefore CTE involves collective beliefs and mindsets as well as individual perceptions. The divergence of the data is aligned to this idea in alignment with the theoretical construct of CTE. It is understandable that the qualitative responses demonstrate participants were influenced by the intervention while the quantitative results model how CTE was not developed across an entire staff when the entire staff was not present for the intervention.

Main Findings Aligned to Research Questions

In this section, I discuss the main findings in alignment with the RQs. I will share two overall findings before reviewing each RQ and addressing each of the three RQs directly. In this MMAR study, I synthesized the quantitative and qualitative data analysis and discussed the complementarity of the quantitative and qualitative data in the previous section. A key finding is that CTE and the ECs of embedded reflective practices and empowered teachers were indicated as present within the school program, according to the survey results and qualitative statements made. A second key finding is that ongoing embedded reflective practices with qualitative evidence of “success” offer an opportunity to further develop CTE in support of CI for equity efforts.

Research Question 1: Embedded Reflective Practices with Qualitative Evidence and Effective CI Systems

RQ 1: How and to what extent does the implementation of an improved engagement in embedded reflective practices with qualitative data as evidence of “success” influence the utilization of effective CI systems within the school program?

The intervention, with the agenda overview in Appendix H, had participants sharing and looking at qualitative evidence of success in the form of educator stories together. Although the current CI for equity systems at the school program were regularly providing opportunities to consider, visualize, and reflect on quantitative data through embedded reflective practices, there was not yet a systematized, frequent way for the team to examine qualitative evidence, generated by teachers in the form of educator stories. Individual educators, teams, and the whole staff were analyzing qualitative-based survey data, focus groups, content analysis in looking at student work, and other anecdotal qualitative information throughout the year, but the quantitative mastery-based grade data was the sole focus of the bimonthly progress monitoring regularly occurring in PD with the whole staff in alignment with CI for equity processes. As has been cited previously, Donohoo et al. (2018) explain how evidence of a team’s success is a primary driver of CTE. When discussing CTE development with embedded reflective practices and CI for equity methods, quantitative data as evidence is more frequently mentioned (Donohoo, 2013, 2017; Donohoo & Velasco, 2016; Goddard et al., 2015; Park et al.,

2013; Valdez et al., 2020). There is almost an implied idea that overall data is quantitative, even when student work as content analysis or student empathy interviews are mentioned. Lewis (2015) explains how practical, contextualized measurements should be used to monitor progress, however only student work or other items for content-analysis are named as examples of qualitative data. As Bryk et al. (2015) assert, “We cannot improve at scale what we cannot measure,” which connects to the desire to have units of measurement or comparable data sources. This is important and the authors are not saying qualitative data is not measurable. This does not mean there cannot be qualitative data within the measurements, but it can be easier to consider quantitative data at the forefront of what may be measured in CI in schools. Educator stories as data, in alignment with a collaboratively defined CI for equity system and specific CI cycle, can be a powerful addition to what is currently measured and considered, especially when seeking a liberatory approach to education overall. Sustainable and consistent engagement with qualitative data has not been as widely demonstrated with clear protocols for the source of the qualitative data coming from educator stories. This means the intervention was an attempt to support the creation of a new approach to CI for equity at the school which may have implications throughout all school programs that utilize CI for equity processes in service of liberatory practices to develop CTE.

The improved embedded reflective practices attempted to build on the work from RC 1 where a more consistent process with regularly disaggregated quantitative data was utilized in the context of CI for equity systems at the school. The intervention in this

dissertation for RC 2 attempted to provide a way for the team to engage with qualitative evidence of “success” in a similarly systematized way. The participants helped co-create the intervention through their input and engagement with collaborative protocols and processes of inquiry. Participants explained in their interview and focus group statements that the intervention was supportive for their development of CTE, teacher empowerment, and in improving their use of embedded reflective practices.

In regards to “how” the intervention influenced CI systems, the specific focus on qualitative data provided an opportunity for the participants to consider this data and grapple with it in the moment. It also provided an opportunity for participants to grapple with how qualitative data from teacher storytelling could be incorporated more frequently into their CI for equity processes. The intervention influenced participants by providing them the opportunity to practice examining qualitative evidence of “success” together when they were more used to engaging systematically with quantitative evidence in the regular CI for equity check-ins every two weeks. This is not to say focus group data, anecdotal evidence, input, work samples, and open-ended survey questions were not seen and analyzed as evidence before at the school site. There is just not yet an ongoing, collaboratively designed and engaged in process that supports educator stories as evidence of “success” in connection to CI for equity and the development of CTE. Even though there were many opportunities to reflect on qualitative data across the school both through formally constructed CI for equity processes and unofficially with anecdotal evidence trends from stakeholders, the regular check-ins about mastery-based grading

data (and the Google Data Studio dashboard as a whole developed in conjunction with RC 1) was representing a bias toward quantitative data. Participants expressed how this focus on qualitative data helped them discuss how they can shift the CI for equity practices at the school and engage in PD with the entire staff to consider this qualitative evidence moving forward. When considering “to what extent” the intervention influenced these CI for equity systems, the quantitative results were not significant and therefore the intervention did not influence CTE across the staff to any extent. The intervention was influential, as demonstrated by participant statements, in participant perceptions about CI for equity processes and how they can be improved specifically in connection with the incorporation of teacher shared stories as qualitative evidence.

Research Question 2: Embedded Reflective Practices with Qualitative Evidence and CTE Development

RQ 2: How and to what extent does the implementation of improved embedded reflective practices with qualitative data as evidence of success affect CTE?

While RQ 1 addressed the intervention’s potential influence on the CI for equity systems, this research question considered how the intervention may have influenced CTE itself. CTE, and its ECs of embedded reflective practices and empowered teachers, were addressed within this research study. The intervention was framed with participants as a way to potentially influence their CTE development. The intervention’s influence on CTE was discussed earlier in this chapter in the section about the complementarity of the quantitative and qualitative data. While the qualitative evidence demonstrated that the

intervention had a positive influence on participants and their CTE, the quantitative data did not demonstrate any significant shift in CTE for the participants. This is potentially connected to how the intervention itself provided opportunities for the participants to develop their collective beliefs and this was evident in their qualitative responses to interview and focus group questions. However, the quantitative-based survey questions were asking explicitly about the overall staff team and the overall perceptions of their holistic CTE. This means that although there is some evidence that CTE was increased based on participant input across the participant team, CTE overall and CTE in how it is conceptualized in this study was definitely not influenced to any extent across the participant team when they were considering their entire staff team in the quantitative-based survey results. The intervention was influential, as demonstrated by participant statements, in participant perceptions about CTE, but this was limited to within the participant group itself, and not indicative of a shift in their perceptions of CTE overall at the school program as evidenced by qualitative statements and quantitative survey results.

Research Question 3: Embedded Reflective Practices with Qualitative Evidence and Views of Leadership

RQ 3: How does engagement in an improved CI process and embedded reflective practices for CTE development influence views of leadership in the school program?

When considering views of leadership within the school program, this was connected to how CI for equity and CTE development are a part of the collaborative and shared leadership practices overall. In addition, specifically, the EC of empowered teachers is connected to the views of leadership within the scope of this study. There was no significant change in quantitative ratings on empowered teachers, although qualitative evidence demonstrates that the intervention itself was empowering. The statements made by participants emphasized their commitment to and engagement with shared and collective leadership. A theme emerged in connection to shared leadership, its presence, and its importance (THE IMPORTANCE OF SHARED LEADERSHIP AND COLLECTIVE OWNERSHIP). This is an element of the school program that is a part of how the school operates. However, the statements made about the benefits of the intervention were not necessarily connected directly to how this intervention and the engagement with qualitative evidence as educator stories influenced their perceptions of leadership. The sharing of qualitative evidence of “success” allowed for participants to connect based on the statements made by participants. This connection was made across roles at the school which can indicate a further empowerment of teachers. The intervention was influential, as another way for teachers to be empowered, within a program that already provides opportunities for shared leadership across the program.

Overall Limitations

Overall limitations of this study will be discussed in this section. Limitations to each data set were discussed in the previous chapter as well. The findings connected to

the RQs in the previous section and the subsequent limitations in this chapter should be considered with these limitations in mind.

An important limitation to this research is the small sample size. Engaging in PD with six participants, even if this was a representative group, is not the same as engaging with an entire staff or school community. This means the data may provide insights into how the full staff may have treated the intervention and considered their engagement. However, it is not guaranteed that these findings represent the staff community as a whole and how the intervention would have been considered by the whole staff team. Also, it was an intervention focused on staff that had more background knowledge and experience with CTE and its ECs. In addition, multiple participants themselves named that not having the full staff present was the least helpful part of the intervention. It is important to consider this in the implications for future research or implementation within another context as well. Although MMAR can provide insights into a specific local context which can then have implications for the overall local context or a larger system, it needs to be noted that this intervention was only with a portion of a staff, the participants knew each other well from working together over time, and the participants had more familiarity with the topic and research due to their experience in the school program for the last several years.

In addition, although this small participant group could be considered representative of the local community, it is predominantly white. The research also took place in a predominantly white school community, in a predominantly white local

context. Although the participant group was generally representative of the staff and community as a whole across gender, age, and race/ethnicity, it does not represent the diversity of the United States. I did approach this work critically and did acknowledge that there would be no perfect, single solution but rather a collaborative seeking with participants who are closest to the work (Carr & Kemmis, 2009). However, this was all as a white researcher with predominantly white participants in a predominantly white community. Although school communities can reflect this demographic breakdown, predominantly white communities do not represent the entirety of the United States school system, the demographics that exist throughout the country, or the strength that can come from more racially and ethnically diverse school communities. My whiteness, the predominantly white staff, and the predominantly white make up of the participant group are important limitations to this work.

Limiting views of student achievement and success are also present within this research. Research on CTE often considers student achievement in the context of standardized test scores (Arzonetti & Donohoo, 2021; Bandura, 1993; Goddard et al., 2004b; Eells, 2011; Hattie, 2016, 2019). This means that achievement is considered in a limited view that does not encapsulate a liberatory approach (Duncan-Andrade, 2009; Freire, 1970; Freire & Macedo, 2007; hooks, 1994, 2003, 2010) or an expanded definition of student achievement (Berger et al., 2016; EL Education, 2018). Although I explain how the EL Education school model can lend itself to liberatory practices and I provide examples of how liberatory practices were purposefully embedded within the

school program, the research about CTE and its impact on student success is not as robust yet in connection to ideas of liberation and achievement beyond numerical measures of student performance. Although some research addresses how efficacy with critical pedagogy and culturally responsive practices can support more student engaged and liberatory approaches (Labone, 2004; Siwatu, 2007, 2011; Siwatu et al., 2016, 2017; Wheatley, 2005), there is more research focusing on how CTE impacts traditional measures of student achievement. In addition, often CI efforts can be focused on numbers only and without other quantitative or qualitative input from stakeholders. This is a critique made by Safir and Dugan (2021) when they describe any school practice that focus on a “pedagogy of compliance” where lectures, hierarchies of power above students, test scores, and Freire’s (1970) banking model of education reigns” (p. 109). CI, without an understanding of bias and a focus on equity, can continue to improve a status quo that is harmful and not supportive of collectively defined progress for and with all learners.

My own positionality overall also potentially played a role in limiting this study. Although my founding leadership position and closeness to the program could be considered a helpful insight to understanding the local context, it could also negatively influence participants and results. I was the founding executive director and could influence the participants who would still rely on me for future professional references in their lives. I still have relationships with several board members, EL Education staff, and supported current school leadership during my transition. On the other hand, I am also no

longer embedded in the day to day of the work of the program after I voluntarily left the school and the area for the next chapter of my professional and personal life. This means I became a collaborator with participants who I no longer directly lead or serve.

Therefore, I also could be seen as *not* as embedded in the work and understanding of the local context at the time of the intervention after being away from the school for seven months.

This intervention was conducted over four two-hour long after school PD opportunities for specific participants. RC 1 was embedded within PD sessions that occurred during the regular work day and work hours with all staff. There was no additional lift placed on staff or their own personal time whereas this was an additional commitment for participants in this dissertation RC. The drawback of this configuration means the intervention did not necessarily demonstrate feasible or sustainable intervention methods. The school itself also has weekly two hour PD embedded in its schedule which also may not be the norm at schools. This is not to say that after school PD cannot be embedded in PD that is available during regular school hours, but it is important to note that this was with a voluntary group of staff during an after hours time frame which does not mimic the reality of school PD, how it is configured, and how it is financially supported.

Finally, although it was appropriate to focus on the adult learners in this specific RC once I had left the school program as an employee, this study could benefit from student stories and student voice. Family stories and family voices could also be

important in future rounds of research. Hinnant Crawford et al. (2023) and Safir and Dugan (2021) emphasize the importance of this student, family, and community engagement in any improvement efforts. Although this mindset and approach are utilized regularly in the school program with students, this research does not incorporate student voice. Even if this was not as feasible with my current outsider status, it is always a limitation when student voice is not involved. While I will discuss this in implications for future research moving forward, it is important to also mention it here in the limitations of this research.

The Intersection of CTE and CI

In this section, I will further connect the findings and results to the literature and theories guiding this study. I have shared the complementarity of the data, aligned the findings to the RQs, and shared the overall limitations of the study. I will now connect the two underlying constructs of the study in relation to the lessons and implications that will follow.

The two theoretical frameworks guiding my work are Collective Teacher Efficacy (CTE) and Continuous Improvement (CI). These core theories are at the foundation of this dissertation. These theories informed the interpretation of results and main findings in this participatory action research dissertation. Moolenaar et al. (2012) explain how collective efficacy is built on self-efficacy research and collective efficacy “can be conceptualized as a group-level phenomenon that links learning and functioning of groups”...“it ‘represents a group’s shared belief in its conjoint capabilities to organize and

execute the courses of action required to produce given levels of attainment’ (Bandura, 1997, pp. 477-478)” (p. 253). This means CTE can address a teaching team’s belief in their collective abilities. This belief can be developed through the sharing of evidence of success in embedded reflective practices. With CI, Bendikson et al. (2020) describe how having a narrow, defined goal is an essential element of CI cycles so there is clarity “on what is to be accomplished (the goal), what changes need to be made to achieve the goal (the strategies) and what evidence will be used to show improvement in the short term (Bryk et al., 2015)” (p. 713). There can be a connection between how CTE can be developed with CI for equity when the evidence shows a potentially positive impact.

This dissertation study examined specifically how the embedded reflective practices that are an EC for CTE (Donohoo et al., 2020) can be utilized to examine qualitative evidence from educator stories directly. Although qualitative evidence is utilized in the local context as evidence of success, educator-based qualitative stories are not systematically incorporated in embedded reflective practices in the way disaggregated quantitative data is at this time. Also, although qualitative evidence may be incorporated into CI for equity structures, there is more to learn about how these educator stories as evidence of “success” can be included most strategically and effectively overall.

CTE

CTE encompasses a team’s belief that they can effectively engage in the necessary actions to successfully support progress. As Gibson and Dembo (1984) explain about efficacy

Outcome and efficacy expectations are differentiated because individuals can believe that certain behaviors will produce certain outcomes, but if they do not believe that they can perform the necessary activities, they will not initiate the relevant behaviors, or if they do, they will not persist. (p. 570)

This means it is about being able to do the action and not just about if they believe the action will work. With a goal of supporting the development of CTE, the use of embedded reflective practices with educator-produced qualitative data as evidence of success was utilized in the intervention. Embedded reflective practices act as an EC to CTE (Donohoo et al., 2020). The consideration of CTE in general was discussed throughout the intervention with participants. These participants also had been studying CTE as a part of the school program and during RC 1. They were familiar with this construct overall as they dove deeper into the specifics of embedded reflective practices with this qualitative evidence of success.

The evidence of “success” was defined with participants, but allowed for participants to consider success in terms of “failure” as well. Participants even chose to engage in a protocol that would allow them to share stories where they did not initially succeed or even failed in ways that were not successful outside of their reflection and meaning-making of the experience. This shifted the idea of success from the description of a pure victory to one that may have resulted in productive reflection, learning, or future positive progress. Participants explained the importance of hearing colleagues describe struggles that they overcame and how successes happened over time. Goddard et

al. (2000) references Bandura (1997) when considering the importance of mastery experiences and vicarious experiences defined respectively as an individual's experiences of group success and failure and an individual's experience of successes and failures experienced by other teammates. Participants emphasized that learning from each other's experiences was powerful, influenced their current perceptions about CI for equity practices, and increased their CTE in the participant group even if the overall CTE for the program was not improved without all teammates present and supported in their own background knowledge of the subject. This is in alignment with how vicarious experiences can support the development of CTE (Arzonetti Hite & Donohoo, 2021; Bandura, 1977, 1997; Donohoo, 2017). CI can provide opportunities to experience successes through improvement cycles and CTE is enhanced through the sharing of evidence of impact. The intervention allowed for this sharing of vicarious experiences through educator stories as an embedded reflective practice in alignment with CI for equity strategies at the school.

CTE was an underlying construct in this study and has been a part of the school program's development for several years. Participants were asked to explore this concept further, through a narrow focus on the EC of the embedded reflective practice. Although RC 1 focused more on the CI for equity systems that most effectively supported the more frequent use of disaggregated quantitative data, this dissertation RC 2 allowed a team of participants to consider how best to collect, utilize, and interpret qualitative evidence of success through the sharing of their own stories together.

CI

The CI for equity approach at the local context supports teachers to engage regularly with improvement cycles. As Hannan et al. (2015) explain, CI is a structure that can support “users to learn rapidly about the function of their system by introducing and testing changes in their existing practice (Bryk et al., 2011; Bryk et al., 2015; Deming, 1986; Langley et al., 2009; Lewis, 2015; Taylor et al., 2014)” (p. 496). This means the staff have experience considering goals, data, and next steps in alignment with cycles of CI for equity within their equity-based approach to teaching and learning. CI for equity is both a mindset and a practice. CI was a foundational construct utilized in this study that has been integrated into the school program’s development for several years. The way progress is considered is through the lens of a cyclical and ongoing approach that includes stakeholder design and input. Collaboration throughout the determination of the goals and design of the processes is also essential (Rohanna, 2017). Feedback and revision are normalized. CI for equity processes, therefore, can be enhanced by staff knowledge and flexibility in using all forms of data together as a team. Specifically emphasizing embedded reflective practices with qualitative data directly from teachers shared together as evidence of success can support the school’s ability to understand an issue or accomplishment more clearly. It can also support the incorporation of essential input from stakeholders who are most in touch with the realities of the school program overall. It is essential that the most local data is considered in order to ensure often purposefully excluded voices are purposefully included and highlighted for their

knowledge, expertise, and understanding (Safir & Dugan, 2021). In this study, the focus was on supporting teachers to engage in embedded reflective practices with qualitative evidence of success directly produced by teachers to build CTE within CI for equity systems. Moving forward, the approach and expertise built can be supportive of further engaging across the community in the gathering of qualitative evidence more effectively and consistently with stakeholders.

Discussion of Personal Lessons Learned

In this section, I will share personal lessons learned from this dissertation research. The previous sections shared the discussion of the complementarity of the data, the main findings aligned to the RQs, the limitations, and the intersections of the underlying theoretical frameworks of CTE and CI for equity. These personal lessons learned are shared in this section before reflections on future revisions, local implications, and larger implications are discussed.

Defining Liberatory Practices

This collaborative work reminded me of the importance of defining and clarifying what we mean by liberatory practices within and across a school program or system. When discussing our intentions for “progress” in schools, engaging in this dissertation process and the specific intervention reminded me of how essential it is to talk about liberatory practices in the concrete. Although an overall liberatory approach to teaching and learning (Duncan-Andrade, 2009; Freire, 1970; Freire & Macedo, 2007; hooks, 1994, 2003, 2010), culturally sustaining pedagogy (Hammond, 2015), or CRSL (Khalifa, 2018)

can act as a framework, the specifics of what this looks like, sounds like, and feels like can be delineated to demonstrate how this happens or does not happen within a specific context. Although the focus of the dissertation was not to define each liberatory practice and concept within the school, it was the essential foundation for why I believed this team should be supported to develop CTE or why we could be trusted to define improvement in the context of CI for equity. I knew schools and school systems could develop teacher beliefs in their abilities to succeed and they have systems in place to improve. I knew that success, achievement, and improvement could be defined outside of a liberatory context and therefore CI there could be building a stronger status quo. This improvement of the status quo can still occur in any school program striving for a liberatory approach, but that specific emphasis on equity can remain at the core of how the CI system is judged overall. I learned in this process that defining the specifics of the liberatory work by providing explicit examples was essential when describing and considering improvement, an expanded view of student achievement, and collaborative inquiry with stakeholders.

Learning Cycles

In addition to defining liberatory practices more clearly, I learned from participants about the importance of cycles and spiraling back around to learning together. Although it is clear that all learners could benefit from revisiting certain concepts or structures, the participants shared about how a concept such as CTE and what it can mean for supporting a staff needs to be given attention continually. The difficulty of

juggling all the many priorities is real, as is staff turnover and the larger context of public education in America. However, the school can choose to shine a light repeatedly and purposefully on concepts that can act as a foundation for the work they are doing. It can be helpful to consider the spiraling of knowledge building across years when developing the PD scope and sequence. In school start-up, it can be difficult to anticipate the most essential needs of the school and it is important to be responsive to internal realities based on stakeholder input. However, there can be foundational, liberatory-based mindsets and practices to be interspersed within the work continuously and it can be incorporated into plans for adult learning more carefully. This is about my own learning in relation to how I considered the long term PD scope and sequence to support adult learning at the local context. This is not about making a comment on current school staff or school leadership choices in PD. Although it was normal to revisit topics in PD and a co-created staff library provided anchor texts, the foundational currents can be more thoughtfully embedded with a consideration of cycles, onboarding, and foundational texts.

Reflections on Future Revisions

In this section, I will build on the overall personal lessons learned from the previous sections and discuss potential revisions for this specific research in future iterations. This is related to implications for the local context as it may inform next steps for the specific program. The final section will include the implications for the local and larger contexts before the conclusion.

In future RCs, I would consider how my research questions were directly or indirectly connected to both the quantitative and qualitative data that I would be collecting. I think this would have supported the collection of more quantitative data about both CTE and CI for equity. Therefore, I would ask more specific questions in the survey about the intervention itself. I was ensuring there were calibrated questions and valid concepts being addressed in the pre- and post-surveys. However, I found myself wanting more input from participants about the intervention itself, specifically in considering “to what extent” the intervention influenced staff perceptions around CI for equity. I did have open-ended survey questions, but none that addressed the intervention specifically. I collected informal feedback in the form of exit tickets and verbal input during the sessions, but I would have liked to have more formal data about the intervention itself from the survey. Similarly, in the semi-structured interviews and focus group, I would ask multiple, more specific questions about the intervention to hear in greater detail how the participants viewed the intervention rather than just the overall constructs resulting from the intervention.

In future PD interventions or sessions, I would potentially record the intervention PD sessions (with permission, of course) to ensure participants could still engage and stay involved in the sequence even if they could not attend a particular day an intervention session was offered. I could also have recorded a video of myself summarizing the session as that may be more feasible for participants to stay connected and current with what was occurring in the intervention. Although I had shared agendas and notes that

were available and provided to all participants throughout the intervention, some visual or auditory information from each session could have enhanced the support for those who needed to miss sessions. This may help engage all participants consistently throughout the PD intervention. It can also be a way for participants to revisit the collaborative learning even if they were present for the session itself. This could mimic the realities of life and school, that people may need to move in and out of the whole group work.

When considering the work of the group, I would have asked participants to engage in some pre-reflection on their equity-based or liberatory practices together before the beginning of the intervention. Although this can be a part of how the school engages in reflective practices, considers equitable classroom conditions, and supports student learning, it could have been more explicit and allowed for deeper discussions around “evidence of success” when we were considering the embedded reflective practices and empowered teachers as ECs to CTE. Also, for CTE overall, it can help us ground ourselves in the idea that we are collectively developing our belief in our abilities together for the purposes of engaging in liberatory approaches to teaching and learning. There was a shared and specifically stated assumption that we are defining this work in the context of the school program and the EL Education learning model, which helps indicate a more expanded definition of student achievement. There was also a shared connection to CI for equity work that is already taking place within the school program. CTE was framed and reminded in the initial session with all this in mind. Liberatory practices at the school program, especially those described in this dissertation, can be

commonly engaged with in a way that makes them ordinary. Although the school was purposefully designed to align with the EL Education learning model in this way, it is helpful to acknowledge that these equity-based practices are intentional, not always ordinary in public schools, and act as the foundation for why this staff could be supported to improve or develop their beliefs and collective abilities to improve. However, there was less explicit discussion of the specific liberatory practices at play within the school program and how the qualitative evidence of success shared in the storytelling protocols and discussions could be connected to these concepts, ideas, and examples as well.

Not having the entire staff team present for an intervention addressing CTE was a miss. This was a potential issue in having the intervention outside of regularly embedded PD where the entire staff is present already, but it was necessary with this shift in my role at the school and home location. This connects to how the sessions could then have happened over a longer time frame with more opportunities to refine the storytelling protocols themselves and tighten the suggested qualitative analysis processes with the whole team.

Finally, there is a missed opportunity in any research about how a school can improve when student voice is not explicitly incorporated. Once I left the school community as an employee, although I was still a part of the overall community from my previous role and time spent there, it was more complicated to bring student voice into this work. In addition, there was a focus on CTE which did not consider student views of CTE or student collective efficacy itself. If collective efficacy overall is about the entire

ecosystem believing in their abilities to improve, then it could be considered in the broader lens of overall collective efficacy across the entire ecosystem and not just in the context of the adult or educator team. With CI for equity as well, student voice and input may be currently incorporated within how the school engages in these processes. However, in considering this qualitative evidence in embedded reflective practices, student voice could be more formally studied in future iterations of this research. Students have opportunities to share information in surveys (scaled and open-ended questions), in focus groups, and through more formal and informal student leadership structures. They are asked to help in determining ideas and next steps as well as engaging in the next steps themselves in hiring processes, teacher growth, and school-wide policies. This research needs to have their voice firmly embedded for it to ultimately provide a full picture of how the school can improve equitably and relentlessly.

Reflections and Implications for the Local and Larger Contexts

With the implications, first I will discuss those that may be more specific to the local school site. These may be influential for the school program while also informing other researchers, practitioners, or practitioner researchers. Next, I discuss the implications for the broader research. When discussing the implications for broader research, I am considering action research, similar to the approach to this dissertation. This means there may still be connections to practice discussed within the broader implications section. I situate broader research implications still within a potential application, which is in alignment with how Carr and Kemmis (2009) situate critical

educational action research. This work is meant to contribute to the greater knowledge in relevant fields of study and produce local knowledge (Herr & Anderson, 2005) which I see as intertwined endeavors. After this section, there is a final conclusion at the end of this chapter.

Implications for the Local Context

In this section I will explain the implications for the local school site and community. This is based on the research in this dissertation as well as my own insider-outsider knowledge of the school. This section will focus on how this research may provide insights for the school program and influence their work moving forward. Participants were consulted in the process of determining these implications. Ideally, this approach to MMAR can support a critical examining of the school itself to consider how this research may support collaborative learning from this action research (Carr & Kemmis, 2009; Herr & Anderson, 2005). I will discuss the presence of CTE, maximizing PD time, collaborative protocols to share evidence of success with vicarious experiences to build CTE, and how existing conferences may be an opportunity to develop collective efficacy school-wide. These local implications are meant to be helpful and supportive to the school and all learners within it while also examining how this research may influence practice.

The existence of CTE. An important implication from this data is the existence of CTE on this school's staff according to participants. It could be celebrated and encouraged with the staff at all levels of the organization. Although there are elements of

the EL Education learning model that can support CTE, it should be noted that the presence of CTE can be specifically fostered through the purposeful and intentional engagement with CTE and its ECs. Learning activities with the staff community can have a positive impact on the development of CTE. School staff, those in formal and informal leadership positions, and the Board of Directors itself can discuss and raise up that this is an important belief on the teaching staff that can support equitable conditions, opportunities, and outcomes for and with students. All of this is, again, in the context of the EL Education learning model and how it is being implemented specifically with equity-based practices within this school program. Shared leadership was supported on purpose and continues to be an essential way of operating for the school. Research demonstrates the significance of CTE and how it can benefit student achievement (Goddard et al., 2000, 2017; Eells, 2011; Tschannen-Moran & Barr, 2004) and school culture (Caprera et al., 2003; Hoy et al., 2002; Klassen, 2010; Lim & Eo, 2014; Tiplic et al., 2015; Tschannen-Moran & Barr, 2004). There is good reason to invest in CTE development. Efforts to sustain CTE could continue to be considered across the school program.

In order for CTE to be sustained within the school program, intentional PD can incorporate building background knowledge, differentiated engagement with CTE and its ECs, and embedded reflective practices that purposefully act to build CTE. All ECs for CTE, empowering teachers, embedding reflective practices, cohesive teacher knowledge, goal consensus, and supportive leadership, can be considered overall and separately.

Specifically focusing on certain ECs can lead to the development of these within the school program. This comes from participant recommendations to circle back to this concept as a reminder for all team members and to consider how everyone can learn about these concepts together over time. Elements of CTE and learning about this construct already exist within PD at the school and are embedded in conjunction with CI for equity processes. There may be further consideration of how to cycle the learning of this concept over time for all team members and as new members of the team join.

PD Time Strategically Maximized. A key takeaway is also about time. A continued acknowledgment of the preciousness of how PD time is spent and considered at the school, for and with the people it serves and employs, can be helpful. CI for equity, especially with a desire to contribute to CTE, takes purposeful, collaborative time (Rohanna, 2017). Although quantitative data visualization tools can be free, such as Google Data Studio, and qualitative protocols can exist or be created, it takes time to engage with tools and structures. The participants provided this feedback and emphasized the importance of utilizing staff time effectively when determining PD prep and agendas. The integration of spreadsheets from various sources to connect mastery-based grades with student demographics takes expertise from the dedicated data-based staff at the school. Similarly, preparation of and engagement with qualitative data takes an investment of time and experience with this work. It is not to say that qualitative data overall is not provided the proper time for preparation and examination currently, but it is to say that this kind of framing, collecting, and sharing of qualitative evidence in the form

of educator stories will take time, especially if it is done all together as a staff. It is neither a call to action nor inaction, just a noticing to echo from the participants and a reminder to myself as a former school leader who did not always allow for the proper time in the PD sequences planned and how this learning would be revisited in future cycles.

The school already invests deeply in collaborative staff time by having PD every Friday and 10 full days of additional PD throughout the school year. This is not necessarily the norm at all schools or in all school systems and should be recognized as important. PD in and of itself does not guarantee development, but the school does endeavor to engage in collaborative, experiential, and engaging PD together. This approach and the time for it has been preserved and supported historically. This aligns with existing research about the effectiveness of this kind of collaborative, ongoing, and strategic PD (Bryk, 2020; Bryk et al., 2015; Darling-Hammond et al., 2009; Durksen et al., 2017; Guskey, 2002; Hord, 1997; Loughland & Ryan, 2022; Perez et al., 2007). In addition, Moosa's (2021) CTE literature review identified the consistent, direct, and positive relationship between quality PD and CTE development. Although it is a clear expectation that PD happens during these times within this program, how the time is then spent can benefit from a revisiting of PD norms, strategic focus, and the value of this collaborative space. In their recent case study about the antecedents of CTE in PD, Loughland and Ryan (2022) explain how "the social and relational nature of teaching cannot be underestimated in achieving highly effective professional learning

environments” and “mastery of the discipline and the pedagogic craft is enhanced by the constructs of collaboration, trust, respect and dialogic approaches to learning and leading” (p. 351). This takes time to develop. This dissertation research may help support the future use of the sharing of qualitative evidence of “success” in the form of educator stories across the staff team to develop CTE, in alignment with research on PD and CTE. It is difficult to find the balance between scheduling time for implementation and transformation to consider what an accountable team may need to envision a necessary shift and enact it (Platt et al., 2008). The school staff can reflect on how to preserve collaborative PD time to enhance team learning and build CTE. Time constraints are real, but worthwhile PD can feel supportive and worthwhile (Park & So, 2014). This is especially important as participant data demonstrated that CTE really needs the whole “collective” present. With CTE having benefits for student achievement and school culture, optimizing this PD time for transformational work can be done through staff’s essential input with an eye on how this collaborative space may further enhance the resource that is CTE.

Collaborative Protocols with Qualitative Data as Evidence of Success and Vicarious Experiences. Additionally, a local implication is how collaborative protocols can support the staff’s abilities to engage with and understand qualitative data in alignment with CI for equity efforts at the program. In the initial RC 1, it became clearer how supportive tools can enhance teachers’ abilities to engage with and understand disaggregated quantitative data in alignment with CI efforts. This is important in

considering how teachers are given data and how their time should be spent when interacting with data. As research demonstrates, CTE and CI for equity can more often consider achievement data as test score-based (Arzonetti & Donohoo, 2021; Bandura, 1993; Goddard et al., 2004b; Eells, 2011; Hattie, 2016, 2019) and quantitative data is more often incorporated and shared in CI efforts (Hinnant-Crawford, 2020; Peurach et al., 2022; Safir & Dugan, 2021). The school also has systems in place for examining this quantitative data more frequently with the entire staff present. Implications for this research with qualitative evidence of “success” in the form of teacher storytelling can provide opportunities in PD to collectively share this important qualitative evidence together.

Although qualitative evidence is collected in various forms and shared with groups taking on their specific analysis or in summaries across the staff, this qualitative data sharing together could become more embedded in CI for equity strategies and for CTE development across the staff. A shift could involve sharing qualitative evidence of success directly and among colleagues together, when all are present. This means any data collected separately, from surveys, focus groups, etc. or by specific teams, could be shared directly with the whole team by the team to support CTE development. As participants explained and data demonstrated, this sharing of qualitative evidence of success was helpful for their own CTE development, but this did not translate to the whole staff team because they were all not present. Often the whole team gets the gist of results and this does not necessarily allow the process of understanding these vicarious

and mastery experiences together that can build CTE. Successes can be shared when everyone is present and making time for these collaborative inquiry processes is important. Participants considered how this qualitative evidence could be examined and what this could mean for their ongoing embedded reflective practices. Although all staff ultimately engage with qualitative data at the school, some teams may be more used to looking for trends or even coding this data effectively. The participants were expressing how the intervention connected them to qualitative data analysis specifically. As this participant explains:

...grappling with qualitative data is really hard (utterance). It's really, really hard, um. And I, I deeply, I have deep respect for that work, um. And, I know, that I don't know, It's not for everyone, I guess, like that, that process of like grappling? But I think one thing that helped in that process was, um, like your words of like there's, it's about the grapple, and that, that helped me feel like oh, it's okay, like we're not, it's not, so much about the end result, it's like as we're doing this. We're deeply, deeply reflecting on and analyzing these stories, um, and I think that's really hard to, um, really hard to, get at and really hard to accept, um. But coming out of that like I felt good, even though, like, I wasn't totally happy with like oh, the, you know, the themes that we came up with like, we were able to tell a story with them, like if asked like do those perfectly capture all of the stories and like are these really the themes of those and like, I don't know about that, but I know that we spent an hour really deeply considering those things, and came out like the product was useful, even if it didn't, um, even though it may not have like perfectly, accurately captured all those stories that product was useful and, um, the story of those stories is also useful. Um, so I, I appreciated that opportunity, and it was really hard (utterance). (RC2 Interview 2, February 15, 2023)

There is an opportunity for staff to develop these qualitative analysis skills together while also benefiting from engaging with vicarious experiences and evidence.

The qualitative evidence of “success” from educator-based stories was not yet the norm in how data was considered when engaging in embedded reflective practices in

alignment with school-wide CI for equity processes. The intervention provided a new way of engaging with evidence of “success” which was both providing team members’ evidence of impact as well as building connection among the participants. The primary lever for building CTE is evidence of impact (Donohoo et al., 2018). This means although evidence is seen as an essential element of CTE development, it is more regularly considered quantitatively. In addition, vicarious experiences are important in contributing to the development of CTE (Bandura, 1977, 1997; Donohoo, 2017). This means the intervention across the entire staff could offer an opportunity to share evidence of impact through vicarious experiences. This can counteract the school’s current privileging of quantitative data as evidence, with evidence being a driver of CTE, and a lack of qualitative evidence being shared collectively, directly to develop these vicarious experiences. Donohoo et al. (2018) further explain how

Team members’ confidence in each other’s abilities and their belief in the impact of the team’s work are key elements that set successful school teams apart.

Publicly seeking evidence of positive effects on student learning does not happen serendipitously or by accident and neither does a sense of psychological safety. (p. 43-44)

The looking at qualitative data in the form of educator stories provides an opportunity to continue to build psychological safety as well as connection, trust, and engagement through the process of sharing this qualitative evidence together. The antecedents to developing CTE involve this trust and effective PD experiences can help build toward

this (Loughland & Ryan, 2022). The intervention across the staff may support the development of CTE and its ECs for the school site.

Conferences as an Opportunity for CTE Development. Finally, a key take away for the specific school site is to consider how Teacher Led Conferences (TLCs) could be considered for qualitative evidence of success to build CTE. TLCs are a biannual process within the teacher support and accountability procedures where the teachers at this school present their goals, evidence, and progress to their peers. These are presentations that are folded into the formal teacher evaluation structures within the school program. They have been opportunities to share success, data, and consider where more support is needed across the school program. The formal school leader also engages in an annual Principal Led Conference (PLC). TLCs are modeled after Student Led Conferences (SLCs) which allow students to present on their own progress and evidence of success to their Crew advisor teacher, family, and other supports in their life (EL Education, 2018). This means at this school there are already formalized processes where semi-structured stories are told every semester by both students and teachers alike. These could be an opportunity to mine for qualitative evidence of success in connection to CTE development. This could be an opportunity to practice grappling more deeply with qualitative data together as a whole staff. This also lends itself to further reflection on and connection to explicitly building collective efficacy among students across the school. This collective belief in a group's ability could be supportive for and with students as well.

Implications for Broader Research

In this section, I will explain the potential implications for this research within the broader field of study. I will discuss CTE across a school site, CTE scales, CTE connected to an expanded definition of student achievement, shared leadership, qualitative evidence within embedded reflective practices, vulnerability, and student voice. These implications for research may still engage with implications for practice as this is related to educational action research in general (Herr & Anderson, 2005) and how I view educational action research at the confluence of research and practice.

Whole School CTE. This study contributes to the research on, and practitioner researcher engagement with, CTE and CI for equity. CTE has been established as a school-wide approach to supporting a staff to believe in their abilities to succeed (Donohoo, 2017; Donohoo et al., 2018, 2020; Goddard et al., 2000, 2004a; Hattie, 2019; Holanda Ramos, 2014). This dissertation provides insight into an entire school program, from an insider-outsider perspective, for a school that has explicitly engaged in the development of CTE with CI for equity through a liberatory approach to teaching and learning. This is an opportunity to consider how liberation in practice can be buoyed by CTE across a school program. In addition, the national network of EL Education school programs could consider how the whole school model approach may be leveraged to provide opportunities for ECs for CTE.

CTE Scales. This research study offers an example of practitioners using and analyzing Donohoo et al.'s (2020) EC-CTES and Goddard et al.'s (2000) CTE Scale.

Although this research study only addressed embedded reflective practices and empowered teachers as ECs with the EC-CTES, this demonstrates that schools can parse out the ECs to consider measuring pieces of the school or school systems strategically. Schools may be able to examine existing levels of CTE and consider interventions for each EC as needed. Specifically for embedded reflective practices, this research study provides an example of how to engage with qualitative data in the form of educator stories as evidence of success with practitioners and how these stories may act as vicarious experiences. Although it takes purposeful action to build CTE overall on a school staff, there are opportunities to consider where CTE already exists, where there are ECs to leverage, and how to intervene strategically for a school community.

Expanded Ideas of Student Achievement in a Liberatory Context with CI for Equity and CTE Development. This study attempted to look at CI for equity and CTE in the context of an equity-based learning space where student “achievement” was defined more holistically. The connection between CTE and student achievement could benefit from further research that also considers how achievement is defined in a liberatory sense. As was mentioned in the overall limitation section, CTE and CI for equity can more often consider achievement data as test score-based (Arzonetti & Donohoo, 2021; Bandura, 1993; Goddard et al., 2004b; Eells, 2011; Hattie, 2016, 2019). More research involving CTE and its impact could be designed that continues to view student achievement data beyond test scores. As previously explained, an expanded definition of student achievement in EL Education incorporates the mastery of

knowledge and skills (which does include standardized test scores, but not solely focus on them), character development, and high quality student work that allows for complexity, authenticity, and craftsmanship (Berger et al., 2016; EL Education, 2018). Freire (1970) explains how a liberatory educational approach utilizes the posing of relevant problems, in relationship with local community partners, to help students consider solutions, engagement, and choice in how they will define progress together. Therefore, further research is needed to connect CTE to achievement beyond numerical standardized test score data more frequently and across contexts. Although CI for equity can connect to a broader view of more inclusive data sources, CI itself does not guarantee this use of other achievement data or an equitable approach to the work (Hinnant-Crawford, 2020; Peurach et al., 2022; Safir & Dugan, 2021). Zumpe and Schneider (2023) recently describe a more holistic dashboard for schools to use in connection to their CI efforts. However, this dashboard still focuses on quantitative data. This can mean research could benefit from further focus on connecting CTE and CI to a more holistic view of student achievement with equity at the center.

As a way to center equity, this further research could also examine how CTE and ECs directly impact how students experience equitable classroom conditions. For example, the University of Chicago's Urban Education Institute, whose research undergirds the UChicago IMPACT programs and measurement devices (Farrington et al., 2012; Nagaoka et al., 2014), had partnered with the school program in the past. Current measurements considering equitable classroom conditions are based on the measurement

tools and research from this organization (Nagaoka et al., 2014). This whole-child approach, which emphasizes positive, strong relationships with students, families, and the community, can demonstrate how academic, social, and emotional learning can all be intertwined (Clark et al., 2020; Immordino-Yang et al., 2018; Nagaoka et al., 2014). CTE could then be considered as supportive or not to these aspects of student development. School programs can consider links between CTE and student self-reported equitable classroom conditions. Overall, research could also utilize this kind of data directly from students to determine links between CTE and equitable student experiences. Therefore, further research could investigate the links between CTE and student experience as well as a more expanded definition of student achievement.

Further research, especially in how CTE and CI for equity can be developed and measured, can be supportive of considering what is being improved and who is being supported to believe in their abilities. Hinnant-Crawford et al. (2023) discuss the importance of considering student voice, individualized input, and valid measurements of equitable and liberatory-based classroom practices and experiences. Additionally, Lin et al. (2023) discuss the importance of liberatory measurements for social and emotional learning (SEL) that humanize and support liberatory engagement with learners. Clark et al. (2020) outline how EL Education is attempting to measure character throughout this school network. Particularly when CI for equity systems are in place with an expanded consideration of student achievement, it is important to consider equitable measurements and feedback with and for SEL within school systems. Although EL Education (n.d.a)

provides a research brief about the impact of the learning model on student character development, the research is still in progress and ongoing. It is also essential to embrace the complexities of building and teaching community (hooks, 2003), developing accountable communities (Platt et al., 2008), and how this can support healing-based practices. Incorporating considerations of healing and the strengths of all community members can be considered, as explained by Ginwright (2018), in relation to future research with CTE and CI for equity. As this research was about supporting liberatory spaces in education and engaging in CI for equity in this context, future research could also consider internal responsibility around healing and repair, as described by Kaba and Hassan (2019), when CTE or CI leads to harm. The real work of collective community engagement as a school program is messy and complicated. It can also be worthwhile. There can be more considerations of liberation that can exist within the public school system in America. Research is needed that supports all the complexities of how data and evidence of “success” is considered in liberatory spaces engaging in CI for equity and what this can mean for the development of CTE as an instrument for liberation or for preserving a harmful status quo.

Shared Leadership and Collaboration. Leadership, formal and informal, within a school program, can support these ECs for CTE and the explicit development of CTE itself through deliberate structures, practices, and expressions. Leadership can support opportunities for educators to be true collaborators who connect effectively and regularly. Educators can also be asked to be collaborators in the choices around CI, not just utilized

as implementers of a predetermined path (Rohanna, 2017). Goddard et al. (2015) emphasize how the instructional leadership of formal school leaders can be a significant positive predictor of CTE. If school leadership can continue to provide experiences, through PD and other structures within a school system, to support CTE development, this can potentially contribute to the consistent development of CTE among staff members. This research lends evidence for how supportive collaboration directed toward developing CTE can have a positive effect. Abedini et al. (2018) describe how the educational environment can encourage learning and ongoing CTE development when leadership is supportive. This can justify future interventions or PD where CTE is explicitly taught, valued, and encouraged. More practitioner-led and designed PD, where they consider the best ways to develop CTE and their own team, can lead to further CTE progress.

Educational researchers and leadership in schools can also consider how to develop collaborative, shared practices that truly empower teachers and all stakeholders to see themselves as a part of who decides and how decisions are made. This is connected to the concept of “accountable communities” where adults are holding themselves and each other responsible for the work of supporting all learners to thrive in the school (Platt et al., 2008, p. 35). This is not to dismiss the influence of overall systems that influence public schools and the educators in them, but it is to emphasize how school communities can create effective shared leadership and collaboration norms. In relation to

collaborative inquiry and specifically connected to embedded reflective practices, Donohoo and Velasco (2016) explain,

If we are to realize a transformation in learning, leading, and teaching, the following shifts need to occur in everyday conversations: We need to shift from

- What has been taught to what has been learned
- Attributing results to factors outside one's control to those within it
- Fixed mindset language to growth mindset language
- Low expectations to high expectations
- Opposition to change to advocating for change
- Valuing isolation to valuing collaboration
- Certainty to Inquiry. (p.71)

This means that the embedded reflective practices were framed within the commitment to these ideas about how CTE is developed collaboratively. This quote was also a reading that we used as a framing for one of our PD sessions together that resonated with participants. I believe this connects to how CI can be considered “possibly wrong and definitely incomplete” (Doctor & Parkerson, 2016, para 10). There is a tension regarding how CI can be used for inequity when there is CTE for preserving a harmful status quo (Hinnant-Crawford, 2020; Peurach et al., 2022). Although CI for equity and shared leadership practices can be generally discussed or broadly framed, there is a continued need for “how” student and educator agency and voice are researched and developed by

practitioners (Bill and Melinda Gates Foundation, 2023). Leadership needs to be aware of this tension and research needs to acknowledge this whenever discussing improvement or enhancement of existing systems. The research can provide more explicit support for the “how” of this work when shared leadership within CI for equity practices and CTE development are studied.

Qualitative Data in Embedded Reflective Practices. With a specific emphasis on embedded reflective practices, this research study considered how best to look at qualitative data from educator stories as evidence of success. There is not yet an abundance of research or practical application for how best to engage with teams to analyze qualitative data effectively from educator stories told together as a sharing of evidence of success or vicarious experiences in liberatory school spaces. There is research and practical application where quantitative data as evidence is examined in educational settings (Donohoo, 2013, 2017; Donohoo & Velasco, 2016; Goddard et al., 2015; Park et al., 2013; Valdez et al., 2020; Zumpe & Schneider, 2023). There are protocols that support looking at quantitative data that the school program has used and are available to school programs across the country. In the previous RC 1, the school tightened its practices and engaged with a new tool to support quantitative, disaggregated data tracking, analysis, and progress considerations within the context of CI for equity. Within RC 2, there is an example of how qualitative evidence of success, in the form of stories told by colleagues, can serve to contribute to CI for equity and CTE. This allows for embedded reflective practices to be considered more broadly.

This means when schools are engaging with numerical data, which can often be traditional grades or test scores, another source of data in the form of qualitative stories can also be proposed or included. These stories can be shared together and not separately on surveys or by individuals or small groups in interviews. This study offers an additional structure and data source. It provides a practical example of how embedded reflective practices with qualitative data can look logistically with a group, not just as separate, individual data points collected outside of the group itself. Story Circles (Fletcher et al., 2021; Oregon State University, 2020) are a practice that can allow for small group story sharing and there are examples of these happening to empower student leadership and connection (Hill, 2017; Martinez, 2019; Voices of our Story; 2021). The existing Making Meaning Protocol: The Storytelling Version (School Reform Initiative, n.d.c) and the What Comes Up protocol (McDonald et al., 2013, pp. 49-50) were modified for use in the intervention. There are small group storytelling examples and existing protocols. However, there may not be a great deal of educationally-based tools to support educator storytelling specifically for sharing evidence of success with vicarious experiences to develop CTE. In addition, although there may be practice in looking at open-ended survey questions or interview results or engaging in content analysis, looking at educator stories as qualitative data and embedding this into the approach to CI for equity is not as common. Even recent and holistic dashboarding practices with CI are based on mainly, if not totally, quantitative data (Zumpe & Schneider, 2023). It moves the idea into practice with details that would allow for researchers to attempt this practice with larger groups

across entire school programs or systems. It may also allow a researcher-practitioner or team to attempt this process as well. This is an implication for researchers to measure the impact of this practice more holistically across CTE and all ECs. It also has an implication for practice both at the specific school program where this action research occurred and for other researcher-practitioners at schools and school systems who are working to build CTE or engaging in CI for equity work.

Vulnerability. Connected to the personal lesson addressing the explicit defining of exactly what the equity-based practices at the school look like, sound like, and feel like, there is an implication of this work connected to how these liberatory practices manifest in the ask for explicit educator vulnerability. To ask for only individual responses, or put the onus solely on individual vulnerability, in addressing systemic forms of oppression in education (or society as a whole), will not suffice. However, there is potential in being vulnerable together to reimagine the current educational systems. As a. brown (2021) explains:

The moment we begin to question oppressive historical imagination, supremacy imagination; the moment we begin to dream of justice, of liberation, of right relationship, we become imagination warriors. Organizers. Our mission is to co-dream visions more compelling than oppression, and more honest than supremacy. And then move from imagination all the way to new practice. (para 6)

It is vulnerable to imagine new worlds and to admit your own individual complicity in the current state of your community or classroom. I assert that a collective belief in the

ability to co-dream a school worthy of all our students can be positively influenced through educator storytelling in embedded reflective practices as a part of CTE development overall. Further research connecting this vulnerability explicitly to the development of CTE and engagement with CI for equity processes could be helpful. Loughland and Ryan (2022) begin to explore the antecedents to CTE in PD and discuss implications for further research on the social environment for teachers. Although Bryk and Schneider (2002) discuss the importance of trust in school improvement processes and the ECs of CTE (Donohoo et al., 2020) indicate that teacher empowerment and collaboration can be important, there is not a great deal of research investigating the intersection of CTE and CI for equity around the vulnerability that may be important in enacting these structures or building this belief system. This can be a strategy that is utilized to center providing educators opportunities to share their stories together, to learn from each other through vicarious experiences, to feel less alone, and to seek a collaborative way forward. Research that addresses this area can contribute to how schools can build effective, equitable systems and beliefs around these concepts. The structures shared in this intervention can be a valid approach to action research. The structure could influence PD development, a way to engage with qualitative data regularly and vulnerably, and not an additional activity *outside of* the regular work of CI in the research and in practice. This approach may support the development of CTE, its ECs, and the antecedents that make this possible.

Researchers can discuss equity, its meaning, and its application. Staff can support

the ideas of equity, liberatory practices, an expanded definition of “achievement,” and shared leadership. Educators can demonstrate their commitment to these beliefs by naming them and/or choosing to work in a place that purports to support these ideals. However, to authentically enact this work or to embody the details of “how” this work happens, vulnerability plays a role. Cook (2021) examines pre-service teacher engagement in activism and the vulnerability and visibility that can accompany this work. Connecting this idea of applying CI for equity, as a form of engagement in meaning making and advocating for a collectively-defined progress, further research could investigate what this means for educators who are internally engaging in this work and how they are utilizing their own stories or the stories of colleagues to build CTE safely and across difference. Participants in this study named how this ask for vulnerability impacts them and their colleagues. One specific response, already fully shared above, lays out the dissonance an educator can feel when these beliefs are challenged:

Yeah, it's like one thing to say, you want to improve, or you have the intent to improve, but that's like a deeply, it's a deeply vulnerable thing to process data, um, that is telling you that you're not [improving], right? (RC2 FGR 3, February 27, 2023)

This is an authentic description of what an educator may be faced with when their data, their numbers, their stories, are not aligning with creating an equitable classroom or realizing a liberatory vision. This is not to negate the systems at play. It is meant to recognize that educators can play a role in how they, their students, their families, and their colleagues experience these systems or realize new ones. Further research can

investigate this element of the work, connected directly to CTE development and CI for equity processes. This could be for these concepts in general or for educators within a system that may be utilizing qualitative evidence in the form of storytelling.

Again, laying blame or asking for salvation from individuals without acknowledging the systems at play is not the goal of this implication or research project as a whole. However, it is important to recognize and name that the work of collectively, continuously improving for equity takes vulnerability. Leadership expert Aiko Bethea on a podcast with vulnerability researcher Brené Brown, explains when discussing inclusivity and equity practices at work,

There's shame. There's grief, let's move through this together, and that's where you can get transformative, not telling people, "You're just so fragile, suck it up and put your armor on basically, and move through it." It's "Let's explore this. What are we learning about ourselves? What are we learning about this?" (B. Brown, 2020, 19:32)

The vulnerability to examine what our data is telling us and where it may not align with our values or intentions can support growth toward a more equitable world. Asking educators, without context, a basis in liberatory practices, or support for sharing where they are truly messing up and making mistakes can be dangerous. Not acknowledging how systemic forms of oppression can treat vulnerability differently across educators is wrong. Educators are within a system too, and at jobs with evaluation practices that can determine pay, healthcare, and retention. Thus, this work is linked to basic survival. Just

like Bethea explains above, there cannot be an ask to push through vulnerability, be vulnerable, or to perform vulnerability without safeguards that this vulnerability will not be punished (and acknowledgment that it can be punished across identities in different ways that are more or less devastating). This puts responsibility on the hierarchical and formal leadership as well as the collective team to be vigilant for where this vulnerability will be or is attacked instead of rewarded. Researchers must consider this when engaging in asks of educator storytelling moving forward as qualitative evidence of success quickly asks for vulnerability. It puts responsibility on a researcher to consider this ask, how structures may be developed and framed within an intervention, and how they will be reported on within a study.

This vulnerability was asked for by the researcher. I also asked for this vulnerability as the school administrator. I believe I got better at demonstrating this vulnerability over time. Moving away from “armored leadership” more toward “daring leadership” is potentially my greatest learning from the start to the finish of my tenure at the school program (B. Brown, 2018, pp. 76-77). The vulnerability of leadership is important when contextualizing the intervention, as it is not implementable without framing and its own ECs to ensure this kind of embedded reflective practice can occur. The intervention itself was nested within an equity-based approach to education that is committed to interrogating “how Niceness is actually relational and has structural consequences” (Castagno, 2019, p. xxi). This means there is an acknowledgment of systems at play, the structurally created inequities, and how new systems can be realized

when this is understood. The stories were meant to be shared to support this more holistic vision of success within an accountable team that has been purposefully built over time (Platt et al., 2008). The intervention detailed in this research study can act as an example of how to structure storytelling in this way so it is done together, with collective norms, and a collective debrief. It is ripe for further research on how this can develop CTE and CI for equity practices. It is one example or one approach to how it could look to provide opportunities for collective storytelling in PD settings in alignment with CI for equity processes to develop CTE. It specifically addresses how vicarious experiences can build CTE. It is also an intervention that would certainly be continuously improved with collective revisions over time. Verbalizing or writing stories of when students were supported well or how an educator faced their own mistakes within this process takes a level of self and team accountability that is beyond a collegial or collaborative sense of a team. “One key indicator of trust is public acknowledgement of a need to learn more and public willingness to seek and use assistance” (Platt et al., 2008, p. 65). This means researchers and school systems need to earn the trust that allows for this kind of public sharing. Although vulnerable sharing can build trust and vice versa, formal leadership must understand their role in modeling, valuing, and not punishing this vulnerability before educators should be asked to acknowledge their learning, its meaning, and what it can mean for collective liberation.

Freire and Macedo (2007) name how oppressed individuals may fear freedom as “they prefer gregariousness to authentic comradeship; they prefer the security of

conformity with their state of unfreedom to the creative communion produced by freedom and even the very pursuit of freedom” (p. 48). I see a connection between this idea and the description of Platt et al.’s (2008) accountable communities where there can be discomfort in truly holding each other accountable to the work of liberation or finding freedom. In addition, hooks (1994) emphasizes how in a liberatory classroom, “this type of learning process is very hard; it’s painful and troubling. It may be six months or a year, even two years later, that they realize the importance of what they have learned” (p. 153). The finding of freedom is not simple or guaranteed. This connects to how in Denby and Marisol Maraji (2021) author Kaitlyn Greenidge explains that liberation is not necessarily guaranteed if structures based on domination are recreated. This storytelling practice, which can enhance CTE and contribute to CI for equity, seeks to create an accountable community where all are supported to work toward equitable progress together, even if this learning is challenging to both the individual and the system.

This study was about the process of learning, how we can learn most accurately, and how the fullness of the data we examine can tell the most robust, complicated stories we are trying to understand as we look to how the work can get better, collectively and equitably. We should expect from our educational leadership and researchers a commitment to and understanding of liberatory learning, a willingness to learn, and an equity-centered approach to it. At the same time, the vulnerability it takes for a team to gather and look at their struggles, missteps, and next steps, takes not just that hope, but also that purposeful, careful vulnerability. As described by a participant,

That is an important modeling, because it's vulnerability, but it's not lack of competence. It's important, that line for a leader, to still be demonstrating high competence, so that the team has trust in the leader. But it's, it's, it's still that leader as vulnerable. (RC2 Interview 1, February 14, 2023)

This is not asking for perfection. It still acknowledges that all educational leaders have moments of searing incompetence when the work pushes us beyond our capacity. This also can be true of educational researchers. An educational ecosystem is owed the vulnerability of leadership knowing when they don't know, seeing leadership ask for help and staying curious, and framing all of this in connection to our collective liberation. The stories educators have, the ones within liberatory approaches and spaces, need to be told and listened to. When educators can circle up and share these stories together, in all their complicated glory, a collective belief in their abilities can be positively influenced. This belief is what can drive hope, across the ecosystem, with and for all learners.

Student Voice. Finally, there is a great opportunity to continue to build in and research the potential influence of student voice on CI for equity systems. This was a missed opportunity in this dissertation. This is an implication that also may be relevant to the local context, although some of these mechanisms and the mindset to include student voice is present already. A practitioner guide from New York City Outward Bound Schools (2023) provides examples of how this network engaged with students in CI for equity processes. This provides avenues to inspire further research around each aspect of incorporating student voice into research around CI for equity and potentially how that

can contribute to and allow students to benefit from collective student efficacy within a school ecosystem.

Conclusion

I will conclude this dissertation here, after the previous sections in this chapter discussed the findings, limitations, reflections, and implications for this research.

There is a power (and danger) in storytelling (Adichie, 2009; Sirah, 2016). I want to be clear that I am not indicating any ownership of storytelling or that this is a new concept. I am also not providing an exhaustive account of storytelling itself. This is a school-based intervention involving qualitative evidence shared by educators as a part of CTE development and CI for equity practices. I also acknowledge this intervention was crafted collaboratively with participants in alignment with a liberatory approach to learning together. It was framed within the contexts of equity-based educational settings seeking to enhance CTE through CI for equity practices. This intervention is just one example of how storytelling may occur to develop CTE and be embedded in CI for equity processes when educators share qualitative evidence of success and vicarious experiences. With CI for equity, ways to collect individual teacher “stories,” such as empathy interviews, surveys, focus groups, etc., are utilized (Bill and Melinda Gates Foundation, 2023; Bryk, 2020; Hinnant-Crawford, 2020; Peurach et al., 2022). I acknowledge how storytelling in the academy has been championed by Indigenous researcher Archibald (2008) and recently Toliver (2022) delved deeply into how Black voices and Black stories can and must be centralized and legitimized within qualitative

research. Telling stories is not new and educators telling stories is not an original idea. However, this example intervention for how educator stories can be shared together and can act as evidence of “success” within regular, embedded reflective practices could be a worthwhile contribution to the work of CTE development and CI for equity strategies in existing or in the realization of liberatory educational environments. Particularly when the team is brought together to do this, rather than through asking for stories to be shared individually, separately, or as a part of feedback sessions, it can allow for the whole group to be present to build that collective efficacy together. With alignment to context and continued revision, this could be a valuable approach for supporting equity in a school. Sometimes, with this equity ideal, the “how” is not clear and I attempt to provide an example of this “how” through this dissertation. I believe the explicit naming of what it can look like, sound like, and feel like to do this work is important. This is not to ignore systems that exist or ask individuals to pretend they are immune to their harm or must fix them alone. It is an example response for “how do we bring these dreams into ideas of structure and policy and agreement?” (a. brown, 2021, para 53). This intervention is a sample structure for how to do this work.

In closing, I see the power of engaging with educators to develop their collective beliefs in supporting each other, students, and the community to succeed together. However, I am considering success in the context of culturally responsive and equitable leadership practices (Khalifa, 2018; Gause, 2020), liberatory approaches to education (Duncan-Andrade, 2009; Freire, 1970; Freire & Macedo, 2007; hooks, 1994, 2003,

2010), and an expanded definition of student achievement as aligned with the EL Education whole school learning model (Berger et al., 2016; EL Education, 2018). This makes any clarity on “progress” messy because I am considering the full experience of being in community and of the people who make up this community in a school system. It also makes it real. Schools are dealing with wicked problems (Jordan et al., 2014) and have the privilege of serving real students and families. Schools do not need external fixes that are not contextualized, not a part of community-based embedded reflective practices, not connected to collaboratively designed CI for equity. There can be an emphasis on internal accountability, with shared leadership (Hargreaves & Shirley, 2009; Fullan et al., 2015). The collaborative approach to finding solutions, in context, with the community can serve young people, support educators, and help schools thrive toward liberation. However, I acknowledge the overall public school system is not without flaws and I am complicit in the engagement with it. As I opened this dissertation, I will close it with hooks (1994) reminding us of the hope that can exist within schools and school systems:

The academy is not paradise. But learning is a place where paradise can be created. The classroom, with all its limitations, remains a location of possibility. In the field of possibility we have the opportunity to labor for freedom, to demand of ourselves and our comrades, an openness of mind and heart that allows us to face reality even as we collectively imagine ways to move beyond boundaries, to transgress. This is education as the practice of freedom. (p. 12)

The continuation of this work is ongoing. Cycles of CI for equity are meant to educate, not create final, forever mandates. CTE ideally helps empower a team to have “critical hope” and believe this is possible again and again (Duncan-Andrade, 2009, p. 191). If an educational leader, defined inclusively, is considering how to live in the transformational leadership landscape, venture into it, or research it, there is the ultimate lesson of staying a learner, audaciously and vulnerably.

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APPENDIX A
COPYRIGHT USE APPROVALS

Figure 1: Model for Leading Collective Teacher Efficacy

Personal Email Communication Approval from Dr. Jenni Donohoo 3/27/23

Figure 3: EL Education Character Framework

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APPENDIX B

CYCLE 2 SURVEY QUESTIONS AND ASSOCIATED CONSTRUCTS

Survey

In this survey, to protect your confidentiality, please create a unique identifier known only to you. To create this unique code, please record the first three letters of the street you grew up on and the last four digits of a phone number you had growing up. Thus, for example, if you grew up on Main Street and a phone number growing up was (613) 543-6789, your code would be Mai 6789. The unique identifier will allow us to match your post-intervention survey responses and your retrospective, pre-intervention responses when we analyze the data.

My unique identifier is: _____ (e.g., Mai 6789, see paragraph above)

For Pre-Survey Only: Demographic Data

- How many years have you been working in education?: Less than a year, 1-4 years, 5-8 years, 9 -12 years, more than 12 years, decline to answer
- How long have you been working at [school name]?: Less than a year, 1-4 years, 5-8 years, 9 -12 years, more than 12 years, decline to answer
- What is your age?: 20 - 29, 30 - 39, 40 - 49, 50 - 59, 60 - 69, more than 69 years old
- What is your gender?: Non-binary, female, male, other, decline to answer
- What is your race/ethnicity?: Hispanic or Latinx or Spanish Origin of any race, American Indian or Alaskan Native, Asian, Native Hawaiian or Other Pacific Islander, Black or African American, White, Two or more races, decline to answer

Directions

For the following sections please indicate your level of agreement with each of these statements regarding teacher leadership. Based on a six-point Likert Scale: 6 = *Strongly Agree*, 5 = *Agree*, 4 = *Slightly Agree*, 3 = *Slightly Disagree*, 2 = *Disagree*, and 1 = *Strongly Disagree*.

These specific questions that will be measured on a Likert scale are based on the Donohoo et al. (2020) Enabling Conditions for Collective Teacher Efficacy Scale (EC-CTES):

Text Insert: No need to read more about this now, but if you're curious here's an [article](#) about the scale.

Embedded Reflective Practices:

1. School leaders regularly acknowledge the accomplishments of individuals within the school.
2. School leaders regularly acknowledge the accomplishments of teams within the school.
3. The faculty continually re-examines the extent to which teaching practices support the learning of all students.
4. The faculty examines multiple sources of evidence when considering student progress and achievement over time.
5. Teachers regularly seek feedback from students and use it to adjust their instruction.

Empowered Teachers:

6. Teachers are entrusted to make important decisions on school-wide issues.
7. Teachers are provided authentic leadership opportunities.
8. Teachers have a voice in matters related to school improvement.
9. Teachers' ideas are valued.
10. Teachers' expertise are valued.

These specific questions that will be measured on a Likert scale are based on the Goddard et al. (2000) Collective Teacher Efficacy Scale:

Text Insert: No need to read more about this now, but if you're curious here's an [article](#) about the scale.

11. If a child doesn't learn something the first time teachers will try another way.
12. Teachers in this school are skilled in various methods of teaching.
13. Teachers in this school really believe every child can learn.
14. If a child doesn't want to learn, teachers here give up.
15. Teachers here fail to reach some students because of poor teaching methods.
16. Teachers here don't have the skills needed to produce meaningful student learning.
17. Teachers in this school have what it takes to get the children to learn.
18. Teachers here are confident they will be able to motivate their students.

Open-ended:

Text Insert: If you do not wish to answer, you can write N/A.

19. When talking with other teachers, what parts of the conversations or interactions help you grow your collective efficacy?

Text Insert: Here is the article we've read about [The Power of Collective Efficacy](#) (Donohoo et al., 2018) if this is helpful here too. No need to reread now! Just FYI.

20. Do you have anything you would like to add?

For post-survey only: Session Engagement

- How many sessions were you able to attend?: 0, 1-2, 3-4

APPENDIX C

CYCLE 2 SEMI-STRUCTURED INTERVIEW QUESTIONS AND ASSOCIATED
CONSTRUCTS

The specific questions are influenced by Donohoo et al. (2020) Enabling Conditions for Collective Teacher Efficacy Scale (EC-CTES) and the specific constructs outlined therein:

Embedded Reflective Practices:

- When or what structures have been most effective in supporting teachers to continually re-examine the extent to which teaching practices support the learning of all students?
- How do teachers examine multiple sources of evidence when considering student progress and achievement over time?

Empowered Teachers:

- Can you provide an example of a time when you were entrusted to make an important decision on a school-wide issue? If so, what did this mean for your efficacy and potentially the collective efficacy of your teacher team?
- From your perspective, are teachers provided with authentic leadership opportunities at the school? Please explain your answer.

Other:

- How did these PD sessions within this intervention support you to develop collective teacher efficacy?
- What was most helpful to hear from your colleagues in developing collective teacher efficacy?
- What else would you like to add?

APPENDIX D

CYCLE 2 FOCUS GROUP INTERVIEW QUESTIONS AND ASSOCIATED
CONSTRUCTS

The specific questions are influenced by Donohoo et al. (2020) Enabling Conditions for Collective Teacher Efficacy Scale (EC-CTES) and the specific constructs outlined therein:

Embedded Reflective Practices:

- What parts of this intervention were most effective for supporting the development of embedded reflective practices using qualitative data? What parts were the least effective?
- What did your colleagues say when sharing qualitative evidence of success that most positively impacted the development of your collective teacher efficacy?
- How would you describe embedded reflective practices to other colleagues or teachers?

Empowered Teachers:

- Does continuous improvement for equity work at the school to help you feel ownership of school-wide goals? Why or why not?
- From your perspective, are teachers provided with authentic leadership opportunities at the school? Please explain your answer.

Other:

- When examining data, what helps you feel most like your team can take on any challenge or problem and solve it or make it better?
- What else would you like to add?

APPENDIX E

CYCLE 2 RECRUITMENT CONSENT FORM

Dear Colleague:

My name is Erica Crane and I am a doctoral student in the Mary Lou Fulton Teachers College (MLFTC) at Arizona State University (ASU). I am working under the direction of Dr. Juan Carrillo, a faculty member in MLFTC. We are conducting a research study on continuous improvement systems and their impact on staff collective efficacy. There will be a 4-6 session sequence of professional development on a video conferencing platform with 6-8 colleagues. There will be electronic surveys, interviews, and a focus group. The purpose of this study is to understand better your approach to supporting collective efficacy with your staff and how it has been supported or prevented.

We are asking for your help, which will involve your participation in a brief intervention (about eight - twelve hours), completion of an **online** survey on two occasions (15 minutes, each), an **online video conference technology** focus group interview (about 60 minutes), and for those randomly selected, a **telephone or online video conferencing technology** interview (about 30 minutes) concerning your knowledge, experiences, attitudes, and beliefs about collective teacher efficacy and continuous improvement.

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. Choosing not to participate in the study does not affect your standing at work. You must be 18 or older to participate in the study.

The benefit to participation is the opportunity for you to learn strategies and practices related to collective teacher efficacy which have the potential to benefit your students and your school. There are no foreseeable risks or discomforts to your participation.

In the survey, to protect your confidentiality, I will ask you to create a unique identifier known only to you. To create this unique code, use the first three letters of the street you grew up on and the last four digits of a phone number you had growing up. Thus, for example, if you grew up on Main Street and a phone number growing up was (613) 543-6789, your code would be Mai 6789. The unique identifier will allow us to match your post-intervention survey responses and your retrospective, pre-intervention responses when we analyze the data.

For those randomly selected for the interviews, I will request to audio record your responses. The interview will not be recorded without your permission. Please let me know if you do not want the interview to be recorded; you also can change your mind after the interview starts, just let me know. I will ask for your oral consent at the time of the interview for those who are selected.

Your responses will be confidential. Results from this study may be used in reports, presentations, or publications but your name will not be used.

If you have any questions concerning the research study, please contact the research team – Dr. Juan Carrillo at jfcarril@asu.edu or (602) 543-6343 or Erica Crane at ericacrane33@gmail.com.

Thank you,

Erica Crane, Doctoral Student
Dr. Juan Carrillo, Dissertation Chair and Professor

Please let me know if you wish to be part of the study and will let me audio record your responses by verbally indicating your consent.

If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact Dr. Juan Carrillo at jfcarril@asu.edu or the Chair of Human Subjects Institutional Review Board through the ASU Office of Research Integrity and Assurance at (480) 965-6788.

APPENDIX F

ARIZONA STATE UNIVERSITY IRB APPROVAL



EXEMPTION GRANTED

Juan Carrillo
 Division of Teacher Preparation - Tempe
 -
 jfcarril@asu.edu

Dear [Juan Carrillo](#):

On 11/18/2022 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Developing Collective Teacher Efficacy Through Embedded Qualitative Reflective Practices in Continuous Improvement for Equity
Investigator:	Juan Carrillo
IRB ID:	STUDY00016952
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • Board Minutes 2_24_2022.pdf, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • Crane_Dissertation IRB Protocol_11_11_2022.docx.pdf, Category: IRB Protocol; • EC Dissertation Supporting Documents_Survey and Focus Group Instruments_11_05_2022.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • EC Intervention Outline_11_11_22.pdf, Category: Other; • EC_Board Minute Approval Explanation_11_11_22.pdf, Category: Other; • EC_Dissertation Recruitment Letter_11_15_2022.pdf, Category: Consent Form;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2)(ii) Tests, surveys, interviews, or observation (low risk) on 11/18/2022.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

If any changes are made to the study, the IRB must be notified at research.integrity@asu.edu to determine if additional reviews/approvals are required. Changes may include but not limited to revisions to data collection, survey and/or interview questions, and vulnerable populations, etc.

Sincerely,

IRB Administrator

cc: Erica Crane
Erica Crane

APPENDIX G

CYCLE 2 THEMES, CATEGORIES, AND CODES WITH ANALYTIC MEMOS

Rich Text Features

The rich text features involved in this coding come from Saldaña (2021) and are as follows:

- CODES and THEMES are set in all caps
- Categories are set in bold

Themes with Categories and Codes

- Theme One: THE IMPORTANCE OF SHARED LEADERSHIP AND COLLECTIVE OWNERSHIP: The existence of shared leadership was evident based on focus group and interviewee responses. However, there was consistently a mentioning of how some people are more familiar with or bought into the concepts of CI, CTE, Accountable Teams and other important elements of the school program. This was discussed as related to time in the profession, time in working at the specific school program, feelings of connectedness to the school program which seemed to be correlated to time and relationships. This is connected to how the idea that not all of the staff or teacher team was present in the intervention PD sessions. Interviewees and focus group respondents considered how there may have been an existing gap in how people understood the school program, felt connected to the idea of wanting to improve, and therefore had ownership over the school, potential shared leadership opportunities, and this overall intent to improve.
 - **Category: Shared Leadership**
 - Code: FEELING SUPPORTED BY LEADERSHIP
 - Code: FEELING EMPOWERED
 - Code: CORE COUNCIL
 - Code: SHARED LEADERSHIP EXISTS
 - Code: ACCOUNTABLE TEAMS
 - **Code: RESPECT FOR THE PROFESSION OF TEACHING - in both The Power of Storytelling and Shared Leadership**
 - **Code: TRUST - in both Vulnerability and Shared Leadership**
 - **Category: Missing Full Staff Team Presence**
 - Code: NOT ALL PEERS PRESENT
 - Code: DIFFERENCES IN VETERAN AND NEWER STAFF
 - Code: GETTING ON THE SAME PAGE
 - Code: EXISTING, POSITIVE RELATIONSHIPS
 - Code: WORKING IN TEAMS
 - Code: UNEVEN LEADERSHIP ENGAGEMENT
 - Code: STUDYING CONCEPTS OVER TIME (ie CTE, CI for equity, accountable teams)
- Theme Two: STORYTELLING BUILDS CONNECTION, NEEDS

- VULNERABILITY: The concept of vulnerability was repeatedly and directly mentioned. It was about how the stories being told were powerful because it felt like this temporary community in the PD sessions was supporting vulnerability and people were demonstrating vulnerability. However, it was stated that in order for this to be happening, vulnerability needs to be supported and present. It wasn't that storytelling would just provide vulnerability. This was also mentioned in conjunction with how the staff viewed leadership and CI for equity.
- **Category: Vulnerability**
 - Code: SHARING STORIES
 - Code: VULNERABILITY
 - Code: LEARNING FROM PEERS
 - **Code: TRUST - in both Vulnerability and Shared Leadership**
 - **Category: The Power of Storytelling**
 - Code: THE POWER OF STORYTELLING
 - Code: PD SESSIONS OFFERED CONNECTION
 - **Code: RESPECT FOR THE PROFESSION OF TEACHING - in both The Power of Storytelling and Shared Leadership**
 - **Code: UTILIZING DATA - in both CI and Power of Storytelling**
 - Theme Three: ONGOING REFLECTION TO SUPPORT CI FOR EQUITY: The reflection and processes supporting CI for Equity need to be ongoing and systematized. It was directly referenced that CI work has been present at the school and is evident throughout the program. The parts of CI that were named were related to reflection and the ongoing making of meaning of data examined, goals set, and next steps taken.
 - **Category: Continuous Improvement (CI) For Equity**
 - Code: VARIETY OF LEVERS FOR CHANGE
 - Code: INTENTIONAL CONTINUOUS IMPROVEMENT
 - Code: ONGOING
 - Code: INTENT TO IMPROVE
 - Code: DATA STUDIO FOR QUANTITATIVE DATA
 - Code: TEACHER LED CONFERENCES (TLCs)
 - Code: BELIEVING IN THE ABILITY TO MAKE CHANGE
 - **Code: UTILIZING DATA - in both CI and Power of Storytelling**
 - **Category: Reflection**
 - Code: REFLECTION
 - Code: USEFULNESS OF THE PROTOCOLS USED
 - Code: GRAPPLING

APPENDIX H

INTERVENTION FACILITATION GUIDE AND OVERVIEW

Introduction

The documentation of this intervention is included for reference and has been modified for coherence. More extensive framing and resources specific to the local context were in the original document shared with all participants. Additional information about the research process, the doctoral program, and the dissertation were included as well. This document does not encompass all facets of the overall local context for how professional learning is framed, encouraged, supported, and approached with equity. It does not describe all existing routines, norms, and relationships.

Session Overviews

Session	Basic Content	Protocols
1/20 - 1/23	Pre-Intervention Data Collection	Pre-Survey
1 1/23	<ul style="list-style-type: none"> •Building background knowledge about CTE Embedded Reflective Practices •Considering the gaps and opportunities for next steps in embedding reflective practices with educator-generated qualitative evidence of “success” 	<ul style="list-style-type: none"> •4 A’s (School Reform Initiative, n.d.a) – written coding of a text and sharing verbally •Draw the Problem (Gray et al., 2010, pp. 90-91) – drawing and sharing/debriefing verbally
2 1/30	<ul style="list-style-type: none"> •Revisiting CTE and embedded reflective practice framing •Practicing an embedded reflective practice with qualitative evidence of “success” •Using the protocol with an emphasis on educator-generated evidence of “success” 	<ul style="list-style-type: none"> •The Making Meaning Protocol: The Storytelling Version - MODIFIED (School Reform Initiative, n.d.c) –verbal storytelling and debrief
3 2/6	<ul style="list-style-type: none"> •Practicing an embedded reflective practice with qualitative evidence of “success” •Using the protocol with an emphasis on educator-generated evidence of “success,” but through failure stories or times when failure occurred even if there was long term 	<ul style="list-style-type: none"> •The Making Meaning Protocol: The Storytelling Version - MODIFIED (School Reform Initiative, n.d.c) –verbal storytelling and debrief

	success or success from reflection on the failure	<ul style="list-style-type: none"> •What Comes Up Protocol - MODIFIED (McDonald et al., 2013, pp. 49-50) –verbal debrief
4 2/13	<ul style="list-style-type: none"> •Practicing the data analysis element of an embedded reflective practice with qualitative evidence of “success” •Utilizing the same or new stories of “success” (short or long term), participants read each other's stories, code them for codes, categories, and themes •Looking at data to determine overall themes from shared stories (connected to our time together overall) 	<ul style="list-style-type: none"> •Data Analysis - MODIFIED (Donohoo, 2013, pp. 66-71) –written stories, written coding, with verbal discussion and debrief
2/14 - 2/27	Post-Intervention Data Collection	Post-Survey, Two Interviews, & Focus Group



Session Agendas

Session 1 - 1/23/23

Attendees: xxxx

Timing	Item	Why	Resources
10 mins	<p>Welcome, welcome! Great to e-see you!</p> <p>Pre-Survey check</p>	<p>Welcome everyone into the space.</p> <p>Help us collect valuable data.</p>	Pre-Survey - linked
5 mins	<p>Norms</p> <p>Which ones will be most important here in our work together overall?</p> <p>Native Land Acknowledgment - links embedded</p>	To ground ourselves in the Norms	[school name] Staff Norms.pdf - linked
15 mins	<p>Greeting: Hello and how you're coming to this meeting today</p> <p>Agenda Review</p> <p>Reading: "It's not like love and spreadsheets don't go together." - adrienne maree brown (a. brown, 2022)</p>	See what's up, say hello, and check in before we begin.	Feeling Wheel (The Gottman Institute, n.d.) - linked
5 mins	<p>Roles</p> <p>Timekeeper: xx Facilitator: xx Notetaker: xx Norm Checker: xx</p>	Share the facilitation / leadership	
10 mins	<p>Framing Overall</p> <ul style="list-style-type: none"> ● Glossary 	Make sure we're clear	Dissertation and ASU

	<ul style="list-style-type: none"> ● Assumption Reminders: <ul style="list-style-type: none"> ○ We're assuming an expanded definition of student achievement aligned with EL Education (2018) ○ We're talking about continuous improvement for EQUITY ○ We're talking about how [school name] incorporates practices to create equitable classroom conditions through the school's implementation of the EL Education learning model ● Confidentiality ● Collaboration ● PD Sessions overview ● Q&A 	on our why together	program preview
40 mins	<p>Building/Reconnecting to Background Knowledge</p> <p>FRAMING (2 mins)</p> <ul style="list-style-type: none"> ● Protocol purpose ● Currently, quantitative disaggregated data is analyzed regularly together through continuous improvement for equity work. There are opportunities to share evidence of success from this quantitative data at the school and in other school communities. ● This research together will consider educator stories as qualitative data to share as evidence of "success." <p>ACTIVITY: 4A's Text Protocol (School Reform Initiative, n.d.a)</p> <p>TEXT: Excerpt from Leading Collective Efficacy: Powerful Stories of Achievement and Equity - linked</p> <p>(Arzonetti Hite & Donohoo, 2021, p. 79, 85-86)</p>	Connecting back to our learning about continuous improvement for equity and collective teacher efficacy, looking ahead to how embedded reflective practice is essential for the development of collective teacher efficacy	4A's Text Protocol.pdf - linked (School Reform Initiative, n.d.a)

	<p><i>Read the text silently - noting: (8 mins)</i></p> <ul style="list-style-type: none"> ● What <u>Assumptions</u> does the author of the text hold? ● What do you <u>Agree</u> with in the text? ● What do you want to <u>Argue</u> with in the text? ● BONUS: What parts of the text do you want to <u>Aspire</u> to (or Act upon)? <p><i>BREAK OUT ROOMS: Share in rounds in groups - get a fac & timekeeper (18 mins)</i></p> <ul style="list-style-type: none"> ● <i>In a round, have each person identify one assumption in the text, citing the text (with page numbers, if appropriate) as evidence. 1 minute max per person with a timekeeper.</i> ● <i>In the next round, have each person identify something they agree with.</i> ● <i>In the next round, have each person identify something they argue with.</i> ● <i>BONUS with open discussion (if your group has time): What do people want to aspire to (or act upon) in the text?</i> ● <i>Time-dependent, open discussion on the A's</i> <p> <i>Break out 1: X, X, X</i></p> <p> <i>Break out 2: X, X, X, X</i></p> <p><i>BACK TO FULL GROUP: Open Discussion (12 mins)</i></p> <ul style="list-style-type: none"> ● Any trend or something you landed on as a group ● Based on what you just read and discussed, what might this mean for your work as a Crew at THE SCHOOL? ● What might this mean for our work together? 		
25 mins	Defining the Problem Together	What are we really trying	Draw the Problem (Gray et al.,

	<p>FRAMING:</p> <ul style="list-style-type: none"> ● Protocol purpose ● Complexity of using educator storytelling as qualitative data to develop collective teacher efficacy and engage in continuous improvement for equity practices ● Collectively defining this “problem” together <p>ACTIVITY: Draw the Problem Protocol (Gray et al., 2010, pp. 90-91) - with “Quick Draw” versus perfect artistic expression in mind (Himmele & Himmele, 2021, p. 45)</p> <ul style="list-style-type: none"> ● Step 1: List ON ONE SIDE of your index card: (2 mins) <ul style="list-style-type: none"> ○ Write a list of items that help to explain the problem ○ You could think about it like a “day in the life” of the problem ● Step 2: Draw ON THE OTHER SIDE of your index card: (3 mins) <ul style="list-style-type: none"> ○ Draw a picture of the problem. It could be as you would explain it to a peer. You can draw a simple diagram or something more metaphorical. The drawing should simply assist in explaining the problem. ● Step 3: 45 second whip around of each person’s explanation while holding up your card with the drawing side facing the camera (8 mins) ● Step 4: Discussion (10 mins) <ul style="list-style-type: none"> ○ Trends we see ○ Differences we see ○ Open discussion 	<p>to do here? What are we trying to “solve” together?</p>	<p>2010, pp. 90-91) - link</p>
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7 mins	<p>Debrief</p> <p><i>Exit Ticket - linked</i></p> <p>3, 2, 1</p> <ul style="list-style-type: none"> ● 3 things you appreciated discussing or learning about ● 2 suggestions to make the next session better ● 1 question you have 	What's working, what might not be, how we're learning together	
5 mins	<p>Next Steps</p> <ul style="list-style-type: none"> ● EC: <ul style="list-style-type: none"> ○ Plan next session based on input given today ● Crew mates: <ul style="list-style-type: none"> ○ Bring a "story" about evidence of "success" for you and your students - so you can successfully in 4 mins in the next session: Write in your journal about a story when you and your students experienced "success" together - ie EVIDENCE OF SUCCESS <ul style="list-style-type: none"> ■ Then you'll be sharing the story out in 3 mins each ○ Attend the Session 2 - 1/30/23 from 5:45-7:45pm PST on Zoom (link at the top) 	So we're all clear on what's next in our process.	

Session 2 - 1/30/23

Attendees: xxxx

Timing	Item	Why	Resources
10 mins	<p>Hello and how you're coming to this meeting today</p> <p>Agenda Review</p>	See what's up, say hello, and check in before we begin.	Feeling Wheel (The Gottman Institute, n.d.) - linked
2 mins	<p>Roles</p> <p>Notetaker: xx Timekeeper: xx Facilitator: xx Norm Checker: xx</p>	Share the facilitation / leadership	
3 mins	<p>Framing for Today</p> <ul style="list-style-type: none"> ● Our "problem" as defined collectively (from our Draw the Problem protocol in last session and from research supporting this study): <ul style="list-style-type: none"> ○ There's a lot of "embedded reflective practice" involving quantitative or numbers-based data. How can we contribute our learning to support the development of embedded reflective practice with qualitative or educator story-based data? ● Embedded Reflective Practices review ● Storytelling acknowledgments and resources for further learning <ul style="list-style-type: none"> ■ Macleod (2021), Behrendt (2021), Tuck & Yang (2013), Toliver (2022) 	Make sure we're clear on our why together	

	<p>Reading: “The power of storytelling is exactly this: to bridge the gaps where everything else has crumbled.” - Paulo Coelho (Coelho, 2008)</p>		
2 mins	<p>Norms</p> <p>Which ones will be most important here in our work together today?</p>	To ground ourselves in the Norms	[school name] Staff Norms.pdf - linked
97 mins	<p>Embedded Reflective Practice</p> <p>FRAMING</p> <ul style="list-style-type: none"> • Protocol purpose • The group will engage in an embedded reflective practice together with educator stories as qualitative evidence of “success” <p>ACTIVITY: The Making Meaning Protocol: The Storytelling Version - <i>modified</i></p> <p>(School Reform Initiative, n.d.c)</p> <p>Getting Started (4 minutes)</p> <ul style="list-style-type: none"> • Write in your journal about a story when you and your students experienced “success” together - ie EVIDENCE OF SUCCESS <p>Step 1. Sharing the Story (UP TO 3 minutes)</p> <ul style="list-style-type: none"> • The storyteller tells their story • The participants listen in silence, perhaps making brief notes about aspects of the story that they find particularly significant. <p>Step 2. Clarifying questions (2 minutes)</p> <ul style="list-style-type: none"> • The facilitator asks the group for clarifying questions for the storyteller. <p>Step 3. Making meaning of the story (5 minutes)</p> <ul style="list-style-type: none"> • The group (not including the storyteller who is listening, reflecting, taking notes) discuss the 	<p>Connecting back to our learning about continuous improvement for equity and collective teacher efficacy, looking ahead to how embedded reflective practice is essential for the development of collective teacher efficacy</p>	<p>The Making Meaning Protocol- The Storytelling Version.pdf - linked (Modified)</p> <p>(School Reform Initiative, n.d.c)</p>

	<p>story.</p> <ul style="list-style-type: none"> • Why do you think the storyteller found this to be such a SUCCESS? • What additional insights do the participants have about why the experience was so powerful for the storyteller? • The storyteller listens in silence while taking notes of the conversation. <p>Step 4. Storyteller response (2 minutes)</p> <ul style="list-style-type: none"> • The storyteller reflects on any new insights on how this was a success, how this helped develop collective or self-efficacy, and what it meant for them to hear crew mates discuss their story. <p>(The protocol repeats steps 1-4 until all members have told their story. 12 minutes per person - 60 mins total with 5 people)</p> <p>ORDER:</p> <ul style="list-style-type: none"> ★ xx ★ xx ★ xx <p>BREAK - 5 min bio/stretch - Thank you for this suggestion!</p> <ul style="list-style-type: none"> ★ xx ★ xx <p>Step 5. Discussing Implications for CONTINUOUS IMPROVEMENT FOR EQUITY and COLLECTIVE TEACHER EFFICACY (10 minutes)</p> <ul style="list-style-type: none"> • <i>In thinking about the stories you just heard / shared, what is coming up for you around COLLECTIVE EFFICACY, EVIDENCE OF SUCCESS, EMBEDDED REFLECTIVE PRACTICES, and / or CONTINUOUS IMPROVEMENT FOR EQUITY?</i> <p>Step 6. Reflecting on the Making Meaning Protocol (10 minutes)</p>		
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	<p><i>The group reflects on the experiences of or reactions to the protocol as a whole.</i></p> <ul style="list-style-type: none"> ● How did this protocol feel? ● Did this protocol help you develop self or collective efficacy? Why or why not? ● How was this similar to “looking at data” in Data Studio or the “looking at student work” protocol? How was it different? ● What made a good story today? 		
5 mins	<p>Debrief (and prep for next time) <i>What is your “final thought” on today? - whip around (1-2 sentences), depending on time</i></p> <p><i>Exit Ticket: LINKED IN HERE</i></p> <ul style="list-style-type: none"> ● <i>For you, what was the most important criteria for making a "good" story today?</i> ● <i>What was your most important takeaway from hearing these stories today?</i> ● <i>How should the next session's storytelling time be framed?</i> <p><input type="radio"/> Same as this time - ask people to share evidence of "success" through a story</p> <p><input type="radio"/> New framing - ask people to share about a failure and what they learned from it</p> <p><input type="radio"/> New framing - open ended storytelling about "success" that relates to my role at school, but may not be from school</p> <p><input type="radio"/> New framing - open ended storytelling about "failure" that relates to my role at school, but may not be from school</p> <p><input type="radio"/> Decline to answer</p> <p><input type="radio"/> Other: _____</p> <ul style="list-style-type: none"> ● <i>What should the structure be for the next session's storytelling time?</i> <p><input type="radio"/> Same protocol - all together telling stories</p> <p><input type="radio"/> Same protocol - in smaller groups</p> <p><input type="radio"/> One at a time storytelling whip around without a structure beyond that - less protocol, more storytelling</p> <p><input type="radio"/> New protocol (modified for our purposes) - The Campfire Protocol (see below for reference)</p> <p><input type="radio"/> New protocol (modified for our purposes) - What Comes up (see below for reference)</p> <p><input type="radio"/> Decline to answer</p> <p><input type="radio"/> Other: _____</p>	<p>What's working, what might not be, how we're learning together</p>	

	<p><i>Campfire</i> - (Gray et al., 2010, pp. 156-157)</p> <p><i>What Comes Up</i> - (McDonald et al., 2013, pp. 49-50)</p>		
1 min	<p>Next Steps</p> <ul style="list-style-type: none"> ● EC: <ul style="list-style-type: none"> ○ Plan next session based on input given today ● Crew mates: <ul style="list-style-type: none"> ○ Come to the next session 2/6/23 5:45-7:45pm PST (Zoom link at the top and in the calendar invite) 	So we're all clear on what's next in our process.	

Session 3 - 2/6/23

Attendees: xxxx

Timing	Item	Why	Resources
10 mins	<p>Hello and how you're coming to this meeting today</p> <p>Agenda Review</p>	See what's up, say hello, and check in before we begin.	Feeling Wheel (The Gottman Institute, n.d.) - linked
2 mins	<p>Roles</p> <p>Notetaker: xx Timekeeper: xx Facilitator: xx Norm Checker: xx</p>	Share the facilitation / leadership	
5 mins	<p>Framing For Today</p> <p>Reading: "If we are to realize a transformation in learning, leading, and teaching, the following shifts need to occur in everyday conversations: We need to shift from</p> <ul style="list-style-type: none"> ● What has been taught to what has been learned ● Attributing results to factors outside one's control to those within it ● Fixed mindset language to growth mindset language ● Low expectations to high expectations ● Opposition to change to advocating for change ● Valuing isolation to valuing collaboration ● Certainty to Inquiry" - Donohoo & Velasco (2016) p. 71 <p>BONUS Reading: "The academy is not paradise. But learning is a place where paradise can be created. The classroom,</p>	Make sure we're clear on our why together	

	with all its limitations, remains a location of possibility. In the field of possibility we have the opportunity to labor for freedom, to demand of ourselves and our comrades, an openness of mind and heart that allows us to face reality even as we collectively imagine ways to move beyond boundaries, to transgress. This is education as the practice of freedom.” - hooks (1994) p. 12		
3 mins	<p>Norms</p> <p>Which ones will be most important here in our work together today?</p>	To ground ourselves in the Norms	[school name] Staff Norms.pdf - linked
86 mins	<p>Embedded Reflective Practice</p> <p>FRAMING</p> <ul style="list-style-type: none"> ● Protocol purpose ● Protocol origins (adapted from The Making Meaning protocol (School Reform Initiative, n.d.c) and What Comes Up protocol (McDonald et al., 2013, pp. 49-50)) ● This will be engaging in an embedded reflective practice together with qualitative data (or evidence of “success”) <i>now with a lens on success as learning from FAILURE</i> ● Based on your exit ticket responses and research, it is important to consider how the story is “EMPOWERING” and has “SUCCESS” either in the form of eventual results or reflection to share an example of making meaning through adversity. This is also important in considering the development of our collective efficacy. ● Norm connection <p>ACTIVITY: Story Rounds</p>	Connecting back to our learning about continuous improvement for equity and collective teacher efficacy, looking ahead to how embedded reflective practice is essential for the development of collective teacher efficacy	<p>What Comes Up Protocol - linked (Modified)</p> <p>(McDonald et al., 2013, pp. 49-50)</p> <p>AND</p> <p>The Making Meaning Protocol- The Storytelling Version.pdf - linked (Modified)</p> <p>(School Reform Initiative, n.d.c)</p>

	<p>Getting Started (6 minutes)</p> <ul style="list-style-type: none"> • Write in your journal about a story when you experienced FAILURE (in the context of your teaching - at [school name] if applicable) and what you learned from that failure - ie EVIDENCE OF SUCCESS as the learning from the failure <p>Step 1. Sharing the Story (UP TO 3 minutes with 5 ppl, 2.5 mins for 6 or more ppl)</p> <ul style="list-style-type: none"> • The storyteller tells their story • The participants listen in silence, perhaps making brief notes about aspects of the story that they find particularly significant. <p>Step 2. Question and Response whip (2 minutes)</p> <ul style="list-style-type: none"> • The facilitator asks the group: What comes up for you when you hear this story? Each person (not including the storyteller) responds to this question (in 20 seconds or less) <p>Step 3. Making meaning of the story together (5 minutes)</p> <ul style="list-style-type: none"> • The group (not including the storyteller who is listening, reflecting, taking notes) discuss the story. • Why do you think the storyteller considered what they learned from this failure a SUCCESS? • What additional insights do the participants have about why the experience was so powerful for the storyteller? • The storyteller listens in silence while taking notes of the conversation. <p>Step 4. Storyteller response (2 minutes)</p> <ul style="list-style-type: none"> • The storyteller reflects on any new insights on how what they learned from this failure was a success, how this helped 		
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	<p>develop collective or self-efficacy, and what it meant for them to hear crew mates discuss their story.</p> <p>(The protocol repeats steps 1-4 until all members have told their story. (12 minutes per person with 5 ppl (60 mins), 11.5 total with 6 ppl (72 mins), 84 mins for 7)</p> <p>ORDER:</p> <ul style="list-style-type: none"> ★ xx ★ xx ★ xx <p>BREAK - 5 min bio/stretch - Thank you for this suggestion!</p> <ul style="list-style-type: none"> ★ xx ★ xx <p>Step 5. Discussing Implications for CONTINUOUS IMPROVEMENT FOR EQUITY and COLLECTIVE TEACHER EFFICACY (10 minutes)</p> <ul style="list-style-type: none"> ● <i>In thinking about the stories you just heard / shared, what is coming up for you around COLLECTIVE EFFICACY, EVIDENCE OF SUCCESS, EMBEDDED REFLECTIVE PRACTICES, and / or CONTINUOUS IMPROVEMENT FOR EQUITY?</i> <p>Step 6. Reflecting on this protocol today (10 minutes) - start at 7:21pm <i>The group reflects on the experiences of or reactions to the protocol as a whole.</i></p> <ul style="list-style-type: none"> ● How did this protocol feel? ● Did this protocol help you develop self or collective efficacy? Why or why not? ● How was this similar to “looking at data” in Data Studio or the “looking at student work” protocol? How was it different? 		
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	<ul style="list-style-type: none"> • What made a good story today? 		
7 mins	<p>Preparing the Data</p> <ul style="list-style-type: none"> • Next week, we're engaging in a data protocol, but first we need the data • Each person needs to contribute a story as our data. It can be one of the two stories you've already told. The story should be able to be read in about 2 mins <ul style="list-style-type: none"> ○ The benefit of sharing a story told from the past sessions is that everyone has had the chance to dig deeper into these, has more familiarity with these, and has discussed these. ○ Wide open to new stories, though, if that's resonating with you. It can also be powerful to have novel, new stories told. • Add your story to the Shared Story Document - linked in here <ul style="list-style-type: none"> ○ You will have 5 mins to read this over and finalize it during the next session ○ It can be framed either way (success as success, failure as success) 	Giving time to collect data for next week	
5 mins	<p>Debrief (and prep for next time) <i>What is your "final thought" on today? - whip around (1-2 sentences)</i></p> <p><i>No Exit Ticket - you have had exit tickets and "homework" in the last sessions. There will be post surveys, a focus group, and interviews after the next session.</i></p>	What's working, what might not be, how we're learning together	
2 mins	<p>Next Steps</p> <ul style="list-style-type: none"> • EC: <ul style="list-style-type: none"> ○ Plan next session based on 	So we're all clear on what's next in our process.	

	<p>input given today</p> <ul style="list-style-type: none">● Crew mates:<ul style="list-style-type: none">○ Ready for next session 2/13/23 at 5:45pm on Zoom - link is above○ The “data” is ready in our Shared Story Document by our next session - (There will be 5 mins to read over/finalize in the session.)		
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Session 4 - 2/13/23

Attendees: xxxx

Timing	Item	Why	Resources
10 mins	<p>Hello and how you're coming to this meeting today</p> <p>Agenda Review</p>	See what's up, say hello, and check in before we begin.	Feeling Wheel (The Gottman Institute, n.d.) - linked
3 mins	<p>Roles</p> <p>Notetaker: xx Timekeeper: xx Facilitator: xx Norm Checker: xx</p>	Share the facilitation / leadership	
5 mins	<p>Framing For Today</p> <p>Embedded Reflective Practices:</p> <ul style="list-style-type: none"> ● Now doing a "looking at data" type protocol with educator stories qualitative data <p>Readings: "Envisioning a future of global peace and justice, we must all realize that collaboration is the practice that will most effectively enable everyone to dialogue together, to create a new language of community and mutual partnership" - hooks (2010) p. 41</p> <p>"...every single large system or structure or network or political protocol – all of it – is made up of small things. Of humans either having or not having necessary conversations... - <i>adrienne maree brown, from the On Being podcast</i> (Tippett, 2022, 19:48)</p>	Make sure we're clear on our why together	
2 mins	Norms	To ground ourselves in the	[school name] Staff

	Which ones will be most important here in our work together today?	Norms	Norms.pdf - linked
70 mins	<p>Data Analysis Protocol</p> <p>FRAMING:</p> <ul style="list-style-type: none"> ● Protocol purpose ● Norm connection <p>ACTIVITY: Data Analysis Protocol - Adapted from Donohoo (2013)</p> <p>Step 1: Organizing the Data (10 mins)</p> <ul style="list-style-type: none"> ● Make sure you're story is ready to be read in the Shared Story Document - (was linked in here) <p>Step 2: Reading the Data (15 mins)</p> <ul style="list-style-type: none"> ● Whip around of each person reading their story (under 2 mins) <ul style="list-style-type: none"> ○ xx ○ xx ○ xx ○ xx ○ xx ○ xx ● Participants can follow along on the Shared Story Document <p>Step 3: Describing the Data (5 mins total)</p> <ul style="list-style-type: none"> ● Individuals reread the data and consider JUST THE FACTS. Consider 3-5 factual statements about the data. (2 mins) ● Each person whips around to share 1 factual statement about the data (3 mins) <ul style="list-style-type: none"> ○ Remember: It's FACTS (vs INTERPRETATION) <p>Step 4: Classifying the Data (coding*) (48 mins total)</p>	<p>Connecting back to our learning about continuous improvement for equity and collective teacher efficacy, looking ahead to how embedded reflective practice is essential for the development of collective teacher efficacy</p>	<p>Data Analysis</p> <p>Data Analysis Protocol (Donohoo, 2013, pp. 66-79) - linked</p>

	<ul style="list-style-type: none"> ● <i>Reading</i> from the protocol: (out loud 3 mins) <p>“Qualitative data analysis is a process of breaking down data into smaller units. In this step, the team identifies themes and develops a coding system that will allow the team to group the data. The typical way qualitative data are broken down is through the process of coding or classifying. A category is a classification of ideas or concepts. When the concepts in the data are examined and compared to one another and connections in the data are examined and compared to one another and connections are made, categories are formed. Categories are used to organize similar concepts into distinct groups.</p> <p>During this step, facilitators lead teams in developing a coding system so that they can identify themes. Coding the data sources allows teams to identify patterns related to data from different times or from different sources. Once the big patterns have been identified, other smaller patterns will emerge as the process continues. It is important that all members of the team have the same understanding of the meanings attached to the codes. In the end, all members must determine what codes they will use—not only for the purpose of consistency, but so they have an understanding of the codes attached to the themes identified.” (Donohoo, 2013, p. 69)</p> <ul style="list-style-type: none"> ● <i>Framing</i> the concepts of Codes, Categories, and Themes (7 mins) <ul style="list-style-type: none"> ➤ CODES - some ideas/concepts we’re noticing coming up more than once ➤ CATEGORIES - buckets to put similar codes in ➤ THEMES - the biggest, the 		
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	<p>overall, capturing multiple categories</p> <ul style="list-style-type: none"> ● <i>Basic coding practice</i> <ul style="list-style-type: none"> ➤ CODES determined from noticed trends: <i>popcorn style</i> (10 mins) ➤ CATEGORIES determined from grouping CODES: <i>discussion</i> (10 mins) ➤ THEMES determined from grouping CATEGORIES: <i>discussion</i> (10 mins) <p>Step 5: Interpreting the Data: Forming Conclusions and Determining Implications (18 mins)</p> <ul style="list-style-type: none"> ● Conclusions: What are these stories telling us? ● Implications: What does this mean for your work as a Crew at [school name]? <p>*A great resource to learn more about qualitative coding: Saldaña, J. (2021). <i>The coding manual for qualitative researchers</i> (4th ed.). Sage.</p>		
5 mins	<p>Debrief</p> <ul style="list-style-type: none"> ● What was your biggest takeaway from today (in two sentences or fewer)? 	What’s working, what might not have worked, how we’re learning together	
10 mins	<p>Biggest Takeaway from our work together OVERALL</p> <ul style="list-style-type: none"> ● Knowing we have the post-survey, interviews, and focus groups, but what is resonating as your biggest takeaway overall right now? 	Making meaning, initially, before the survey, interviews, focus group	

	<ul style="list-style-type: none"> ● Whip around 		
5 mins	<p>Appreciations for this group together!</p> <ul style="list-style-type: none"> ● Share appreciations! 	Appreciating each other for our work and time together	
2 mins	<p>Next Steps</p> <ul style="list-style-type: none"> ● EC: <ul style="list-style-type: none"> ○ Prepare for interviews and Focus Group ● Crew mates: <ul style="list-style-type: none"> ○ Post Survey Completion: linked <ul style="list-style-type: none"> ■ By 2/17 FRIDAY morning circle please! ○ Ready for our FOCUS GROUP - not a session of learning, more of a group interview on Monday 2/27 - check your calendar for the invite - 5:45pm - 6:45pm PST ○ Individual interviews scheduled! You know you are! 	<p>So we're all clear on what's next in our process.</p> <p>Help us collect valuable data to consider our time together.</p>	Post-Survey - linked

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