

**Transforming Everyday Teaching:
Pedagogy and Collaboration Supporting Equity, Inclusion and Effective Instruction**

By

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Abstract

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Transforming Everyday Teaching: Pedagogy and Collaboration Supporting Equity, Inclusion and Effective Instruction

Thesis directed by Assistant Professor Susan Hopewell

This multiple-case study examined three teachers' formal and peripheral engagement across multiple years of a three-year, professional development project. Collaborative support focused on applying the standards for effective pedagogy to the redesign and implementation of elementary instruction, in an effort to increase equity and inclusion for all diverse learners within general education classrooms. The complex contexts of teaching within psychosocial school systems influenced teachers' active and limited engagement in a variety of collaborative support activities. Negative intersubjective perceptions generally influenced limited engagement. Long-term participants sought active engagement in collaborations perceived to support continually improved instruction, while responding to their challenging contexts, and relevant to their instructional obligations and classroom needs. Examination of longitudinal data revealed a substantive process of cyclical collaborative support through which teachers engaged collaboration to process and prioritize relevant challenges, explored ideas to apply effective pedagogy in the redesign and implementation of instruction, observed improved classroom outcomes, and sought further opportunities for continual improvement. Ongoing engagement in this cyclical process of collaborative support helped teachers mediate the influence of complex challenges across the teaching profession. Conditions that sustained long-term engagement included an iterative process of redesign for collaborative activities, which enabled support to be

most responsive to teachers' available time, and most relevant to teachers' observed classroom needs and instructional obligations. In addition to proximal propinquity, psychosocial propinquity with the standards for effective pedagogy and trusted collaborators, along with engaging activities perceived to provide positive, collegial support, had significant influence on participants' active, ongoing engagement. Administrator involvement during the third and final year of the project influenced significant changes in the design and delivery of collaborative support, including mandated and structured expectations for participation. This led to intersubjective perceptions of increased challenges, negative collegial interactions and an interruption of support provided across the first two years of the project when there had been no administrator involvement. Implications suggest future professional development should take the complex psychosocial contexts that influence teachers into account and respond flexibly to teachers' capacity to engage while focused on relevant obligations and classroom needs.

Keywords: education, inclusive equity, diverse learners, effective pedagogy, instructional design, professional development

Dedication

For my grandmother and mother: my greatest role models as women, educators and leaders for equity in an inequitable world. Their endless support made this work possible.

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**Transforming Everyday Teaching: Pedagogy and Collaboration Supporting Equity,
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Chapter 1: Are Students and Teachers Being Set-up to Fail?

Although educational institutions are formally delta purposed, in functioning they are beta seeking, homeostatically functioning, and inefficient in offering direct, responsive, individualized influence and assistance; they therefore seldom operate as effective delta-phase systems. (Tharp, 2012, p.117)

How can we expect teachers to provide high-quality instruction that supports all students in the classroom, when teachers have not been trained to include all students effectively? The failure of repeated attempts at school reform suggests that we cannot reasonably expect teachers to accomplish such outcomes when unprepared; however, the essential question remains unanswered (Tharp, 2008). How can general classroom teachers provide effective instruction in inclusive classrooms when required to support all students with multiple diverse identities, including (but not limited to) differing backgrounds, experiences, languages, cultures, races, ethnicities, socio-economic means and abilities?

This is by no means an exhaustive list of the diverse identities a teacher may encounter in a classroom, but the teacher is responsible for ensuring educational success for every student. Research to understand the experiences of, and effective instructional strategies for, each categorically identified sub-group of students is essential. Inclusive classrooms must support all students with differing identities as well as those with intersectional identities informed by experiences across multiple sub-groups, including diverse linguistic, racial and ethnic or cultural backgrounds, genders and orientations, (dis)abilities and socio-economic status. Since teachers are responsible for providing instruction that is effective with all students in the classroom,

research must also focus on teachers' needs for pragmatic approaches to effective instruction and support for implementation in inclusive, diverse, 21st century classrooms. Although researchers often specify the identity of the sub-group on which they are focused (Connell, 2004; Gandara, 2013; Klingner & Soltero-González, 2009; McDermott & Varenne, 1995; Richards, Brown, & Forde, 2006; Rothstein, 2004; Skrtic, 2013; Sleeter & Bernal, 2004; Tatum, 1997), Skrtic recognizes the need to move beyond the separatist nature of categorizing students' multiple identities (1995) because of the pervasive deficit perspective subsequently assigned to students given a categorical label (Biklen, Bogdan, & Blatt, 1977; McDermott, 1996; Mirci, Loomis, & Hensley, 2011; Skrtic, 1995).

While research across categorized identities is essential for understanding the learning needs and experiences of varied, diverse sub-groups, the current practice of using labels as a gate-keeper between students and access to needed opportunities for educational supports necessitates categorical marginalization and perpetuates the social reproduction of segregation in U.S. schools (Burris, Welner, & Bezosa, 2002; Howe & Welner, 2002; Noguera & Yonemura Wing, 2006). Alternatively, Skrtic suggests the need to move educational practices toward non-categorical access and cross-categorical perspectives, thereby humanizing and unifying the individuals included within the learning community and the assets they contribute to the classroom (Bartolome, 1994; McCall & Skrtic, 2010; Skrtic, 1995, 2013; Tharp et al., 2000). Unfortunately, policy structures influencing schools have focused on the content of instruction rather than ensuring teachers are able to deliver instruction that is both equitable and effective for all learners in the classroom.

Background: Education Policy Gone Awry

As a result of misguided policies on standards and accountability under the No Child Left Behind Act, diverse students have been marginalized from their education in schools across the country (Carter & Welner, 2013; Howe & Welner, 2002; McGuinn, 2006). Although access to public education is not specifically cited as a constitutional right, the US has a long history of providing education as a public service and has been through many waves of reforms, attempting to broaden access and align schools with intentions for students when they enter society as a working citizen in a democracy (McGuinn, 2006; Tharp, 2008). Clearly, education has changed in many ways since the 1800's, but Tharp's analysis of historical reforms and supporting data show that each policy has fallen significantly short of its goals by failing to garner enough political or local support, or attending to limited factors in education while ignoring those essential to success (Tharp, 2008). Policy during the Civil Rights Era spurred efforts to increase educational access. *Brown v Board* (1955) and the Civil Rights Act (1964) signified significant progress, eliminating de jure segregation and securing the right to access equitable education across racial lines. Momentum spread as other groups, experiencing marginalization from education worked to secure their rights including the Elementary and Secondary Education Act (ESEA), the Education for All Handicapped Children Act, Title 1- for those struggling against poverty, and Title 9- for inclusion of women. Although judicial decisions secured further rights, such as *Lau v Nichols*- clarifying that access to school in a language a student cannot understand does not constitute equitable access to education, in 1983 *A Nation at Risk* caused great upheaval (McGuinn, 2006). The report shared findings of continuing struggles for educational access across the country, and the response was new waves of federal policy for education reform (National Commission on Excellence in Education, 1983).

Federal policy under Bush's No Child Left Behind Act (NCLB, 2002) shifted attention from affirming rights to access education for a broad range of citizens with diverse identities and backgrounds to federal oversight to ensure accountability for equal student outcomes (McGuinn, 2006). While well intended by name, the enactment of NCLB policies have pushed progress in the opposite direction, with increasing marginalization of diverse students across the nation (Betebenner, Howe, & Foster, 2005; Howe, Eisenhart, & Betebenner, 2001; McGuinn, 2006; Noguera & Yonemura Wing, 2006). Funding, originally intended to support states and local schools with changes to align with new policy, was removed and methods for accountability to student outcomes was interpreted as equal scores on standardized tests of the core content standards.

This focus on accountability narrowly defined by student scores on standardized tests displaced the goal of ensuring access to education or equitable outcomes for all students, and supplanted it with the goal that all students earn equally high scores on tests. The resulting unintended consequences have been increasing and wide spread inequity due to educational practices such as school tracking, separation of students based on categorically labeled differences of diversity or ability, decreasing equity of school capital and resources across geospatial areas in line with social segregation, and inaccurately low test scores being used to target students, identify failing schools and dismiss teachers (Burris, Welner, & Bezozza, 2009; Carter & Welner, 2013; McDermott, 2011; Skrtic, 2013). By limiting accountability to achievement on narrow content standards, ignoring other essential school learning, access to educational resources or the contexts in which teachers design and deliver instruction, the goal of accessible, equitable public education as a way to prepare students for their future in the workplace and communities within a democratic society by been derailed by policies that are

insufficient in reflecting the complex nature of effective instruction. In addition to significant concerns around the validity of narrowly written, culturally and linguistically biased content in mandated tests, these methods presume to gauge learning of grade-leveled content, but cannot demonstrate any student's growth from previous years. At best, these tests, if valid, could only gauge a portion of learning in any subject. While interfering significantly with instructional time, the tests serve no instructional purpose since teachers cannot know test questions, even after tests, to inform their classroom instruction and support student learning (Carter & Welner, 2013; McGuinn, 2006; Solano-Flores, 2008).

Although teacher evaluation takes other factors into account, the challenges associated with using standardized tests for school accountability are highly problematic. The organizational structure used to enact accountability oversight focuses exclusively on student test scores with no attention to students' access to learning or teachers' access to support or instructional resources. As a result, sole responsibility for student learning is placed on the shoulders of each teacher, making mandated tests for accountability very high stakes for teachers who bear the brunt of accountability measures, as job retention or dismissal are based on students' test scores (McGuinn, 2006). Unfortunately, the recent attention to CCSS and the 2015 reauthorization of the ESEA in the form of the Every Student Succeeds Act (ESSA) have yet to indicate if there will be a return to an approach to public education that is grounded in equity. In fact, ESSA effectively eliminates larger school, district or state responsibilities for teacher training and licensure, ensuring equitable opportunities to learn for all students, equitable distribution of funds, capital and educational resources by excluding them from any accountability framework (Anderson, 2010; Carter & Welner, 2013; Gandara & Contreras, 2009; Howe & Welner, 2003; McGuinn, 2006; Noguera & Yonemura Wing, 2006). This change in

licensure requirements under ESSA increases the need to understand how effective PD can be designed and delivered to support teachers' ability to work with all learners.

Teachers are not only responsible for teaching every student in their classroom; they are accountable for students' test scores. This means teachers' jobs rest on students' success on the test, disregarding students' gains in essential background knowledge since previous years or access to resources and support. But, teachers have not been provided the supports and resources they need to deliver high-quality education for all. We know that general education teachers are underprepared to support culturally and linguistically diverse learners and students with identified (dis)abilities (Fillmore & Snow, 2000; Klingner et al., 2008).

While instructional time is decreased, due to high-stakes testing, teachers have little planning and collaboration time, both of which are needed to develop high-quality lessons. In addition, students of diverse racial, cultural or linguistic backgrounds are disproportionately placed in special education with separate special education rooms, pullout supports, or lower academic tracks, stigmatizing learners by removing them from the general education classroom and disconnecting them from their peers (Betebenner et al., 2005; Harry & Klingner, 2006; Howe et al., 2001; Howe & Welner, 2002; Noguera & Yonemura Wing, 2006; Welner & Carter, 2013). Beyond special education, students with diverse linguistic backgrounds are often pulled from general education classrooms to receive English as a second language (ESL) supports or may be placed in a separate ESL program, further stratifying students within schools (Gandara & Contreras, 2009; Noguera & Yonemura Wing, 2006). In elementary schools, this means a wide range of students miss general classroom instructional time because they are pulled out of the classroom for targeted interventions supported by special education, ESL or response to intervention (RTI) teachers, or paraprofessionals who have little training-if any.

While NCLB policy was intended to improve all learners' access to equitable, high-quality education, it accomplished the opposite. Improvement in education through federal policy reform will require attention to the neglected essentials, standards for teaching methods, implementing effective pedagogy and equitable access, as well as accountability at the state, district and school levels, rather than targeting individual teachers. Improving the state of schools in the US will require far more than reform of education policy. Equity for students depends upon the transformation of education and instruction. Teachers are at the frontline of education, responsible for designing and implementing effective instruction for all students, but a classroom community and student learning depend not just on the teacher, but upon the specific contexts of the school, district and broader educational systems within which they are situated. For each classroom to be most effective and equitable for every student, it is the teachers who need both opportunity for transformation including effective training, collegial collaboration, appropriate content with curricula resources and systemic assurances of equitable access to high-quality resources and meaningful opportunities for student learning.

Rectifying the problem of segregation in U.S. schools will take years of improvement, relying on the dedicated efforts of many in both political and educational settings. However, the political arena and the educational settings are two very different realms, which will require differing efforts and timelines to influence change in ways that are practical and effective. A shift in policy is needed to decrease instructional emphasis on accountability tests, but there is also a pragmatic need to address the current conditions of instruction and support general education teachers within the context of their classrooms.

Importance: Student Segregation and Exclusion from Instruction

Currently, teachers are accountable for their students' performance on high-stakes tests, but are not well prepared to support students with emerging multilingual or learning needs (Fillmore & Snow, 2000; Klingner, Hoover, & Baca, 2008; Tomlinson & McTighe, 2006). Classroom teachers are rarely sufficiently trained to support students with needs related to language, ability, or background (Fillmore & Snow, 2000). Instead, support from professionally licensed Special Education or English as a Second Language teachers is most often provided using a pullout model removing students from the classroom or providing lists of strategies classroom teachers must independently design into lessons (Gandara, 2013; Meyer & Rose, 2000; Tatum, 1997). Layering strategies onto instruction through ad-hoc additions or pullout instruction cannot sufficiently address the learning needs of all students (Gandara & Contreras, 2009). In fact, we know that all brains learn differently (Hitchcock, Meyer, Rose, & Jackson, 2002; Meyer & Rose, 2000) and it is the classroom teacher who must support the needs of all. What is needed is a more systematic and sustained way to provide professional development to teachers, so that they are better able to plan and design inclusive lessons.

In classrooms, teachers lack sufficient time to plan lessons and collaborate with instructional specialists, (Mueller, Singer, & Carranza, 2006). In addition to curricular content overload (Dare, Durand, Moeller, & Washington, 1997; Kosnik & Beck, 2009), teachers gather instructional strategies from learning specialists, such as ESL and special education teachers, in addition to a multitude of PD trainings, which when lacking the ability to collaborate with instructional specialists contributes to what I have termed *strategy overload* when teachers struggle to implement needed instructional strategies sufficiently, or to support the diverse students who make up their classroom effectively (Norman, 2013; Ralabate, 2011). Since

classrooms must support diverse students with varied background knowledge and lived experiences, the encapsulated nature of instruction that lacks contextual connections to students' real-world lives (Engeström, 1991) exacerbates the need for both high quality instruction and teachers who can effectively design instruction in response to the students they teach.

Unfortunately, everyday instruction cannot be effective for all students with a range of experiences and identities unless each of their marginalized perspectives are appropriately considered during lesson design (Norman, 2013). This is particularly problematic when classroom teachers are insufficiently trained and licensed specialists trained to support these needs are not available to help with the design and implementation of everyday instruction. Teachers must be prepared to work with all students and must take care not to cater to one identity at the expense of another. Emerging multilingual (EM) learners, for example, are an important group, but supporting needs related to cultural and linguistic diversity does not preclude them from having needs related to other marginalized identities as well. Teachers must recognize that allowing student identities to be marginalized in the classroom can create barriers to learning, whether due to needs related to culture, language, learning styles or abilities, so instruction must be designed to be effective for all learners in a given classroom by accounting for as many of these identities as possible during initial planning (Hitchcock et al., 2002; Jiménez, Graf, & Rose, 2007; McLane, Burnette, & Orkwis, 1999). New teachers, however, often enter the field without sufficient training to address the learning needs of diverse students, and trained learning specialists have little time for collaboration (Friend, 2008; Klingner et al., 2008). As a result, in-service teachers are expected to acquire the skills necessary to provide effective instruction through in-service training known as professional development. Professional development can be presented to, and engaged by, teachers in many different ways indicating the

need to understand the complex factors that influence teachers' professional learning and resulting transformation of instruction.

While much is known about contexts that impede productive professional development (PD), little is known about complex contexts enabling successful PD, or the perspectives of teachers who actively seek long-term opportunities for PD support. As policies on standards, testing, or instruction change, teachers are forced to change the instructional strategies, priorities and organization they use to teach, essentially changing the work culture of the school with each new reform (Lassonde, Michael, & Rivera-Wilson, 2008). Professional development is a key component of implementing any education reform by bridging the gap between paper policies and pragmatic practice, often structured into mandatory school and district-wide calendars. Unfortunately, while some programs have been effective at impacting change in schools, PD is both a necessity and notoriously difficult to do well.

In addition, research in cognitive neuroscience has expanded our understanding of the neurological processing differences among every individual's brain. This has only emphasized the need for unified inclusive approaches for instructional design and practice, such as Universal Design for Learning (UDL) rather than a one-size-fits-all approach (Hitchcock et al., 2002; Meo, 2008; Meyer & Rose, 2000; Norman, 2013; Ralabate, 2011). Instead, UDL focuses on methods for designing instruction while proactively accounting for the vast range of diverse identities, languages, learning needs and barriers to educational access situated within the context of each teacher's classroom. I utilize Kincheloe and Steinberg's definition of multicultural diversity, inclusive of many differing repertoires of cultural and lived experiences that could also be informed by family structure, gender, social class, ability or orientation among others (1997),

because it is most relevant to the inclusive, diverse, multicultural classrooms in which teachers are situated.

Purpose of Inquiry

In response to the urgent need for instructional transformation in the context of public school settings, this multiple-case study presents an investigation into the experiences that influenced multi-year teacher participants while engaged in PD focused on supporting their implementation of effective pedagogy for diverse learners, in their inclusive, general education classrooms. In this inquiry, I sought insight from the teachers who voluntarily engaged ongoing, research-based PD opportunities designed to support increased implementation of effective pedagogy across instructional content subjects, to support all diverse learners in inclusive elementary classrooms.

With this in mind, my work addressed the inherently diverse nature of inclusive classrooms, in which teachers must create a learning community unburdened by the deficit perspectives associated with the use of categorical labels assigned to individual dimensions of a student's multidimensional identity. I began with the assumption that teachers are charged with designing and implementing instruction capable of supporting learning for all students across diverse racial, ethnic, cultural, linguistic, gender, socio-economic status or ability informed experiences of identity based on the students situated within the 21st century inclusive classroom. This work focused on the practical need to transform instructional practices within the context of a school's learning culture, in order to increase equitable inclusion and student achievement in classrooms across the country. The practical need to transform instruction, as practices teachers utilize to facilitate equitable, inclusive learning for all students, is relevant to every classroom across the country, and is an essential area of exploration in the field of education, given the slow

and highly politicized nature of education policy reform. The purpose of this study was to explore how experiences during PD embedded within the psychosocial contexts of a school influenced teachers' participation, perceptions and instructional implementation toward unified approaches to effective instructional strategies that are responsive to the contexts of each classroom.

Conceptual Framework: Designing Learning for Inclusive Equity

The current focus on teaching as general methods for delivering content and language instruction ignores the most essential underpinning of attending to instructional pedagogy that is effective for the diverse students being taught in any given classroom (Darling-Hammond & Bransford, 2005; Gay, 2010; Norman, 2013). The design and implementation of effective instruction rely on critical, responsive and inclusive pedagogical approaches. For teachers to create effective learning spaces with inclusive classroom communities, teachers need far more than content knowledge. They need adaptive expertise to balance established routines with responsiveness to students' needs (Darling-Hammond & Bransford, 2005), they need the critical skills to broker equity in the classroom as an inclusive community, identifying, interrupting and revealing inequitable metanarratives in society (Kosnik & Beck, 2009; Mitchell, 2013) and they need mastery of strategies for orchestrating the classroom as a learning community, rather than a group of children to be managed (Darling-Hammond & Bransford, 2005; Gay, 2010; Kosnik & Beck, 2009). This means teachers need the support of a significantly expanded repertoire of practices beyond NCLB's emphasis on knowledge-centered and assessment-centered practices. Teachers need to be able to engage pedagogically sound design for instruction, understand and value diversity as a classroom resource necessary to learner-centered responsiveness, and recognize and enact 'classroom management' and relationship-building strategies necessary to

create a community-centered classroom and a safe, inclusive learning environment. Done well, relevant, culturally responsive and inclusive pedagogies for teaching have the potential to support effective learning for all students while fostering equitable community in the classroom, resisting societal inequities, empowering students and transforming education.

Expanded knowledge and understanding of developmental influences related to age, language, culture, experience and ability, enables teachers to better understand the local and personal contexts relevant to their students. Skills to build relationships and classroom community allow both resistance to reproduction of inequity and transformed experiences of equity in a community centered on learning. Empowering students to connect learning to their own prior knowledge and background experiences enables further connection to others in the classroom community while validating students' identities. Providing opportunities for collaboration leverages students' use of language, experience and personal expertise to increase understanding, learning, work skills and motivation to explore new perspectives and interests. Although a base level of content expertise is needed by teachers, the repertoire of practices that are essential for creating equitable educational opportunities remain neglected in U.S. public schools (Darling-Hammond & Bransford, 2005; Fillmore & Snow, 2000; Hoover & Patton, 2005; Ladson-Billings, 2014; Tharp, 2004). The skills needed to bring equity and effective pedagogy to the classroom revolve around teachers' understanding that diversity includes a broad variety of differences, and the skills to recognize and address the barriers to learning that exist in the context of their specific classroom, students and instructional resources.

Given the complex contexts that influence schools, within which teacher learners engage professional development to improve their instruction for student learner, any approach to PD much recognize the complex nature of the school psychosocial system where PD, teachers, and

their students are situated. With attention to these complex contexts, my conceptual frame draws on three essential perspectives: working in schools as complex, psychosocial systems, designing PD for effective teacher transformation, and teachers' design for effective instruction in the classroom.

Working in complex, psychosocial school systems. To better understand the complex nature of schools as dynamic psychosocial systems, I rely on Delta theory (Tharp, 2012). Delta theory focuses on designing influence, as assistance, to support intended change within psychosocial systems. This theory provides a unified understanding of influence and change drawing from multiple fields including education, sociology, psychology, anthropology, cognitive neuroscience and biology. The concepts within Delta theory, founded on scientific principles, provide an understanding of intentional influence and change across all cultures, recognizing that variations in the lived cultural experiences of individuals will manifest as different style preferences among participants with diverse backgrounds. While focusing on the narrow dynamic of intentional influence and change, Delta theory's unified scientific perspective also equates to a unified learning perspective encompassing learning theory, culturally responsive and effective pedagogy, second language acquisition and equitable, inclusive instruction for students with diverse linguistic, cultural, socioeconomic and ability backgrounds (Tharp, 2012).

Tharp's Delta theory framework assumes that the process of social sorting influences all groups, such that opportunity for propinquity, participation in activities, intersubjectivity and affinity influence who establishes membership in a special interest group and how group members participate within, and identify with, a group or network. Since this unified theory is applicable across identity groups, the agents, means, and subjects of influence, and resulting

change, can be understood in universal terms. Agents are those who design and present purposeful influence toward a specific goal for desired change, such as teachers in the classroom or trainers delivering PD. The means of influence are the methods used to convey the designed message, such as the structured approach to instruction or PD. Subjects are those being influenced by the delivery of a designed message, such as teachers learning through PD or classroom students learning through instruction (Tharp, 2012). Delta theory recognizes that the process of intentional change through influence, often structured as assistance or regulation, is universal regardless of age, gender or culture. Therefore, Delta theory is also relevant in the context of diverse classrooms, where teachers' and students' roles vary, as subjects or agents of influence, depending on the activities and settings with which they are engaging. However, since very few teachers engage with groups comprised exclusively of individuals from the same background, preferences for particular stylistic approaches to influence may vary as greatly as the range of diverse identities represented.

For teachers, opportunity for participation is created through providing PD, but the intersubjective experience that develops affinity relies on the design and execution of the activities within with PD and the same can be said of activities within instruction for students. In the instructional capacity of PD, teachers are the subjects of influence, with a particular goal for change and the agent of influence is generally the PD provider (e.g., the designer of an interactive online module, trainer or instructional coach). As is the case with online PD, mediated by the Internet, software and virtual interface, mediators are often situated between the agent and subject of influence, as seen in figure 1, below from Tharp (2012).

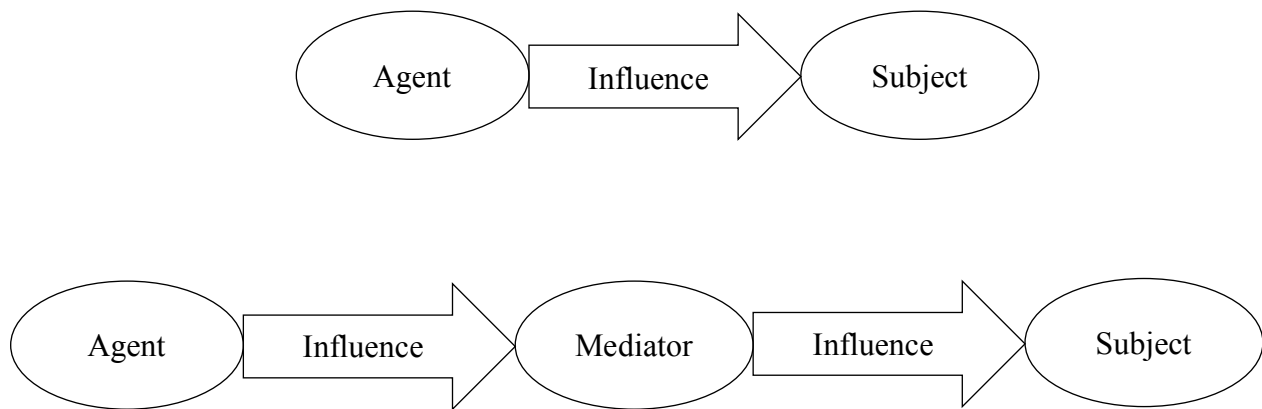


Figure 1. The cultural pattern of influence (Tharp, 2012).

In a psychosocial group, influence is directional, exerted on one by another, but this relationship is not necessarily limited to a dyad or stable with unchanging roles between agents and subjects. Tharp represents these relationships as three dimensional and often dynamic with the roles of agent and subject moving around various participants in the context of different activities (Tharp, 2012). As a result, a person within a structured group may be assigned the role of agent, such as a school administrator or PD provider. However, when the person assigned agency in a leadership role is not present, influence may come from the agency of another colleague or group member within the social network. This means that some group members, such as school administrator or lead teacher may have the agency to exert more influence than others, so the multidimensional structure above represents potential influence. Within a specific network that is both dynamic and more complex representing the network of connections among group members is also more complex. It is also essential however, to recognize that individual members of any one group or network will also identify with multiple groups and networks within multiple psychosocial systems, as shown in Figure 2.

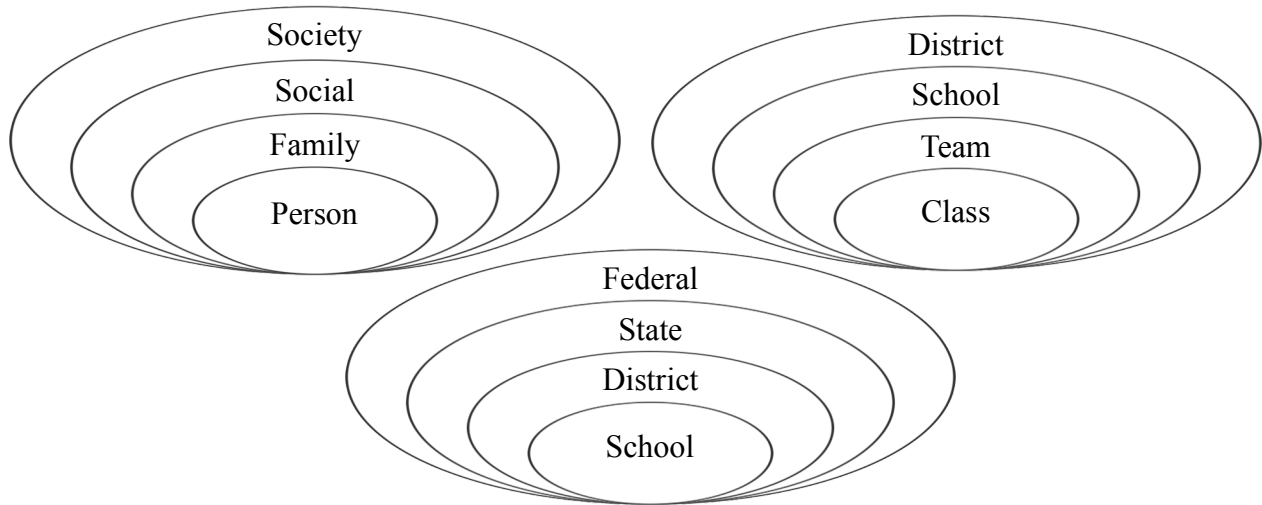


Figure 2. Federal, societal, and school district psychosocial systems containing units and sub-units, in which teachers and students have differing membership.

As a result, the representation of psychosocial systems contains complex networks within groups that are themselves dynamic and moving, containing individuals with evolving identities and membership in multiple network groups, which are themselves evolving units within larger psychosocial systems.

Delta theory provides a frame for understanding the complex nature of psychosocial systems. Tharp also emphasizes the importance of the dynamic alpha, beta or delta state of each of the individuals or units within a system network. In the context of a school or classroom, alpha state is characterized as a state of chaos in response to change, such as new school policies, mid-year staff changes, or specific catastrophic crises. Beta state is characterized by a maintained state of stability, such as consistent routines and practices among teachers or within daily, classroom instruction, prior to any disruptions from an unexpected or unmanageable change that pushes the psychosocial state from beta into alpha. Delta state is characterized as a state of stable synergy with dynamic change. An individual or group in delta state has normalized the

occurrence of changing contexts by establishing routines and practices for interaction that account for and embrace change, or difference, as an asset or opportunity, rather than an obstacle or crisis. Delta classrooms recognize that synergy with change and difference support successful learning (Tharp, 2012).

Tharp discusses background and empirical evidence that supports Delta theory from many fields of social and cognitive science, to advance the delta classroom, as an ideal psychosocial unit, utilizing all five means of influence as appropriate to support each student in their varying zones of proximal development. Tharp's ideal delta classroom is a laudable goal, but very few classrooms approach what Tharp describes as delta phase, where influence and change are integral to the design of the psychosocial classroom community of learners. Instead, the overarching structures of traditional education, particularly in the US, tend toward and maintain a Beta phase, stabilizing and reproducing the status quo established in broader society, moving through Alpha phase, in a chaotic response to disruption of crisis (Tharp, 2012).

The successful delta classroom may be an appropriate goal of influence and change for teachers and the larger psychosocial system of schools. However, this requires designing influence within school networks to support instructional change among constituent teachers. By engaging effective influence in schools, current teachers can develop skills needed to facilitate high quality delta classrooms that enable students' access and successful learning. In addition, by working within school psychosocial systems that support student teachers, delta theory predicts influence for positive change among three convergent psychosocial systems; teachers within the school, students within the classroom and aspiring future teachers.

Approaching a school as a psychosocial system with shared values, shared experiences and restricted membership parameters affords application of delta theory to support change at

multiple levels. Although a school can be viewed as a member of a larger psychosocial unit, such as the district or the community, the school itself is an independent and cohesive psychosocial unit with its own psychosocial sub-groups. Within a school, classrooms constitute independent psychosocial units, as do teacher cohorts collaborating as grade leveled or subject-focused teams. In addition, students across the school or even within a class can form a psychosocial unit, often described as social cliques. Since delta theory emphasizes the psychosocial system or central unit of focus as the locus of influence, the teacher has primary agency to influence change within the classroom, as do administrators or supervisors within their schools. Importantly, general classrooms are including more students with diverse language and (dis)ability backgrounds, yet teachers remain unprepared to provide instruction appropriately differentiated for varied levels language acquisition or ability that now influence the classroom (Gay, 2010; Smith, Tyler, Skow, Stark, & Baca, 2003). High-stakes testing for teacher accountability does nothing to better prepare teachers and those who feel ineffective or inexperienced demonstrate lower levels of receptiveness to inclusion and worse attitudes, more frequently overlooking students with these needs (Mitchell, 2013; Smith et al., 2003). Bartolome suggests that education must be redirected from the strict perspectives of methods toward humanizing perspectives to create more effective educational spaces (1994), much in the same vein as Skrtic and McDermott's works against the use of deficit labels that stigmatize diverse identities as problems in classroom and school communities (see: McCall & Skrtic, 2010; McDermott, 1996; Skrtic, 1995).

Since learning cannot happen unless new knowledge is connected to prior knowledge, teachers must understand the varied backgrounds, experiences and abilities of all students in their classrooms and how those differences influence learning, in order to appropriately facilitate instruction for all learners (Darling-Hammond & Bransford, 2005; Hoover, Klingner, Baca, &

Patton, 2008). Culturally responsive pedagogy for teaching can enable teachers to affirm students' identities, experiences and learning styles while transforming the societal inequities and majoritarian stories currently reproduced in schools (Gay, 2010; Mitchell, 2013). The Center for Research on Education, diversity and Excellence (CREDE) Standards for Effective Pedagogy provide a set of methodological criteria for organizing and facilitating opportunities to learn that could transform schools and classrooms, reorganizing the unbalanced power relationships in the classroom, embracing differing experiences, enabling greater student engagement and ultimately improving student outcomes (Darling-Hammond & Bransford, 2005; Tharp et al., 2000).

Directly influencing the psychosocial unit of the classroom teachers take on a role as brokers of learning and culture (Gay, 2010). In this capacity, teachers as the primary agents of influence, are responsible for designing and orchestrating effective learning situated in the context of their classroom setting, mediating cultural perspectives among students, and fostering shared culture within the classroom community, as a psychosocial unit within the larger school system. While understanding the complex systems and contexts within schools enables PD to better support teachers, it is still essential to design PD that provides effective structures and content, as means of influence toward relevant professional learning that supports teachers and students within classroom contexts.

Design for effective professional development and teacher transformation. As policies change with regard to standards, testing or instruction, they have significant impact on teachers who are forced from stability in beta state to the chaos of alpha state, as they change the practical strategies, priorities and organization of what and how they teach, essentially changing the work culture of the school (Lassonde et al., 2008; Tharp, 2012). Using delta theory to understand the complex contexts influencing teachers in schools enables more effective design of

PD as means of influence within schools. Professional development is a key component of influencing change whether in response to education reform or school policies, by bridging the gap between policies on paper and pragmatic implementation in practice. Therefore, efforts toward change must focus on providing effective professional development (PD) for in-service teachers. While some programs have been effective at impacting change in schools, PD is notoriously difficult to do well. Guskey (2000) emphasized that influential PD must be an intentional process for systematic change with clear purposes and goals, but that designing effective PD relies on multiple factors.

PD must be presented at the appropriate level within the psychosocial system (e.g., district-wide, site-based or individual), utilize structured means of influence appropriate to intended learning goals (e.g., training, inquiry/action research, study groups, mentoring), present content and skills that are effective when implemented (e.g., supporting relevant classroom context) and sustained with systemic support for ongoing follow-up, rather than imposed by administrators as a top-down mandate or one-shot event. Although Guskey (2009) recognized that each of the PD models are best suited for different purposes, he also recognizes that the most effective implementation is designed to integrate multiple PD structures to best support the situated contexts relevant to teacher participants and their classrooms. Training, the universal perception of PD, presented as an event, can be useful for presenting knowledge or policy to a large group to support shared understanding, but done alone is unlikely to affect change in practices. Instead, Guskey suggested an ongoing PD structure as an alternative or mutual support to provide teachers opportunities to collaborate or reflect on practices within their network or community of learners (Guskey, 2005; Tharp, 2012). Working within the school-site allows PD to respond to the relevant situated contexts of the teachers and students, but can also focus the

means of influence more narrowly to support teachers most effectively. While all are useful models, training is best suited for larger groups that need common understanding, and individual approaches can be highly individualized, but both tend to maintain either barriers to professional collaboration or relative isolation of teachers within schools. Guskey recommended that structured means of PD be designed for the target learning goals by integrating multiple supports including collaboration with other members of the school community (coaching/mentoring, small group study, action research), spanning sufficient time to explore practices across a year or more, emphasizing specific reflection on enacted practices and fitting it to the situated context of the classroom. Guskey also recognized the need for administrative or supervisory support for these collaborative practices that require time so the means of PD influence toward a professional learning goal, content or skills support the development of new practices within the community of teachers.

With the explosion of content knowledge and increasingly diverse student identities within inclusive general education classrooms in the 21st century, effective training is essential for in-service teachers' development and implementation of teaching practices known to effectively support learning for diverse students. Guskey (2014) suggested that the backward planning teachers must use to design instruction effectively for their diverse students, must also be used to design PD that can effectively support teachers through PD activities that appropriately align the goals for improvement. Because change is a difficult and gradual process, and PD is particularly difficult to translate into effective implementation, it is the careful planning of PD to suit teachers within the complex contexts of schools, that is essential to effective influence and change through PD (Guskey, 1986, 2002; Guskey & Yoon, 2009, Tharp, 2012). It is job-embedded assistance that teachers need to adapt their professional learning from

a PD into new instructional practices (Guskey & Yoon, 2009). Discussing PD specifically oriented toward (PCK), Driel and Berry (2012) suggest that teachers need far more than new input from PD, they need opportunities to practice enacting and reflecting on new practices both individually and collectively. Diffusion of implementation by teachers engaged in PD requires interaction across the professional social network, through which teachers collaborate and assist each other, sharing ideas, experiences and perspectives that support exploration and implementation of new professional learning (Penuel, Sun, Frank, & Gallagher, 2012; Sun, Penuel, Frank, Gallagher, & Youngs, 2013).

It is essential however, to recognize that time for follow-up support, planning or collaboration is not a sufficient means to support the professional learning or change that PD is intended to influence. Because PD and teacher professional learning are situated within the complex contexts of a school, the school community as a social network is also an important means of influences for individual teachers' learning (Meirink, Meijer, & Verloop, 2007; Penuel et al., 2012; Sun et al., 2013). PD must be designed to provide structured means of influence that are effective for teachers within complex school contexts. However, PD must also present a message or content that teachers can learn and implement to provide instruction that is relevant and most effective for their students. Timperley and Alton-Lee (2008) provided a framework for analysis of effective PD, recognizing that both the content of PD and the structured activities teachers engage to learn PD content are essential components in teachers' iterative learning process, through which teachers must first learn how new PD content is dissonant with current practices, so that teachers can work to reconstruct their practices both individually and with colleagues.

Pedagogical design for effective content and language instruction. Sufficient

knowledge of instructional content is essential for effective teachers, but the growing bodies of research around subject content and education present a significant challenge in the classroom where curricula and teachers' instruction cannot possibly cover everything (Kosnik & Beck, 2009). Given the focus on high-stakes accountability to standardized tests, teaching has mirrored the policy's focus on teaching as a general method for delivering content while ignoring the most essential underpinning, effective instructional pedagogy (Darling-Hammond & Bransford, 2005). We have a breadth of knowledge about effective pedagogy and instructional practices that are effective for teaching students with diverse backgrounds and learning needs (see: Darling-Hammond & Friedlaender, 2008; Gay, 2002; Ladson-Billings, 1999; Nieto, 2010). It is this repertoire of practices which teachers must know and be able to use effectively that must be central to the focus of PD content delivered to in-service teachers, but PD cannot focus on delivering instructional strategies alone (Molle, 2013). The dearth of evidence suggesting that teachers are implementing instructional pedagogy to create equitable learning opportunities that are equitable for all students in their inclusive classroom community suggests the need to focus on how we design effective PD for in-service teachers, to deliver a repertoire of instructional skills that are effective for all diverse students in inclusive classrooms. Some researchers focus on exploring PCK, as pedagogically guided design of content instruction (Bullough, 2001; Carlson, 1990; Hill, Ball, & Schilling, 2008; Segall, 2004), but teachers need more than understandings of content and how to design instruction of content. Teachers must know how to design content and language instruction that can effectively support all students in inclusive classrooms. This means that teachers need content knowledge in addition to pedagogical and methodological expertise, which must all be applied in the design of everyday instruction, so that it can be implemented effectively in the classroom. Teacher-training programs tend to focus on

pedagogy for instructional content knowledge, but it is methodological implementation of pedagogy for student equity, in addition to PCK, that is essential to appropriately adapt instruction which can successfully engage the wide range of student identities and abilities in the classroom (Shulman, 1986).

Previous research has focused on elucidating understandings of how best to support particular marginalized groups identified by a label within a situated context. I drew from these context specific funds of knowledge related to serving students with a variety of labeled identities to spur pragmatic discussion of the instructional repertoire needed to create effective, equitable and inclusive learning communities situated within the highly diverse and evolving contexts of 21st century classrooms in the US. For the purpose of understanding how to design instruction that supports learning for all students effectively, in a classrooms with multiple, diverse identities, teachers must know their students well and be able to draw on a repertoire of pedagogical perspectives that are critical, relevant and responsive to students with diverse backgrounds, and inclusive of all students and the diverse identities they contribute as members of a classroom learning community.

Critical, relevant and responsive instructional design. Critical and responsive pedagogies particularly focus on effective instructional design for students who experience culturally and linguistically diverse backgrounds or socially marginalized identities. Approaches to teaching that are culturally sustaining, relevant, and responsive to students' diverse identities are an essential foundation for equitable opportunities to learn in diverse classrooms (Darling-Hammond, 2013; Gay, 2010; Ladson-Billings, 2013; Ladson-Billings, 1999; Paris, 2012). Responsive and sustaining pedagogies are essential for the effective instruction of students with diverse backgrounds because the nature of these pedagogies require attention to understanding

and valuing students' individual backgrounds as both assets to learning and the contexts that inform students' prior knowledge, which must be used to develop the connections between new learning and pragmatic understanding (Gandara, 2013; Hopewell, 2011; Klingner & Soltero-González, 2009; Nieto, 2010; Paris, 2012; Tharp et al., 2000).

Beyond just sustaining or responding to the diverse identities of students in the classroom, critical pedagogies advocate for social justice through learning by engaging a critical perspective of social inequity, marginalization and injustice through instruction (Ladson-Billings, 1999; Nieto, 2010; Sleeter & Bernal, 2004). While this can be focused on the larger, democratic society, possibly the most important focus is on the efforts at transformation of marginalization in the classroom as a community of diverse learners. It is the classroom community where the teachers' design of opportunities to engage learning must effectively support learning for all students. This suggests that critical, relevant and responsive pedagogical approaches must take into account many, diverse, multicultural identities such that instruction can be designed for all students in a teacher's classroom (Biklen et al., 1977; McCall & Skrtic, 2009; McDermott, 1996; McDermott & Varenne, 1995; Paugh & Dudley, Marling, 2011; Skrtic, 2013)

Culturally responsive instruction and inclusive instruction are not the same, but are similar in many ways (Boyle & Scanlon, 2010). Culturally responsive instruction requires teachers to know their students and students' communities (Darling-Hammond & Bransford, 2005), understand child development and language development (Fillmore & Snow, 2000), recognize how culture and personal experiences influence knowledge and learning, and discern how these differ from factors related to disability (Hoover et al., 2008). In addition, culturally responsive pedagogy means teachers must be able to adapt curriculum to reflect the diversity of

the classroom, as well as establish an equitable learning community that provides care, concern and respect for all students (Gay, 2010). Although diversity in a classroom can be related to cultural and linguistic diversity, a classroom community grounded in culturally responsive pedagogy requires that teachers attend to all diverse identities to create a safe space for equitable, inclusive learning for all students including those with disabilities (Darling-Hammond & Bransford, 2005; Gay, 2010; Kosnik & Beck, 2009). Although the instructional supports and learning styles of students with culturally diverse backgrounds and students with diverse abilities are influenced by different factors, over-arching strategies are similar (Tharp et al., 2000) including instructional clarity to eliminate student confusion, specifically structuring connections between learning and students' contexts and prior knowledge and repeated opportunities to understand and practice new skills and instruction that target the students' *zone of proximal development* (ZPD; Boyle & Scanlon, 2010).

Inclusive design. Moving beyond the conversation focused on culturally and linguistically diverse learners, the classroom must support access for all learners. Meyer and Rose remind us that all brains function in neurologically different ways and therefore, all learners are inherently different (2000). Universal design for learning (UDL) has approached the diversity inherently present in a classroom with a group of different learners by focusing on identifying barriers to learning and providing students with multiple means to engage, represent and express their learning in the classroom (CAST, 2011b; CAST & UDL Center, 2012; Jiménez et al., 2007). By initially identifying any barriers to learning, including needs related to cultural, linguistic, learning styles, abilities or other types of diversity that are relevant to the classroom, instruction can be designed to promote access to curriculum and learning in the general classroom that is effective for all learners (Hitchcock et al., 2002; Howard, 2004; Jiménez et al.,

2007; McLane et al., 1999). The measures of instructional effectiveness, then, may vary to reflect the diverse contexts present in each setting just as instruction of curricular standards, reading growth plans, individual education plans (IEP) or behavior support plans all vary to reflect different students' needs and goals in a specific context. However, UDL also recognizes that designing instruction for inclusion is a necessary precursor, without which instruction may remain ineffective (CAST, 2011a; Ralabate, 2011).

Universal backward design or understanding by design (UBD) gives focus first to the instructional content objectives, allowing teachers to design opportunities for students to engage relevant opportunities and demonstrate relevant learning (Childre, Sands, & Pope, 2009; Noble, 2011). Differentiation is a common approach to inclusion, which relies on teachers' ability to effectively select and implement targeted strategies for learning (Hoover & Patton, 2005; Tomlinson & McTighe, 2006). However, challenges such as strategy overload and ineffective implementation arise when teachers have to draw from strategies gathered across teacher training, professional development and a list of school-based specialists (e.g., special educators, English as a second language specialists, reading specialists or other intervention providers) as methods which must then be layered onto instruction to support students effectively (Bartolome, 1994; Howard, 2004; Molle, 2013; Tomlinson & McTighe, 2006). Instead of layering strategies onto previously designed instruction, inclusive, differentiated, responsive and relevant strategies must be embedded within instructional design (Dalton, Proctor, Uccelli, Mo, & Snow, 2011; Howard, 2004; Kappler Hewitt & Weckstein, 2012; Proctor, Dalton, & Grisham, 2007)

As 21st century classrooms include more students with diverse backgrounds and abilities, teachers must be prepared to teach all students inclusively with high-quality instruction and respond to a wide range of academic, developmental, linguistic and experiential backgrounds (Darling-Hammond & Bransford, 2005). In order for general classroom teachers to effectively support all students and appropriately design instruction, teachers as learners need this repertoire of new pedagogical skills to understand and recognize the difference among students' learning behaviors, styles and needs as they are influenced by culture, language, experience and (dis)ability (Hoover et al., 2008). Tharp identifies the psychosocial contexts within a school system, support for teacher learners through engaging activities, toward a goal repertoire of teaching practices that are effective for student learners, as the three essential components that must be addressed through the intentional design of PD for influence to be effective within complex school systems (Tharp, 2012), all three of which are included in this conceptual framework, as shown below in figure 3. It is also important to note that Tharp recognizes

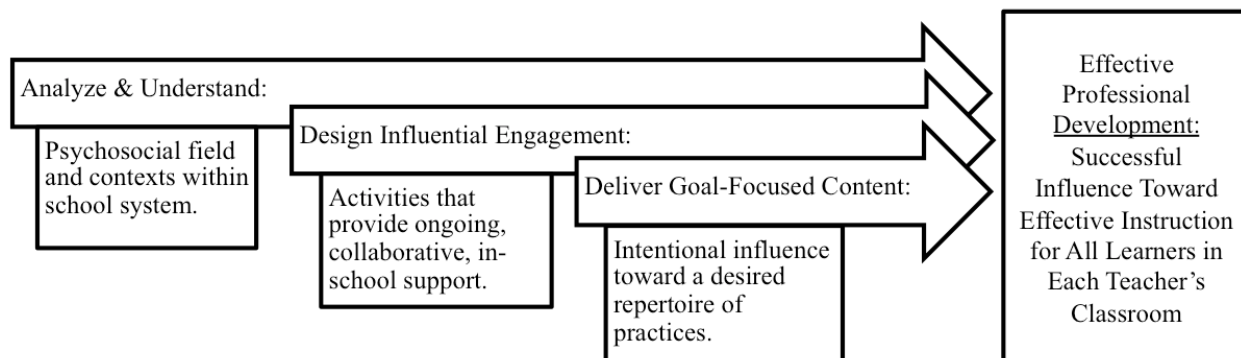


Figure 3. Conceptual framework for effective professional development supporting inclusive equity

individuals are indivisible from their psychosocial groups. As such, any approach that attempts to influence individual subjects, as bifurcated from the sustaining psychosocial group with which

they feel indivisible unity, is fundamentally flawed and can produce influence with only limited effect. As a result, while the psychosocial system must be addressed as one of the components essential to designing influence to be most effective, the psychosocial system itself can also serve as a mediator of influence (Tharp, 2012).

Context of Inquiry: Supporting a Framework for Inclusive Equity

This study was conducted within the complex contexts of a large scale, five-year professional development (PD) grant, which included multiple projects to support teachers across grade levels, schools, districts and even in multiple countries. The five-year project focused on designing, developing and launching on-line, e-learning PD modules for teachers. A separate project launched during the third year of the grant focused on designing and implementing structured, in-person PD supports for teachers in classrooms. This project focused specifically on supporting teachers' understanding and instructional implementation of standards for effective pedagogy with local, in-service teachers. The standards were constructed not only to support students with diverse minority identities, but to draw on a consensus of research evidence across the fields dedicated to studying cultural and linguistic diversity, students considered to be "at-risk", inclusion of students with disabilities in mainstream classrooms, and critical, social justice and equity studies (Tharp et al., 2000). Research-based evidence suggested the need for an approach with two key components: first, a repertoire of pedagogical skills that, when implemented with efficacy by a classroom teacher, can produce equitable access to educational opportunities that include all students in each class; and second, an approach to professional learning that enables teachers to develop successful implementation of equitable practices within their classroom instruction.

Rationale: Inclusive consensus and the need for effective pedagogy. Few educational

standards for instruction maintain the necessary pedagogical alignment; the CREDE Standards for Effective Pedagogy is one of very few that does (Griffin & Associates, 2002). The Standards for Effective Pedagogy (SEP), originally developed by the Center for Research on Education, Diversity and Excellence (CREDE) (Tharp et al., 2000) attend to pedagogy for equity and inclusion of diverse students as a necessary component of effective content and language instruction. Since 2000, CREDE researchers have been examining pedagogy for effective instruction for learners with diverse cultural and linguistic backgrounds, recognizing five research supported standards; (1) joint productive activity (JPA), (2) language and literacy development (LLD), (3) contextualization (CTX), (4) challenging activities (CA), and (5) instructional conversation (IC) (Doherty, Hilberg, Pinal, & Tharp, 2003). There is a breadth of research looking across many components of the standards with students of diverse cultural, linguistic and ability backgrounds, dating back to the 1980's (Doherty et al., 2002, 2003; Gallimore, Dalton, & Tharp, 1986; Tharp, 1989, 1991, 2004, Tharp et al., 2004, 2000; Tharp & Dalton, 2007; Tharp & Entz, 2003).

A number of meta-analyses have looked across both qualitative and quantitative evidence of effectiveness for each standard, as it pertains to multicultural and linguistically diverse student groups (see: Tharp et al., 2000). The meta-analyses of evidence collected across multiple inquiries suggest significant benefits for culturally and linguistically diverse learners, and the rubrics for measuring instructional implementation of the standards through classroom observation have been validated (see: Doherty & Estrada, 2002; Tharp et al., 2004). Evidence from these analyses suggests implementation of the CREDE SEP is a reliable predictor of improved student outcomes for conceptual learning of content, time on-task, language

comprehension, perceptions of classroom cohesion, reading ability, attitudes towards content and student achievement on standardized tests (Doherty et al., 2003; Tharp & Dalton, 2007).

The SEP include a focus on language and literacy development within the LLD standard, recognizing that language is an essential focus for instruction for all students. LLD is of the utmost importance for students who struggle in areas of literacy or language development, including multilingual learners who are working on acquisition of English. However, LLD is also the foundation needed for content learning where students need content-specific, academic language and comprehension of content-specific, academic texts to engage opportunities to learn and achieve. The LLD standard recognizes that all students are learning to develop language and literacy, and that multilingual learners draw on their linguistic funds of knowledge to make sense of instruction, especially when the language of learning and instruction is not consistent with students' primary language. The CREDE SEP recognize that students may learn reading and writing in English, as explicit subject matter, but that developing academic language in other content areas is akin to developing a second language, even for students who are native English speakers. All students must have access to extensive opportunities to use and engage meaningful language, but students who draw on knowledge of languages other than English while engaging instruction in English also need opportunities to use all of their linguistic resources to support development of and learning in English. Teachers must not only allow students opportunities to use their languages with linguistic peers, teachers should encourage and even incorporate language or code switching within the classroom as an important component of LLD for multilingual learners (Tharp et al., 2000).

The SEP are supported by a vast body of research evidence, including validation of a Standards Performance Continuum including the initial five standards; Joint productive activity,

language and literacy development, contextualization, challenging complex thinking, instructional, small-group conversations and critical stance (Doherty et al., 2003; Tharp et al., 2004). However, this original pedagogical framework was lacking the inclusion of a standard related to critical perspectives in education, needed to support the transformative social justice orientation of multicultural education and was subsequently expanded to include the sixth standard, critical stance (CS), reflected in the Standards Performance Continuum-Plus (SPC+) (Teemant, Leland, & Adams, 2009). While developing the SPC+ to include critical stance (CS), Teemant and Hausman (2013) found statistically significant correlations between teacher implementation of a critical stance and student achievement. Teachers' increasing use of critical stance was related to greater achievement for all students in the language arts classroom, significant additional benefits related to improved English comprehension, overall English proficiency and higher-order thinking for students who are non-native English speakers, and was a powerful predictor of English proficiency for emerging multilingual (EM) learners (Teemant & Hausman, 2013).

Even when teachers know a repertoire of responsive, inclusive, instructional strategies, it is essential for them to understand how instructional strategies align within the inclusive consensus represented within the CREDE SEP. Understanding this alignment and the connections among, or distance between, the strategies teachers implement in practice enable more effective instructional design. Influencing teachers to understand these connections and change their approach to instructional design to better align with pedagogy is a laudable goal, but will rely on effective design of the professional development activities in which teachers participate.

Relevance: Supporting CREDE to empower teacher transformation. The CREDE

project focused on the SEP as a pragmatic approach to PD content that would be relevant to teachers in the context of their classrooms and the diverse students they teach. Each year, the structured supports and ongoing activities provided, the teacher participants and the settings in which the project took place varied. However, the focus on CREDE as PD content remained consistent across the three years of the project, orienting teachers toward pedagogical practices that would support equity for diverse learners.

In order to implement the six CREDE standards for effective in the classroom, both teachers and students must understand this approach and enact skills associated with this new change of practice. To Influence change in the classroom, Tharp et.al. (2000) offered a progressively expanding set of teaching frames that specifically assist students with the new skills needed for CREDE classrooms by scaffolding students' engagement in structured activities. This progression allows teacher agents to influence students' building of knowledge, skills and understanding by structuring tasks within the learners' ZPD (Tharp et al., 2000; Vygotsky, 1978) of the class as a community of learners. As the class gains new skills to converse with and assist others, the teacher can progressively expand the complexity of instructional facilitation in the classroom by adding more activity settings for directed learning tasks.

While full implementation of effective CREDE pedagogy supports progression toward Tharp's ideal of the delta classroom as a transformative space designed for dynamic intentional change through the transformed classroom community as a psychosocial unit, CREDE pedagogy and Delta classrooms are rarely evident in schools (Darling-Hammond & Bransford, 2005; Gay, 2010; Griffin & Associates, 2002; Tharp et al., 2000; Tharp, 2012). The shift toward effective implementation of equity oriented pedagogy, for the inclusion of diverse students, relies on

progressive influence and change among the teacher participants who are both subject to the complex contexts influencing the school, and primary agents for the students they influence through the design and implementation of classroom instruction.

In order for CREDE to effectively reach and transform classrooms, teachers need the support of effective PD designed to support their understanding of new pedagogical knowledge and enable their development and implementation of new instructional practices. Given the contexts relevant to this project, the conceptual frame described above is particularly well aligned with the repertoire of practices presented as the PD content, the research-based design of the structured activities within the PD, and the complex, psychosocial school contexts in which the project was situated.

Research questions. This study addresses one guiding research question and four sub-questions: What contexts influenced teachers who actively engaged long-term collaboration within professional development?

1. What challenges affected teachers' ability to provide effective instruction? (RQ1)
2. Why did teachers seek collaborative support? (RQ2)
3. What contexts influenced teachers' active or limited engagement in opportunities to collaborate? (RQ3)
4. What results from PD collaborations did teachers note in their classrooms? How did results influence equity for students? (RQ4)

Study significance. By conducting this study and seeking to answer these questions, my inquiry offers a significant contribution to the field of professional development for equitable, inclusive instruction. This exploration of teachers' experiences across multiple years of engagement during a PD project will contribute needed insight for the future design of PD that

can be most effective for supporting teacher transformation within the demanding and complex contexts of the school system. Looking deeper into the complex contexts influencing teachers' professional learning and transformation of classroom instruction can inform more effective efforts to influence long-term, sustainable change among teachers' practices to support equitable learning for diverse students in inclusive classrooms.

Study limitations. Although this study serves to make a significant contribution by looking across teachers' multi-year participation, the small number of participants limits the specific findings. While important to look at the varied experiences among teachers within a single-school context, the findings cannot represent the experiences of all teachers who participated in the multi-year PD, but did not participate in this research. Similarly, while this study offers a rich investigation of the teacher participants within and across their experiences in the PD, each of the three participants reflect a different amalgamation of complex contexts, within the psycho-social context of the school, and therefore, should not be generalized across dissimilar contexts relevant to teachers or school systems. Despite limited generalizability to other settings with differing contexts, this study will support insight to the design and implementation of effective PD for teachers within similar school settings and contexts.

Chapter 2: Review of Professional Development Literature

My purpose is to bring together a number of theoretical and research domains *insofar as they treat influence and change*...proof of concept of the feasibility of unifying many small domain theories – not to refute or remove them, but to offer a system of more basic processes to enrich their own theorizing and research...unification is necessary to progress. (Tharp, 2012, p. xv)

In this literature review, I explore the range of research that addresses the complex contexts that influence teachers as learners in the field of PD research. Since my study utilized a three-prong conceptual frame, I wanted to understand the discussions in the field of PD focused on the experiences of teachers engaging PD addressing pedagogy for equitable, inclusive instruction, across content areas in elementary classrooms, during a long-term project. I began by searching ProQuests' Education and ERIC databases for peer-reviewed studies published in scholarly journals during the last 20 years (1996-2016). Using the search terms "professional development" and "US OR united states teachers" I collected 394 articles with the potential to contribute to my understanding of prior research in this area. While these were broad search terms, my goal was to review all studies that explored the content, delivery and influence of PD with US teachers in K-8 public school settings.

I coded the 394 articles using NVivo 10 qualitative research software and found that 231 addressed in-service teachers in US, K-8, instructional settings, of which 147 were empirical studies. I further coded these 147 studies for pedagogical content, structure and duration of delivery, and influence on participant teachers. Below, I review only the 34 empirical studies coded for PD influence across the teaching career or PD content specific to pedagogies. Because my study focuses on pedagogy for instructional design with teachers responsible for multiple

content areas, my review included studies coded for PD content that specifically addressed pedagogy for curricular subjects or student equity. I did not include articles that discussed PD content for specific curricular subjects if they did not also discuss a pedagogical approach.

Influence Across a Teacher's Career

Within the group of eight studies discussing PD as relevant to the stage of a teacher's career, five specifically focused on PD for induction programs and early career teachers (Arnold-Rogers, Arnett, & Burris Harris, 2008; Brownell Leimann, Foxwell Murdock, & Routenberg Waller, 2008; Glover & Harris, 2015; Hoffmeyer, Milliren, & Eckstein, 2005; Howe, 2006), one focused on supporting the later or veteran stage of a teacher's career (Eros, 2011) and one surveyed early, mid and later career teachers (Masuda, Ebesole, & Barrett, 2013).

All studies focusing on the early career stage for beginning teachers, asserted that the professional development was offered as a response to struggles with teacher retention, yet they did not provide retention or attrition data in order to measure effectiveness. Each of these studies found that mentorship, as an ongoing collaboration between an early career or recently transitioned teacher in a new school system and a more experienced expert who could serve an individual or small group of new teachers, was an important support (Arnold-Rogers et al., 2008; Brownell Leimann et al., 2008; Hoffmeyer et al., 2005; Howe, 2006).

Hoffmeyer, Milliren and Eckstein (2005) discussed their application of invitational theory, or the act of inviting teacher participation, across three studies they conducted while mentoring first-year teachers. After conducting a factor analysis across the three studies, the researchers found 22 specific behaviors and activities that assisted first-year teachers, which the researchers then developed into the Hoffmeyer Mentoring Activity Checklist (HMAC). They suggested that the three subgroups within the checklist: inviting mentoring relationships,

mentoring activities and strategies, and supportive institutional parameters, include specific factors that support first-year teachers. They also acknowledged distinct limitations related to the projects' lack of support prior to the beginning of the school year, lack of flexibility for teacher driven decisions, lack of sufficient common release time and inadequate resources. However, the researchers did not provide any results related to teacher retention, which they leverage as a focal purpose for providing early career mentor support.

Arnold-Rogers, Arnett and Harris (2008) discussed results of a needs assessment survey they gave to novice teachers and mentors in March after collaborations during the first year of a new mentoring program, which began at the beginning of the school year through the support of a University-District partnership in Tennessee. Analysis of open-ended survey responses revealed that both novice teachers and mentors characterized the program as positive, but needed more time for individual collaborations as well as structured PD to support development. In addition, the researchers recommended that mentor pairings be made only with those who desired to be mentors. In response to their findings, the researchers reported making adjustments for the second year of the mentoring program including seeking teachers receptive to being mentors, providing a summer meeting for mentors to discuss strategies and responsibilities, and adding more time for mentor-teacher collaborations while eliminating the expectation that collaboration happen after-school. Results of this study informed further development of the program but did not discuss any data related to the impact of the program on the teacher retention struggles the creation of the program was intended to address.

Brownell Liemann, Murdock and Waller, (2008) discussed a mentoring program supported by a public school district in rural Maryland in which professional mentors were assigned to first and second year teachers who engaged in a summer training on the procedures

of mentorship, monthly PD with peer early career teachers and regular collaboration with their non-evaluative mentor. The researchers discussed mentor involvement in PD sessions and the provision of ongoing training with the novice teachers as a team, in addition to twice monthly meetings of the mentor team, but did not discuss the structure or frequency of teacher-mentor one-on-one collaborations. The limited data provided showed teachers who participated in one year of the mentoring program were retained at rates between 75-93 percent for a second year of teaching. However, although the researchers reported positive responses from teachers and long-term impact from the mentoring program, retention rates for a third year of instruction dropped to 78-82 percent, which is more closely aligned with the national retention rate of 78 percent, which was the only comparison or counterfactual discussed by the researchers.

Howe (2006) discussed a review of international research on teacher induction programs and focused analysis of case studies of exemplary induction models from eight countries in North America, Europe, Australia, New Zealand and Japan. Across the programs, he specified that the most successful included opportunities for supportive collaborations between “experts and neophytes” (p. 288). Howe noted that novice teachers in the US are often confronted with the “sink or swim” metaphor (p. 289) as they struggled with the burden of extra duties and difficult classes that were often placed on new teachers, practices specifically prevented in exemplary induction programs in other countries. He acknowledged that US education reforms supported expanding practices such as mentoring and pre-service supports like internships in PD schools. However, in comparison to other countries, Howe recognized that the US approach to induction for early career teachers lacked attention to the need for reduced teaching loads and increased time for the collaborative and reflective practices that support teacher development and instruction most effectively for those not yet “acculturated” into the teaching profession (p. 289).

Although not specifically focused on induction, Glover and Harris (2015) discussed their work as a professional dyad, specifically paired as a beginning teacher with a mentor. While the researchers conducted a single-case study of their partnership, they did not present any information about the other beginning teacher-mentor dyads who participated in the larger PD project. As a result, while the researchers asserted retention of early career teachers as the purpose of providing mentors, they did not speak to any effect on retention beyond their work as partners. However, a particularly interesting finding from their study related to the beginning teacher's reflections on challenges. Notably, the researchers coded reflections on the challenges related to exploring the integration of new practices within reflections on the challenges of beginning teaching. This is informative because the researchers reported the beginning teacher encountered relatively "little difficulty" (p. 30) around the uptake of new practices, possibly because of Harris's early career stage. More specifically, because she was in the process of developing new routines for her professional practice as a teacher, the exploration of pedagogical implementation became part of her early career development, rather than a more difficult challenge related to changing an established practice with a more experienced teacher in a later stage of the teaching career. The details of the pedagogical content and partnered structure of the PD will be further discussed below (see: Content of Influence- Pedagogically Equitable Instructional Design; and Structures of Influence- Embedded Structures).

In the one study focused specifically on supports for veteran teachers later in their careers, Eros (2011) discussed a review of research on the career cycle, focused on the later, "second stage" (p. 66), when teachers have four or more years of experience, and the implications for veteran teachers who are beyond the early years of their career. Eros suggested that in order to prevent veteran teacher attrition, PD policy and design needed to focus on

sustained PD that responded to teacher's individual needs. This is particularly significant because early career teachers have distinctively different development needs from veteran teachers whose development needs vary because they draw from varied knowledge, practice and classroom experiences throughout their career.

After surveying teachers across career stages, Masuda, Ebersole and Barrett (2013) conducted a qualitative study with 16 teachers and found themes across pre, early, mid and later career stages. Common themes related to teachers' intention for engaging, value in participating, topics of interest and tensions creating resistance toward involvement in PD. The researchers found that beginning teachers preferred voluntary sessions to best suit their unique needs to minimize their sense of being overwhelmed from too much information. While beginning teachers valued practical PD that was useful for their classrooms rather than theoretical PD, their sense of being in "survival mode" limited their focus to topics related to classroom management. In general, beginning teachers' tensions were related to being overwhelmed by so many things that needed to be done and the pressures of accountability.

With mid-career teachers, the researchers recognized that the teachers were focused on the credits they needed for licensure renewal or salary advancement, and indicated higher levels of engagement when allowed to self-select a PD opportunity they valued enough to pay for themselves, if not provided by the school or district. Mid-career teachers valued the time to collaborate with colleagues and wanted PD to support their efforts to hone their craft through pedagogy and building curriculum. However, their tensions around PD were related to significant time constraints and teachers tended to weigh PD opportunities in relation to their perception of costs to their personal and family lives.

With teachers in the later stage of their career, the researchers found that teachers preferred the ability to voluntarily attend the PDs they perceived as "worthwhile," in contrast to mandatory PDs they characterized as irrelevant or "shoved down their throats" (p. 10). Instead, later career teachers valued PDs that offered digital resources to support instruction, support to collaborate with other teachers, or focused on new initiatives such as the Common Core State Standards, data analysis and accountability. Tensions for later career stage teachers were related to frustration with "mandatory" PDs, due to previous experiences in PDs they described as "irrelevant or imposed" (p. 11). These teachers also recognized that budget cuts, furlough days and time for collaboration resulted in a "lack of job-embedded" supports that were "worthwhile," with little focus on supporting quality use of curriculum or effective instruction.

While Masuda, Ebersole and Barrett (2013) found teachers at different career stages characterized their perceptions in different ways, they also revealed common themes across stages. All teachers expressed a value in collaborating with colleagues and exploring ideas that were practically applicable in their classroom, relevant to their classroom and student contexts, and could easily be applied in useful ways during instruction. As the researchers stated, "regardless of career stage, the teachers were adamant that anything learned from PD needed an application component; the content had to be relevant to their own teaching contexts, whether it was for the grade level or subject they taught or for the demographics of their students" (p. 10). However, while this study reveals important insight about the PD needs of teachers across the stages of their careers, this qualitative study was conducted through teachers' reflections on their experiences across all PD and does not inform how or why teachers were motivated to sustain engagement across extended periods of time when able to self-select a PD opportunity they initially perceived to be "worthwhile."

Together, these studies suggest that teachers, across varying stages of their careers, benefit from ongoing support, particularly through PD supported by an experienced partner. Whether that partner serves as a mentor, instructional coach or thought partner who can share ideas and resources, PD remains an important element throughout the career cycle. While these studies suggest that teachers in different stages of their careers desire and benefit from different types of support resources, such as help coping with a sense of being overwhelmed in early career, guidance for developing and improving instruction in mid-career, or new resources to stay current with the field in late career, they also support the idea that PD needs to be an ongoing endeavor, not just across a school year, but for multiple years across a teacher's career. While each of the studies reviewed here discussing early career PD as a way to address the need for teacher retention, only Brownell Leimann et al. (2008) discuss findings related to teacher retention. Although the findings are consistent with national effects on retention, Smith and Ingersoll's study of the effects of induction and mentoring on teacher retention showed that first year teachers who participated in collective induction activities such as planning and collaboration with colleagues or mentors, were less likely to leave teaching after their initial year in the profession (2004).

Content of Influence

When reading studies that discussed subject specific content and language instruction or PD specific to those content subjects, I coded studies for their focus on an instructional subject, classroom and behavior management, design thinking for instruction, student responsive pedagogical orientations, and technology for innovative instruction. I ran a query of the studies coded under content, which revealed that PD studies focused on classroom and behavior management did not present any cross-curricular connections to any subject of instruction, and

studies focused on art or music instruction did not present any discussion of pedagogical thinking for the design of instruction, student responsive pedagogical approaches or uses of innovative instructional technology. However, studies focused on curricular content, specifically social studies, literacy, math and science, as the subjects of instruction, tended to include cross-discussion of pedagogical perspectives for instructional design, with only limited discussion of instruction for academic language within those content areas. Since my study examined teachers' experiences during PD specifically oriented toward influencing pedagogy for effective inclusion, my discussion here focused on PD content oriented toward classroom management and pedagogies for instructional design. While I discussed studies that explored pedagogical perspectives within a specific curricular subject area, I did not discuss studies that explored PD without attention to a pedagogical perspective.

Classroom and behavior management. Four studies focused specifically on approaches to classroom and behavior management. All four focused on management or prevention of disruptive behaviors, conflicts and violence through professional development for classroom teachers, in addition to other school staff. It is important to note that all of the studies focused on PD for behavior management, assert an orientation toward the inclusion of students with significant and identified needs related to challenging behaviors in general education school settings. Although oriented toward inclusion, a perspective I discuss further below (see: Pedagogy for Design of Equitable Instruction), none of the studies discussed cross-curricular connections to the design of instruction.

In 2004, Selfridge studied the Resolving Conflict Creatively Program (RCCP) and reported on the long-term positive effects of the program across multiple school sites. She reported that RCCP worked to change school environments as well as teaching practices to

support the development of students' social and emotional skills. While she presented a synthesis of a wide range of implementation, across multiple years, in varied districts around the US, she acknowledged that much of the data she used was produced by small, local reports by schools or districts who have defined varied factors, interests and outcomes that are not widely comparable due to their locally defined relevance.

Although she demonstrated widely reported positive results, she also discussed the program particularly as a school-wide approach. However, in the instances where she had access to teacher level data, she concluded that teachers using effective classroom management, student-centered teaching and integrated lesson instruction with RCCP resulted in teachers and students reporting higher levels of appreciation, safety and attendance, sometimes accompanied by increases in student achievement scores. However, discussion of the PD model focused on work with school and district level leadership and whole school communities, including staff and families, without much focus on the specifics of supporting teachers. Selfridge described the standard delivery of “an 18- to 24-hour interactive workshop for teachers,” (p. 63) that prepared staff to implement classroom management and RCCP specific curriculum-based instruction that promoted social, emotional and community development. She also reported that teachers received RCCP curriculum manuals and were expected to deliver RCCP lessons regularly while receiving classroom support for the first year after the initial RCCP training. Although Selfridge did not extensively discuss the supports provided to teachers during that year, she did report that the PD providers worked with teachers to model, co-facilitate or observe lessons for which they provided feedback, in addition to individual coaching and trouble-shooting. In one of her available data sets, the researcher reported findings from teachers that the RCCP PD prepared them to implement the program, specifically acknowledging the value of model demonstrations

they could use in the classroom and the ability to infuse RCCP into their regular practices up to four years after receiving the initial training.

Studying a statewide scale up of Positive Behavioral Interventions and Supports (PBIS), Bradshaw and Pas (2011) discussed the development of the system of supports for 316 elementary schools across Maryland. However, systems and foci of analyses attended to school and district level factors, but not teacher level factors. Of note, the researchers did find that factors at both school and district levels were associated with training and adoption of the program, but only school-level factors were related to the quality of implementation. Again, the PBIS program aimed to support student behavior particularly as a school-wide approach. However, the three-tiered PBIS model aligned with Response to Intervention (RTI) structures, and included a universal, school-wide tier, a tier for targeted supports as well as a tier for intensive intervention systems. Although the researchers pulled from data generated during 12 years of the Maryland initiative, schools engaged a four-stage implementation model developed in the field of community psychology, rather than education. In order to move from the creating readiness phase, into the initial implementation phase, schools had to demonstrate community-wide stakeholder buy-in and commit to three years of PBIS implementation. The researchers then described an “extensive multilevel infrastructure, or ‘support system’ to promote,” (p. 533) and provide training for the PBIS model. However, the researchers also described a series of trainings, including an initial summer 2-day, annual 1- or 2-day and ongoing supports, which were typically only attended by the core team of 4-6 school administrators and implementation coaches. While the researchers acknowledged the coaching model was originally intended to involve coaches who were “external to the school,” (p. 533) the model was not sustainable when the project scaled-up. However, the system did maintain a coach in every school as part of the

PBIS core team, who were then responsible for training the rest of the school staff. The institutionalization phase focused on maintenance of the newly implemented PBIS systems including multiple PD training events throughout the year before moving into the final ongoing evolution and renewal phase that emphasizes integration, evaluation and data-based decision making. Unfortunately, although the researchers conducted an extensive series of hierarchical linear modeling (HLM) analyses, attention was only given to school and district level predictors or school-wide implementation, with no attention to the training or implementation of teacher participants.

Becker, Darney, Domitrovich, Keperling, and Ialongo (2013) discussed a program for universal behavior prevention in their study of a two-phased coaching model to support teachers' implementation of two social-emotional development programs, the PATHS® curriculum and the PAX Good Behavior Game (PAX, GBG). Focused in the field of psychology, rather than education, the researchers responded to elementary teachers' expressions of need for increased support with these two programs. The researchers used an initial universal coaching phase, followed up with a phase of tailored coaching, and studied both teacher implementation and student outcomes using rubric observations generated by independent observers four times during the year subsequent to initial training. While I discuss the specifics of the two-phase coaching model below (see: PD Structures- Embedded) the researchers' analyses revealed promotion of proficient program implementation by teachers, which was reinforced by examination of data that linked the connection between implementation and students' disruptive behavior.

Most recently, in 2015 , Oakes, Powers, Diebold, Germer, Common and Brunsting studied the effectiveness of a year-long PD supporting teachers' use of functional, assessment-

based interventions (FABIs). They described 48 educators who attended an initial 4-day training and a series of practice-based PD along with coaching. Using pre- and post-training surveys, the researchers examined participants' knowledge, confidence and perceived usefulness of FABIs. Although I discuss the structure of this coaching and PD model below (see: Structure-Embedded), the significance of this study for this review is the shift from large, school-wide implementation and support systems to a focus on interventions for students with significant behavior support needs. FABI practice support the inclusion of students with identified needs related to more significant behavior supports, and the researchers found that school practitioners could successfully implement FABIs with little support from university personnel. However, the FABIs required intensive observation, analysis and design of specific, functionally targeted, student-specific interventions. This necessitated a larger school-based team for implementation since a single teacher, within their classroom, could not accomplish the practices independently. Notable in this study is the finding that educators were capable of successfully implementing FABIs after a 4-day training with the support of an ongoing PD series provided by the university within the school, as well as a school-based team of collaborators.

These studies all focused on PD for classroom and behavior management, and support pedagogical approaches for the inclusion of students with challenging behaviors. However, all four addressed a large unit of inquiry looking at school or district level systems. As a result, these studies do not inform how best to support implementation by teachers through classroom instruction, where students with diverse cultural, linguistic and ability backgrounds are included and expected to demonstrate equitable learning outcomes.

Pedagogical design for content and language instruction. Pedagogical design for content and language instruction is a theme I coded for deductively as I read studies that

discussed approaches to the design of instruction for content, rather than curriculum for a particular subject or content area. As a result, I included studies that discussed specific curricular subject area only if they were also coded for an orientation toward a pedagogical perspective for instructional design related to *pedagogical content knowledge* (PCK) or *technological pedagogical content knowledge* (TPCK).

Pedagogical content knowledge. PCK as design thinking, or pedagogy for designing content-specific instruction is a theme that encompassed discussions of strategic thinking or systematic design for instruction, but did not specifically aim to respond students' needs in diverse, inclusive classrooms. What is particularly interesting about this theme is that the researchers of seven of the eight studies discussed design for math, science or history specific curricular content, while only one study focused on instructional design from a broad, cross-curricular perspective.

By exploring formative instructional practices (FIP), Liang, Collins, Kruse, and Lenhart (2015) studied a statewide school improvement initiative. The researchers collected data from 895 educators across more than 300 districts to examine what factors affected fidelity to the PD and what perceptions teacher participants reported about the supports provided for their school-level teams. This was a particularly interesting study because of the program and research design the researchers described. As a statewide initiative, it had a top-down approach where experts trained regional trainers, who trained district and school leaders, who then facilitated training, collaboration and on-line learning modules with local, face-to-face groups of teachers. Of note, a national education publisher provided the on-line modules, while the role of university-based personnel was limited to evaluation research by the researchers, Liang, Collins, Kruse and Lenhart (2015). While I discuss the blended learning structure of the PD below (see: Structure-

Embedded), the content of the PD was specifically focused on increasing teachers' implementation of formative practices in general instruction, across content areas and grade levels. Although the focus on increasing formative assessment of specific learning targets, ongoing collection of evidence of learning and effective feedback enabling student ownership in their own learning are very centered on the learners, the researchers did not explore the learner-centered nature of strategies in the PD. Instead the researchers focused on evaluation of fidelity of implementation across top-down levels and the resources needed to support fidelity at the teacher level. Using teacher focus groups and an online survey, the researchers collected qualitative data in response to open-ended questions as well as quantifiable data in response to Likert scale questions administered one year after the initial delivery of the PD. Results on Likert scale items showed that 58% of respondents reported some of the FIP PD content provided information teachers thought they would use in the future, only 47% felt the FIP PD answered professional questions or concerns, and only 45% reported FIP influencing changes in their instructional practices. When asked if the FIP provided good theory even if teachers were unclear how it applied to their instruction, 10% agreed (good theory but application unclear), while 90% disagreed meaning it is unclear if these teachers did not find the theories to be good or if they found the theories to be both good and applicable. The researchers concluded that the FIP PD failed to achieve sufficient teacher buy-in or the larger goal of fidelity of implementation by teachers because the planned support structures and overarching vision of the PD were not clearly presented or consistently provided to the participants.

Focused on design within content areas, only two studies discussed PD for the design of math instruction, and both focused at the intersection of math and science teachers. Green and Kent (2016) conducted a qualitative exploration of elementary teacher leader development

through the Math, Science, and Technology Initiative (MSTI). However, their study focused on the PD orienting teacher leaders toward the design of inquiry-based lessons and did not focus on discussion of technology. The MSTI statewide initiative emphasized problem solving and hands-on learning as methods for inquiry-based math and science instruction using teacher leaders in an effort to close the gap between short-term use of innovative practices and long-term instructional implementation and institutional incorporation. Focusing on elementary teachers, the researchers recognized that the seven teacher participants emphasized either math or science content during their fellowships, but were responsible for delivering instruction in both subjects as general classroom teachers. What is particularly interesting about this study is the PD design itself. Teacher participants applied for a 1-year fellowship, during which they were trained as MSTI specialists and coached other teachers, but were removed from their school and classrooms. After their fellowship year, teachers returned to their home school classrooms, where they were expected to both implement the MSTI PD and continue to engage teacher leadership. Although the researchers did not report on the PD's effectiveness for instructional design by non-fellow teachers, findings from open-ended surveys showed that teacher fellows valued deep understanding and rich engagement in inquiry as PCK, in addition to recognizing that developing meaningful relationships as teacher-leaders enabled the fellows to embrace the inquiry-based design of instruction in their own practice.

Zwiep and Benken (2013) conducted a study with 4th -9th grade teachers of math and science from four districts in two large, diverse metropolitan areas. While the researchers described a multi-year PD project, their research focused on teachers' reported perceptions during summer training and the following three months. The researchers acknowledged that the PD focused on both content and pedagogical instruction of content, and that teachers tended to

participate in the summer training and follow-up sessions multiple times, and may even crossed content areas, depending on the teachers' interests and areas of instruction. However, the researchers did not share this background information for the 103 research participants. Of the 103 participants, 85% held elementary licenses, but not all participated in a content area specific to their instruction, such as a special education or science teacher who attended the math summer institute. Participants completed pre/post surveys and content exams, as well as daily reflections on the institute, a post-institute reflection survey and follow-up interviews. Surveys included both open-ended and Likert-type questions. Teachers' scores on content exams increased on post-tests in both content areas, and teachers reported "many 'Aha!' moments following content lessons on daily reflections and post-surveys" (p. 313) suggesting teachers learned content during the summer training.

Quantitative analysis of teacher perceptions found a statistically significant increase in confidence in participants' understanding of the science content, but found a statistically significant decrease in confidence in both understanding the content as well as teachers' own ability in math. However, through qualitative analysis, the researchers found teachers reported a deeper understanding of both contents and a shift in perspective away from fact and procedure as an instructional emphasis. Instead, the researchers found teachers moving toward a focus on process for both the math or science content itself, and as a method of instruction. In addition, while the researchers acknowledged that the summer institutes focused on content, not pedagogy, research findings suggested that teachers' deeper understanding of the content processes (e.g., scientific process or problem solving), coincided with teachers' increased focus on teaching those processes and checking for student understanding, rather than previous emphasis on rote skills. The researchers concluded that deeper understanding of content could be a vehicle toward

changes in the pedagogical approaches teachers use to teach math or science content, when subject-specific content learning is embedded within effective PD.

Two additional studies focused on design for instruction looking solely at science. In 2014, Harlow conducted a case-study investigation with five elementary teachers who participated in PD for Physics and Everyday Thinking (PET). While typically offered as a semester-long undergraduate course, the researcher acknowledged condensing the 70-hour course into a 15-hour, six-week format to match the structure typical for PD in the participant teachers' school district, while the hands-on, discussion and computer-based activities central to the PET training were maintained. Participants were audio and video recorded during two interviews and two lessons prior to the PET PD, were video recorded during the PD and video recorded again after the PD during at least two lessons. Although two teachers did not transfer any pedagogy into practice, the researcher found that three participants demonstrated different instructional approaches post-PET PD, including transferring PET content into more effective lessons using pre-existing pedagogy, as well as transfer of new pedagogical approaches.

In 2015, Zhang, Parker, Koehler, and Eberhardt conducted a study of 118 K-12 teachers who had participated in a PD program over three years with a specific focus on assessing the needs science teachers had for further development. While the researchers found a common list of content topic specific needs, they also discovered that science teachers needed further support in the development of PCK specifically for designing inquiry based teaching, strategies for instruction and assessment and particularly, responding to the needs of students. As a needs assessment, the researchers focused not on the PD participation or effectiveness but used open-ended and Likert scale survey questions to collect participant reports of their desires for further PD to support their instructional needs. While the 118 participants selected 230 specific science

topics as areas in which they needed further PD, 11 were commonly recognized across grade levels. However, regardless of content topic, the researchers found that 80% of the participants reported a substantial need for further development in the area of teaching scientific reasoning and inquiry, in addition to fostering conceptual understanding, creating conceptual instructional activities and developing effective assessment. While the teachers reported confidence in their interactions with students, over half of the participants reported considerable needs for PD to improve how they connect content to students' lives, address students' misconceptions and find resources.

Although the researchers found teachers consistently reported a need for deeper understanding of specific content, it is not reasonable to expect any specific PD opportunity to sufficiently cover 230 science specific topics, and even 11 may be difficult in a single PD. The researchers found that all of the teachers' reported needs were in service of one goal, improving students' learning outcomes through better understanding of the content, more engaging instruction and relevant real-world connections to students' lives, as well as some reported need for designing age-appropriate, differentiated lessons and the ability to address learners' misconceptions. Comparing participants by grade level and experience, the researchers concluded that elementary and beginning teachers in particular had a greater need for PD in these areas, but that PD in general needed to respond to the classroom context, teachers' experience and the curriculum standards guiding instruction, in order to support PCK for more effective instructional practices.

The remaining three studies discussed pedagogy as design thinking for history and social studies instruction. In 2007, Hall and Scott published a study discussing an inquiry approach to historical thinking. The researchers described a process of inquiry they called "uncoverage"

through which they gave teachers a set of case study documents to read prior to a workshop session during which teachers then discussed their differing perceptions and understandings of the given documents with the intention that teachers would then be able to guide students through similar content inquiry to uncover the significance of a given content curriculum. Although the workshops were not described in detail, the researchers did assert that teachers in the PD also engaged “linked sessions on methodology,” (p. 259) during which the teachers explored a process for the “backward design” of unit and lesson plans. While I discussed the evolving structure of this PD below (see: Structure- Experiential), it should be noted that the researchers concluded the presentation of a history inquiry workshop and separate sessions on methods for backward design were not well received by teachers and produced only modest results in teachers’ lesson planning incorporating historical inquiry using backward design, and some participants completely disregarded the pedagogical inquiry question of historical significance for the topics they planned to teach. The researchers did conclude, however, that there needed to be more significant attention paid to the needs and concerns of the teachers engaging the PD, and the distance they discovered between their designed approach to teaching historical thinking and teachers’ ability to apply a pedagogically designed approach in their classroom.

In a similar vein, Obenchain, Orr, and Davis (2011) studied how K-12 teachers addressed problems in designing history lessons. Rather than focusing on “coverage” of a vast curriculum, or targeting curricular content by grade level, the researchers discussed training 25 teachers of history, grouped in vertically aligned teams, to use over-arching essential questions to guide historical thinking. Through this process the researchers described historical thinking as a process of inquiry into history, recognizing that using essential questions to guide lesson design

can support teachers across grade levels as they confront four problematic challenges in history instruction, 1) teaching history that is factual and linear, but disconnected from significant, recurring themes leaving content to be perceived as “inconsequential,” (p. 192), 2) teaching factual content without opportunities for explicit inquiry into historical significance, 3) teaching content without opportunities to connect enduring historical themes to current issues, and 4) teaching about historical sources without connection to historical themes and relevant contexts. Although the 25 participants delivered history instruction across different grade levels, the four challenges in designing effective history lessons were common concerns. By shifting focus from the content itself to the overarching essential questions, teachers were able to design lessons in which students sought to answer the essential inquiry questions using the content and primary sources, rather than teachers covering the content in lessons that were disconnected from relevant historical contexts, themes or current implications.

Shifting focus, Howell and Saye (2016) published a study of fourth grade social studies teachers’ shared professional knowledge culture through the use of lesson study and problem-based historical inquiry (PBHI). The researchers discussed providing significant supports that diminished as teachers became more skilled with the lesson study process. Although the intention of the lesson study PD was increasing implementation of PBHI, the study focused on the roll lesson study played in the development of a shared knowledge culture among participants. Qualitative data were collected during lesson study research sessions as well as during classroom instruction observations and post-observation debriefing sessions. Interestingly, the researchers recognized observing both the research study lessons and “teacher-selected” lessons. While the researchers found variation among the participating teachers’ willingness to embrace the public nature of the lesson study process, the teachers demonstrated

receptiveness to the collegial collaborations themselves. However, the research findings suggested teachers' ability to apply the PBHI theory, diagnose problems of practice or resolve those problems was minimal, even after three years of participation.

Technological pedagogical content knowledge. TPCK is a theme that emerged within my deductive coding for pedagogical PD content. Three relevant studies specifically discussed PD for technology as part of the process of instructional design. Carroll, Rosson, Dunlap, and Isenhour (2005) focused on technology as a necessary tool for the sharing of teacher practices and resources and for creating a framework for knowledge management. While the researchers stated that the project was an ongoing, long term, participatory design, the study focused on the result of their initial needs analysis. They found teachers share three types of knowledge that could be supported through a technological knowledge management system including tangible resources, lesson designs and activity plans, and prototypes or artifacts produced by the students. Unfortunately, since they focus on the need analysis and design of their knowledge management system, they are not able to discuss the PD process engaged by teachers to learn, explore and implement the system as new technology for broadly sharing information among teachers.

Also in 2005, Glazer, Hannafin, and Song conducted a qualitative study of collaborative apprenticeship specifically for the integration of instructional technology. The researchers asserted that the ever-changing, increasingly complex and time-consuming nature of teachers' responsibilities compounded the challenges teachers faced when training, particularly with instructional technology took place outside of, and disconnected from, the classroom where any new practices must be applied. Although I discussed the collaborative apprenticeship model below (see: Structure- Embedded), the researchers did find that teachers were motivated to implement instructional technology when they saw positive outcomes for students, and that

participation in the school community of technological practice enabled teachers to overcome the mitigating barriers to implementation. Teachers empowered to contribute to the community drew expertise from others to expand their repertoire of practice and implementation using the new instructional technology. While the researchers did discuss the need for a school group to create the community of practice, they also found that the implementation of technology during instruction was linked to teachers' ability to develop use of technology through the planning and design of lessons.

Finally, in 2004, Baker, Gersten, Dimino, and Griffiths conducted a case study of peer-assisted learning strategies (PALS) in one elementary school, emphasizing the computer-based student monitoring system as a resource for sustainable implementation of pedagogical practices for inclusive teaching with diverse students. To explore the level of implementation maintained by eight general education teachers during math instruction, the researchers used qualitative and quantitative methods to assess continued implementation 10 years after the teachers participated in the initial training. While they found five teachers sustained moderate implementation and three sustained high implementation, the researchers did not engage any in-depth discussion of the initial, multi-day training or ongoing training beyond mentioning that there had been some support during the first five years, as well as continued district investment in the system and sustaining PD. Notably, the researchers did find that teachers reported cross-curricular utilization of the PALS practices beyond math, when they had a deep conceptual understanding of the student to student, peer collaboration research that was the foundational construct for the PALS strategies.

These studies that discussed PCK and TPCK, all shed light on the importance of sustainable, ongoing PD and intentional approaches to teachers' practice of instructional design

and planning. However, none of these studies attend to the need for effective practices that are equitable for diverse students in inclusive classrooms, which is the context in which general education teachers must support achievement for all students including those with diverse abilities, cultures, languages and socio-economic backgrounds. While these studies emphasize the importance of strategically designing content specific instruction, it is attention to pedagogical approaches that are equitable and inclusive that is essential for all teachers of diverse students.

Pedagogical design for equitable instructional. Pedagogy is more than just a way to approach the design of content and language instruction, integration of instructional technology, or technology to track instructional information. Pedagogy is an epistemological approach to instruction including the complex contexts in which teachers must provide instruction and support students. While pragmatic approaches to the effective design of content based instruction are necessary for teachers to provide appropriate learning opportunities, it is a mistake to think that designing any lesson based on content approaches can be sufficiently accessible to all students if the pedagogical approach does not take language instruction and students themselves into account. In the literature, I found two central discussions related to what I call *pedagogical design for equitable instruction* (PDEI) with orientations toward instruction that is effective for the students with whom teachers are responsible for delivering high-quality teaching and equitable opportunities to engage learning. These two discussions include pedagogy for the instructional inclusion of students with diverse learning needs and abilities, and pedagogy for instruction that is relevant and responsive to students with diverse backgrounds. Of note, both of these conversations in the literature reflect the classroom teachers' need and responsibility to design and facilitate instruction that is effective for all students in diverse, inclusive classroom

contexts, including language instruction, regardless of the specific content area(s) being taught.

Inclusive pedagogy. Inclusive pedagogy is a pedagogical approach to oriented toward creating instruction, that is accessible for all students across curricular subjects or content areas, specifically including students with diverse learning needs and abilities. As I noted above, all of the studies focused on PD for behavior management assert an orientation toward inclusion particularly for students with significant and identified needs related to challenging behaviors, since they can present a barrier to learning for those students as well as potentially interrupting the learning opportunities being provided for other students in the classroom or larger school setting. Since those studies focused specifically on the larger context of school-wide behavior supports rather than attending to the broader scope of instruction or students' identified learning needs in classrooms, I did not include those studies in this section to avoid redundancy. However, it is important to acknowledge the orientation toward inclusion in the literary discussion of classroom and behavior management, as they constitute a subset of the larger pedagogical discussion oriented toward equitable inclusion and instruction for all students. I found a number of additional studies that discussed inclusive pedagogical approaches to PD for teachers designing instruction in classrooms.

Jenkins and Yoshimura (2010) published a single case study of a school-based support specialist who recognized the needs of general education teachers to be better prepared to support students with special education needs through inclusive classroom instruction. The researchers described the process the support specialist engaged to assess, plan for, and respond to the PD needs of the 18 general education teachers in a small, inclusive school. After collecting surveys from the 18 teachers, the support specialist created and provided six research briefs, which she designed to be easily engaged and utilized by teachers, and distributed one per week

for six weeks. While I discuss the structure of this PD further below (see: Structure- Teacher Driven), it should be noted here that the teachers responded well to the one-page briefs, each of which included short descriptions, visuals and additional resources, and were each focused on a strategy or approach for improving inclusive instruction. In follow-up survey responses, teachers reported that the briefs were helpful because they were short and focused, easy to read and implement, and served to remind teachers to make efforts toward instructional improvement. As a result, teachers reported making efforts to improve instruction, using strategies from the briefs, which had been specifically included for their orientation toward increasing the quality of instructional inclusion for students with disabilities.

Strieker, Logan and Kuhel (2012) conducted a study of *job-embedded professional development* (JEPD) following the level of instructional inclusion of 338 students with identified learning needs in six elementary and middle schools. Conducting a large-scale quantitative analysis, the researchers treated the JEPD as an independent variable, which they designed to “assist teachers in finding solutions to problems resulting from the inclusion of students with disabilities” (p. 1053-1055). The researchers asserted that the PD model was oriented toward supporting student needs to achieve learning goals, joint collaboration among teachers and administrators to plan and implement school-based, job-embedded, long-term, differentiated learning opportunities that were tied to district goals. The dependent variables examined included the percentage of time students spent in inclusive classrooms during core content instruction, and the percentage of time students engaged other service delivery options such as general education inclusion with para-professional support, special educator-general educator co-taught core content instruction, co-taught core content with addition support in a resource room, resource room only or self-contained classrooms.

Compared to first year baselines, each of the six schools demonstrated increases in the percentage of instructional inclusion for identified students. The researchers reported statistically significant increases in inclusive instruction across the six schools, but also reported significant differences among the schools. The two schools with the lowest levels of instructional inclusion during the baseline year, demonstrated the most significant gains across the project, while the third school with statistically significant gains had a higher baseline level of instructional inclusion, but made significant gains in one year of study, rather than two years, due to a delay in implementation. The two elementary schools with the lowest gains in instructional inclusion overall, also started with highest baselines for inclusion, suggesting less potential room for growth in those settings. However, one of the middle schools demonstrated the least gains in instructional inclusion across the project, potentially influenced by a decrease in instructional inclusion during the first year, balanced by a more significant gain during the second year of implementation. Overall, the project recorded an aggregate baseline of inclusion during 33 percent of core instruction, with 26 percent increase to 59 percent instructional inclusion ($p=.001$). However, when looking at the programmatic structures implemented in each school, a very different picture comes to light.

All of the schools, including those with less significant gains in overall inclusion, successfully eliminated or significantly reduced instruction in self-contained classrooms, as well as significantly reducing reliance on the resource room as a sole support. Instead, all six schools demonstrated significant increases in co-teaching supports with or without the support of the resource room or para-professionals, all of which represent significant improvements in inclusive structures to support instruction for students with identified learning needs. Of note, the study findings were consistently positive improvements for students with mild, moderate, significant,

low incident and behavior related identified learning needs. In addition, while the researchers did not extensively discuss the detailed implementation of the JEPD itself, the study results demonstrate that it is possible to support wide-spread inclusion of students with a broad range of identified learning needs through inclusive instruction with appropriate supports rather than relying heavily on exclusionary instructional models.

Perkins and Cooter conducted a study of the efficacy of a literacy academy in 2013. While the researchers clearly emphasized the focus of their study on PD for the systematic improvement of elementary student literacy in a large urban district, the researchers also asserted that the literacy academy was intended as a PD to build teacher capacity through knowledge and expertise of formative assessment, effective teaching methods and specifically adapting instruction for students with special learning needs. Using a mixed methods evaluation design, the researchers examined the perceptions, experiences and instructional methods of 144 teacher participants across 24 diverse, elementary schools, as well as student achievement. Although the researchers did not specifically detail the PD provided or the specific pedagogical orientations included, they did describe the orientation of the project as a whole, including attention to culturally, ethnically, racially and linguistically diverse students, as well as students with special needs, as integral factors in the overall improvement of literacy achievement school and district wide. Unfortunately, the researchers do not present data or discuss finding related to teachers' use of instructional adaptations or achievement outcomes for these students. As a result, while acknowledging diverse students and students with special learning needs as important groups included within the student body needing effective literacy instruction, the study did not attend to factors related to the implementation or outcomes of the inclusive pedagogy used to frame the study.

In contrast, Kappler Hewitt and Weckstein, (2012) presented a district-wide approach to supporting widespread, deep implementation of differentiation in academic instruction. While differentiation is an instructional approach to support inclusion, which the district expected of all teachers, the researchers acknowledged that the PD itself was designed to include differentiation for the teacher participants, who were expected to learn and implement differentiation strategies in their classroom instruction. While I discuss the structure of this PD below (see: Structure-Teacher Driven), the importance of this study is the overarching attention to differentiation as essential to inclusive success for all participants, including teachers and students. The researchers recognized that the district-wide goal was instructional implementation of differentiation for the successful and effective instruction of all students in inclusive classrooms. In order to support teachers' ability to implement differentiation at high levels, the PD project used differentiation to frame not just the content of teacher learning, but also as the structured approach for delivery of PD content.

By providing the teachers with differentiated PD opportunities, the teachers were able to experience differentiation as it was provided to them and engage the learning opportunities that best suited their learning and instructional needs in order to create more meaningful differentiation for their students. While the researchers reported positive outcomes with teachers and improved student achievement scores using a differentiated approach to support teacher learning, they grounded their orientation toward differentiation in the works of Tomlinson and Danielson, both published in 2007. However, they did not specifically discuss an orientation to differentiation as a method or pedagogy for inclusion of students with special learning needs or diverse backgrounds. Similarly, Howell and Saye (2016) (see above: PD Content- Pedagogical Knowledge for Content and Technology) described the nature of their PD as “scaffolding”

supports for teacher learning, drawing from historically inclusive orientations to instructional support, such as Vygotsky, but made no connection to the inclusive nature of scaffolding for successful learning in regards to their teacher participants or the students those teachers ultimately served through instruction in inclusive classrooms.

I located only one study that specifically oriented toward a bridge between inclusive pedagogy and responsive pedagogy, which I discuss further below (see below: Responsive pedagogy). Polly and Hannafin (2011) discussed a learner-centered approach to PD and instruction, which allowed teacher learners to respond to the needs of each student learner included within instruction, whether related to special education needs or diverse backgrounds. The researchers presented a case study of two elementary teachers who participated in a yearlong Technology Integration in Math (TIM) PD focused on learner-centered pedagogy, technology and content for math instruction. The researchers attended to learner-centered principles for the instruction of students, as well as for professional development with teachers, which they called *learner-centered professional development* (LCPD). The PD itself provided supports for learner-centered pedagogy and content instruction, as well as providing teacher-as-learner-centered supports such as scaffolding instructional implementation through modeling and co-planning. Using interviews, observations of PD and instruction, and video analysis, the researchers analyzed the difference between the two participants' espoused and enacted practice of learner-centered pedagogy in math instruction. Unfortunately, even with learner-centered PD and scaffolded supports for teachers' emerging implementation, the researchers found low levels of effective implementation during lessons the teachers planned independently. In addition, teachers' espoused beliefs about the importance of learner-centered pedagogy and instructional implementation of practices were not consistent with the enacted practices observed during

instruction. While observed implementation was higher during instruction of lessons with which the teachers received more scaffolded supports (e.g., lessons modeled during the PD and subsequently adopted in the classroom or co-planned lessons), the decrease in observed instructional implementation of learner-centered pedagogy in lessons for which teachers received no scaffolded supports suggests that, just like the students they serve, teachers benefit from learner-centered, scaffolded supports and struggle to successfully demonstrate mastery of new skills through pedagogical instruction when those scaffolded supports are prematurely removed.

Relevant pedagogy. Relevant pedagogy represents a shift in orientation from inclusion of students with identified learning needs or disabilities, toward the need for instruction that is effective for all students in general education classrooms by responding to students' varied, diverse backgrounds and experiences, which may include culture, language, ethnic heritage or race, or socio-economic status, among others. Although few studies specifically addressed general education teachers' needs for PD to support students with identified needs in special education, rather than a broader attention to educational inclusion, a much larger number of studies specifically addressed the need of general education teacher to support students identified as culturally and linguistically diverse.

Eun and Heining-Boynton (2007) conducted a quantitative analysis of 90 elementary and secondary teachers to assess the impact of a PD program specifically oriented toward teaching practices for supporting students using English as a second language (ESL). Using Likert scale questionnaires, the researchers discussed teachers' self-reported efficacy, implementation and organizational support to analyze how teacher efficacy and school level organizational supports, as independent variables, influenced impact of the PD on teacher practices, as the dependent variable. The researchers found that teachers reliably rated both their efficacy and impact of the

PD, but found a much wider range of ratings in the area of organizational support, which also had the highest standard deviation. Interestingly, the researchers found that teacher efficacy contributed to predicting the impact of the PD, even when controlled for teachers' years of experience. This suggests that teachers' career stage was not a significant factor in the impact of the PD or teachers' ultimate implementation of the strategies they learned. However, after controlling for teachers' self-reported sense of overall efficacy, school-level organizational supports were a statistically significant factor in the prediction of teachers' reported sense of the PD's overall impact. In other words, regardless of a teacher's years of experience or sense of instructional efficacy, school-level organizational supports were needed for the PD to have the most impact. Unfortunately, the researchers did not report details of the PD itself or varied reports of impact across teachers in general education classrooms versus ESL specific teachers, and while 90 teachers participated in the study, 77 were ESL specific teachers and only nine taught mainstream classes. This means the overall impact of the PD supports teaching that responds to students' linguistic diversity, but not primarily with teachers in inclusive, general education classrooms.

In 2009, Burroughs, Hopper, Brocato and Webeck conducted a study about a cross-cultural PD oriented toward social justice and citizenship. While I discuss the structure of this Democracy Camp below (see: Structure- Experiential), the PD content focused on supporting 28 teachers from around the world to better prepare students to understand and address social issues as community, national and global citizens. The researchers reported that the PD activities were designed to foster teachers' awareness, knowledge, understanding and confidence in teaching about topics related to the concept of social justice, in an effort to prepare students to be social justice-minded citizens in democratic societies. Covering content topics such as *Brown v Board*,

Dr. King Jr.'s "I Have a Dream" speech, the Civil Rights Act of 1964 and National Voting Rights Act of 1965, Internment of Japanese-Americans during WWII, and the Nazi occupation of Europe including genocide of the Jewish population, participating teachers were able to learn and share their perspectives and experiences across diverse cultural and national backgrounds.

Pre- and Post- open-ended surveys were collected from participating teachers centered on their definition of social justice, explicit and implicit teaching and prioritized importance of the topic. Inductive analysis was used to identify and interpret changes across and between teachers from different geographic areas. In addition, coding and content attribution analysis allowed the researchers to extrapolate themes that emerged across participant responses. While definitions of social justice varied by geographic location on pre-surveys, 59% of respondents felt their definitions had become more informed after the PD, and all groups referenced the importance of civic participation, the balance of rights and responsibilities, the role of education in promoting social justice and specific consideration of race, class and gender issues. While 47% of teachers reported explicit teaching of social justice issues on the pre-survey, 81% reported the importance of explicit teaching on the post-survey with gains across geographic groups. Teachers from Europe reported slightly higher gains in orientation toward the explicit instruction of social justice, and the most significant gains were found among teachers from Mississippi. In contrast, teachers reporting attention to implicit teaching of social justice orientations fell from 80% on the pre-survey to 74% on the post-survey, with no notable differences among geographic groups. However, the researchers attributed this to the significant increase in attention to explicit instruction for social justice issues.

The researchers also noted differences among the specific topics within the theme of social justice that teachers asserted interest in teaching on post-surveys with teachers from

Europe specifying fairness, freedom, human rights, equality, happiness, justice and injustice, while teachers from Central and South America asserting fairness, equality, cooperation, justice and injustice, and teachers from North America specifying peace, freedom, choice, order, equality, tolerance, opportunity, poverty and justice. Finally, participants' perceptions of the importance of teaching social justice orientations (rather than implicit or explicit instruction) shifted significantly from pre-survey responses of moderate importance by 68% and high importance by 22% of respondents, with only 30% reporting moderate importance and 70% reporting the highest importance on post-surveys. Higher increases were found among teachers from the Americas over those from Europe, but the most significant changes within groups were found among teachers from Panama and again among teachers from Mississippi.

Of particular interest is the researchers' discussion of teachers from southern states in the US. In contrast to teachers from other parts of the US or around the world, teachers from Mississippi, Texas and Florida were generally unaware and genuinely perplexed by instances of socially unjust atrocities against peoples in other parts of the world, and struggled to grasp the significance of parallel experiences in other locations, particularly internationally. This suggests the PD successfully impacted teachers to expand awareness, understanding and their perception of the importance of teaching about social justice issues, but did not successfully do so on the level of global citizenship for teachers from southern states in the US. In addition, while this study showed laudable gains among teachers' orientations toward teaching about social justice issues, it did not provide any insight to teachers' transfer of their orientation toward teaching about social justice into their instructional practices.

Hutchinson and Hadjioannou (2011) studied their design of a hybrid PD focused on supporting teachers' abilities to better understand, assess and implement instruction for

linguistically diverse students with limited English proficiency (LEP). The researchers utilized both digital and collaborative structures with teachers enrolled in a two-semester sequence of University course work. While I discuss the structure of their design below (see: Structure-External), the researchers focused their research on participants evolving knowledge of second language acquisition and their subsequently developing and knowledge of TESOL strategies. Working with 20 in-service teacher participants, the researchers collected pre- and post- surveys, reflective writings and online conversations, all of which were assigned within the hybrid coursework, as well as collecting classroom observations. While the researchers analyzed participants' perceptions of the knowledge gained through the PD, the researchers also analyzed the presence of associated teaching practices during observations. Examining teacher reports in writing (surveys, reflections & conversations) the researchers found that the hybrid course did significantly support participants' knowledge and understanding of second language acquisition.

The researchers also found that teachers reported growth in their senses of frustration and inadequacy, and "felt intimidated by the daunting task of designing and implementing accommodations that are appropriate to the needs of their diverse" students without "compromising the educational experience of their non-ELL students" (English language learners, p. 106). Although the researchers reported high levels of inter-rater reliability, they also described using the participant surveys to develop observation rubrics used to evaluate participants practices as not, somewhat or strongly evident during observations conducted early and late within the PD. While the researchers reported significant growth for participants between early and late stage observations, it is unclear how knowledge and understanding questions from the survey are sound, valid or reliable in their translation within the observation rubric. For example: The researchers described the Likert scale survey item, "I know,

understand, and use the major concepts from applied linguistics and second language acquisition to construct learning environments that support English language and literacy development and content area achievement” (p. 97) as being expressed on the observation rubric in terms of instructional competence, as “Teacher knows, understands and uses the major concepts from applied linguistics and second language acquisition to construct learning environments that support English language and literacy development and content area achievement” (p. 98). However, observation alone cannot support sound analysis of a teacher’s knowledge or understanding, and can only support analysis of a teacher’s use or implementation. In addition, while the researchers reported that each observer was certified in the area of ESL instruction and trained in observation, the researchers did not describe what “level of adequacy appropriate for regular education teachers,” was when ESL observers deemed demonstrated practices were not, somewhat or strongly evident.

Of note, the researchers reported that “all” participants asserted the need to purposefully take time to get to know their students’ linguistic, education and cultural backgrounds, as well as their learning styles, personal interests and level of language development. Unfortunately, the researchers found only “several” teacher participants appropriately connected the need for this knowledge of diverse learners in their classrooms, with the ability to design and implement instruction effective for those students.

In 2011, Kose and Lim published a study using quantitative analysis of surveys collected from teachers in 25 diverse, small, urban elementary schools. While the study did not focus on a specific PD it did explore a comparison between teachers professional learning processes (PLP) or the structure of PD opportunities and transformative professional learning (TPL) or the content of PD oriented toward supporting instruction for students learning English, students

qualified for special education, students of color or living in poverty and teaching for social justice. While the researchers described the above groups of diverse students, the pedagogical perspective that underpins transformative teaching and learning is an orientation toward increasing equity and social justice for all diverse students. Using nine PLP or process variables and the five TPL variables named above, the researchers explored five teacher outcomes as dependent variables in the areas of transformative beliefs and transformative practices.

Exploration of the process model looked at nine professional learning factors: job-embedded learning activities, learning contexts, planning days (per year), team collaboration time (per week), peer observation time (days per year), special education collaboration time (days per year), specialist collaboration time (days per year), mentor or study group time (days per year), team collaboration quality, staff meetings and in-service quality, without focusing on quality of PD opportunities but not orientations of the PD content. Exploration of the transformative model looked at five professional learning factors, teaching for social justice and teaching for students in four groups that are traditionally marginalized: special education, emerging multilingual, minority race or ethnicity or living in poverty, focused specifically on the quality of PD content rather than the context of the PD opportunity.

The researchers ran multiple regression analyses for each of the two models exploring the relationships among the independent variables with five, dependent, teacher outcome variables: decreased deficit perspectives, increased value of diversity, increased perception of expertise in teaching for social justice with diverse students, increased frequency of student diversity represented in instruction, and increased frequency of teaching for social justice. Findings from both analyses showed the quality of staff meeting and in-service day collaborations (SMIQ) was the only statistically significant independent variable that was highly correlated with decreases in

deficit perspectives. In relation to teacher perceptions of diversity importance, SMIQ was again the only statistically significant independent factor in the PLP model, which was positively associated with importance for students of color, in special education, living in poverty or emerging as multilingual; however, no PLP factors were associated with importance for “GLBT” diversity.

In contrast, the TPL factors related to students in special education or students who are multilingual were both positively associated with teacher reported importance for those diversity groups. Interestingly, while the researchers reported finding no transformative factors associated with diversity important for students of color, they found a decrease of importance for students living in poverty, but an increase in the importance of GLBT diversity. Although special education collaborations in the PLP model were associated with teacher reported special education expertise, no PLP variables were associated with dependent, transformative outcomes. Teaching for social justice in the TPL model was positively associated with expertise in teaching for GLBT, ELL and social justices, while the latter two were also associated with teaching for ELLs. Special education expertise was positively associated with teaching expertise for special education but both ELL and special education were negatively associated with teaching for students of color in the TPL model.

Looking at the representation of diverse identities in curriculum, or curricular representation, ELL collaborations were positively associated with increased representation of both ELLs and GLBT. While study group collaborations were associated with increased representation of students of color in the PLP model, and no factors were associated with increases in curricular representation of low-income students or students in special education. However, teaching for social justice was positively associated with both planning days and

SMIQ. In the TPL model teacher learning relevant for ELLs was positively associated with curricular representation of ELL students, but negatively associated with the representation of students of color. Teacher learning relevant for teaching students of color and special education were both positively associated with curricular representation of students of color, but only teacher learning relevant for special education was associated with curricular representation of students in special education. Curricular representation of students in poverty was associated with teacher learning relevant for students of color, while representation of GLBT students was associated with teacher learning for social justice in the TPL model. However, implementation of teaching for social justice was only positively associated with the TPL variable teacher learning relevant for teaching ELLs, not learning for teaching for social justice.

While the researchers found interesting variances within and across the two models, the significance of the finds relate to the need for attention to both process and content in PD design and planning. Although access to sufficient time and quality collaboration processes are important for decreasing deficit perspectives, attention to transformative content is needed to support instructional equity and inclusion for diverse student populations. Both PD content oriented toward transformative perspectives and PD processes that structure and support collaboration among classroom teachers and instructional support experts need to be included in the design of PD to support equitable and inclusive instructional outcomes.

In 2014, Johnson and Fargo studied a PD project designed to be responsive and transformative for elementary teachers. While the PD engaged fourth, fifth and sixth grade teachers in multiple structures across two years, the researchers followed the students a third year to gather data on the PD's impact on students' mandated test scores. Using a treatment school, which received the PD intervention, and a comparison school, which did not receive the PD, the

researchers conducted a comparative case study of the students for whom test scores could be collected across each of the three years of the study. Using baseline year one and year two test scores from students in classes with treatment or comparison teachers, the researchers conducted a statistical analysis of student score gains and the impact of the transformative PD. The researchers found that the students whose teachers had engaged the PD demonstrated significantly higher gains over time than the students whose teachers were in the control school, meaning the longer students received instruction from participating teachers, the more gains were indicated in students' mandated test scores. In addition, the researchers found that all students demonstrated gains over time, but that students coded as Hispanic demonstrated more significant gains than those coded as non-Hispanic. This means that the PD provided support for increasingly effective instruction for all students, but particularly supported the students historically underserved by instruction not appropriately responsive to their diverse backgrounds.

Chinn (2015) published findings from a study of PDs in Hawaii that were designed to support teachers' ability to effectively teach science at the intersection of western knowledge of science and native Hawaiian cultural knowledge of ecological mindfulness, in response to the unique context of cultural and linguistic diversity in Hawaiian schools. The researcher found that providing PDs that integrated Hawaiian and western science knowledge deepened teachers' interests in culture as well as science. Second, Chinn found that PD led by teachers to develop exemplary programs through experiential and inquiry-based learning supported classroom transformation toward place, community and inquiry-based instruction. Chinn's work in Hawaii supported an important perspective because the students and teachers studied included a significant representation of native Hawaiians, in comparison with the demographic representation of peoples from other cultural or ethnic minority backgrounds across the

contiguous US. Chinn suggested, particularly when working with native Hawaiian teachers, who were responsible for teaching western standardized content to native Hawaiian students, the PD had to do more than teach pedagogical perspective that were responsive to students. In fact, the PD also had to respond to the cultural background and knowledge of the teachers. In order for teachers to best implement the science content through instruction they needed to better understand the hybridity of the two knowledge sets. This enabled them to transform their instruction using both native Hawaiian-western science hybrid knowledge and responsive practices in the classroom.

Glover and Harris (2015) published a single-case study of their work within a PD focused on culturally relevant instruction within literacy, highlighting a commitment to educational equity for all students by early childhood teachers. The researchers, a teacher educator and an early-career second grade teacher respectively, worked in tandem to explore culturally relevant instructional practices. The researchers focused on two research questions: how their professional partnership influenced the beginning teacher's perspectives and impacted the beginning teacher's practices. The researchers explored their experience using culturally relevant learning to develop cultural competence and sustaining pedagogy, which Paris (2012) describes as approach to sustain and support culture through instructional practice, rather than just responding to cultural difference. As partners, the researchers worked together throughout the project, and met periodically with the four other partner dyads around the country. Each dyad developed an investigation and worked with diverse families, communities and students in their local contexts. The researchers found that the PD had a "profound impact" (p. 30) on Harris during her first two years in the classroom.

The researchers revealed three broad themes within their coded data, first-year challenges, the dyad relationship, and “a voice and a vision” (p. 30). Interestingly, the researchers found reflections on exploring and integrating the culturally responsive pedagogical practices that guided the dyad’s work together were coded within reflections on the challenges of teaching during the early years in the classroom. While I will discuss the dyad structure below (see: Structure-Embedded), what I found particularly interesting was the finding that the voice and vision developed through the dyad relationship supported implementation of the responsive practices they were exploring. In addition, the researchers suggest that uptake of implementation was met with “little difficulty” (p. 30) possibly because the beginning teacher’s instructional practices were still emerging as part of her professional practice as an early career teacher. As such, modifying instruction to incorporate new practices did not require retraining to leave behind old habits, but focused solely on initial training of new, responsive, effective approaches for instructional implementation. The researchers also found a consistent occurrence of resistance to the emerging implementation of culturally relevant pedagogy by other teachers not participating in the PD project. The researchers assert this resistance led the early career teacher to build confidence in her practice of responsive pedagogy through the PD partnership dyad, and contemplate her emerging role as an early teacher-leader.

Both Chinn (2015), and Glover and Harris (2015) recognized an important intersection that responsive instruction was important, but hybridity with relevant, culturally sustaining pedagogy with content knowledge was essential for teachers’ design and students’ access with equitable instruction. Teachers and students had to understand how the content knowledge required in western standardized curricula could be valued in synchronicity with their cultural background knowledge, rather than in dichotomous conflict. Both teachers and students must

understand how the content of their learning is relevant to their own diverse backgrounds and experiences, and feel that their identities, learning styles and needs are responded to and supported within a learning opportunity.

Glover and Harris (2015), in particular, presented an important case study that is both relevant and insightful for my study, but they present a sole perspective in their single dyad case study with no clear understanding of any common experiences or generalizability across other dyads within the context of the same PD project. Looking across the studies that discussed inclusive and relevant pedagogies there was an important theme among the findings that relevant instruction and pedagogies oriented toward equity and social justice had important implications for supporting teachers and improving instruction students in diverse, multiculturally inclusive classroom. This is consistent with the work of key researchers in the fields of inclusive and relevant pedagogies, who have emphasized the essential nature of equity oriented pedagogies for the design of instruction to support learning for all diverse students effectively, in any content area (Biklen et al., 1977; Darling-Hammond & Friedlaender, 2008; Gay, 2010; Ladson-Billings, 2014; McCall & Skrtic, 2009; McDermott & Varenne, 1995; Meo, 2008; Nieto, 2010; Paris, 2012; Tomlinson & McTighe, 2006). These studies inform important understanding of the repertoire of pedagogical practices that are essential to the content of effective PD, but there remains a need to better understand the structured means of influence and contexts of PD that best support teachers' learning and transformation of instruction through application in daily practice. Since Timperley & Alton-Lee (2008) suggested that effective PD must attend to both content and structured means of influence, in the following sections I review the contexts of PD structures and terms of influence discussed among body of studies reviewed above.

Structures of Influence

While coding for PD structures I learned that “university based” was not effective because it was difficult to separate non-university supports from university supports which could exist in any or all of a PD’s design, implementation or evaluation, as well as the writing and publication of research studies. Instead, I described the relevant research coded into three overarching themes that emerged from the studies: experiential, external and embedded structures.

Experiential structures. Experiential structures were limited in the studies I reviewed, but had an overarching theme of immersion within an experience, such as a camp or a retreat. Two studies specifically discussed teacher participants who attended a weeklong summer camp experience, with no description of follow-up supports. Burroughs, Hopper, Brocato and Webeck (2009) discussed a camp experience offered to teachers across the US and international partnership locations. As a Democracy Camp, the weeklong experience was designed to increase teachers’ awareness, understanding and orientation toward teaching about issues of social justice on community, national and global scales. While the immersive, cross-cultural experience demonstrated significant gains in the areas of intended outcomes for teachers, there were two significant limitations that should be noted. First, of the 28 teacher participants from across the Americas and Europe, teachers from southern states in the US struggled more than any others to understand global parallels of socially unjust atrocities and found it difficult to see past their culturally relevant knowledge of local, historical experiences to understand global perspectives. Second, while the study demonstrated significant gains by participants in orientations toward the high importance of explicit instruction on issues of citizenship and social justice, the limitations of the retreat structure being studied cannot reveal any transfer of knowledge gained through the

PD camp, into the instructional practices of any participant. This means that the impact of the PD's retreat structure may have been significant and meaningful learning for teacher participants, but the retreat structure itself is limited in its ability to support or understand the impact of teacher learning on transformative changes in classrooms.

Meichtry and Smith (2007) researched a place-based PD program, grounded within a relevant local environment to determine the impact of the experiential PD on teachers' attitudes, confidence and resulting classroom practices. During a six-day summer workshop, 20 participants explored 310 miles of a local river, between the headwaters and the confluence with the Ohio River, studying environmental education and watershed science. The PD program intended to increase teachers' confidence and practice of hands-on inquiry-based science and field-based investigations, integrated the sciences along with other subjects and current real-world issues, use of community-based and local environmental resources to teach watershed science and integrated technology in their teaching. Participants were offered two follow-up sessions during the academic year in September and March, in order to focus on classroom applications of learning from the summer experience. This suggests PD designers recognized the need to move beyond brief experience outside of school contexts to provide additional means of influence through ongoing support for practical application. The researchers used pre-, post- and nine-month post-, Likert-type surveys to generate quantitative data, which they used to evaluate the outcomes and impact of the experiential PD. Findings showed increased confidence-levels after the PD with some areas showing greater gains on the long-term post survey, after the two follow-up sessions. Teachers reported increased use of community resources, field investigations and teaching watershed topics with connections to real-life and social issues. While the findings showed a lack of significance in the overall use of technology and instructional strategies, the

program did have a significant impact on the use of inquiry-based strategies, water-quality sampling kits and digital cameras. Although findings were limited by the nature of self-reported data from teacher participants, the findings suggest that the impact of the experiential PD was increased by the mid-year follow-up sessions focused on classroom applications, resulting in increased confidence between the post-survey and long-term post survey.

In 2012, Smith published reviewed an evaluation of Circle of Trust® cross-professional retreats, responding to growing attendance by teachers. While the retreats offered were short, three to four days, they were structured to provide iterative, follow-up support for teachers (or other professionals) who first attend a three-day introductory retreat, and then returned for intermediate and advanced, four-day retreats. Although the leveled retreats, offered a form of ongoing, the work done in these retreats was completely isolated from the school context. The Circle of Trust retreats focused on professional work with an orientation toward supporting participants' "Journey Toward an Undivided Life" (p. 102), by fostering reflective practices as a form of professional development. However, the researcher asserted that the evaluation was done with cross-professional participants whom had attended at least two of the three-retreats and did not give specific attention to teacher participants. One notable finding of the evaluation was participants praise of the evaluation itself, as a reminder to practice professional reflection, reinvigorating their attention and effort to practice strategies learned during the retreats. This suggests that learning during the retreats was not consistently applied during daily professional practice, even after attending follow-up retreats for ongoing support.

Although both Meichtry and Smith (2007) and Smith (2012) described limited opportunities for participant follow-up engagement, experiential learning presents a particular challenge; transferring knowledge, skills and strategies learned during the experience into the

context of daily practice through classroom instructional implementation. While the research published by Meichtry and Smith (2007) suggests that follow-up sessions could increase the effective impact of experiential PD, data and therefore findings were extremely limited by both the self-reported nature of survey responses and the limited term of follow-up supports or investigation done within a single school year. This means the long-term impact on changes in teachers' classroom practices in subsequent years cannot be determined.

External structures. External structures included a variety of training opportunities that may or may not have been presented on location at a school site, but were not specifically embedded within a school or teacher's context of instruction, such as a training workshop or a university course. Each externally structured PD provided some specific training with a set structure for expected engagement in the professional learning opportunity by teachers. Here I reviewed the research that discussed entirely external structures, but further discussed studies that reported simultaneous use of external and embedded structures below. Within the studies discussing external support structures I found two themes: in-person workshop or course structures and digital, virtual or blended structures. The experiential structures described above were also external to the context of instruction, but were distinctively different from the workshop, course or digital structures described below. Experiential PDs created a contextualized experience that was immersive, in contrast to the separated, dendritic experience of external structures described here, which lacked immersive or embedded contexts relevant to the teachers they engaged.

Workshops and enrolled courses. Workshops and enrolled courses provided some specific training with a structured program for engaging teachers in professional learning. The workshops and courses all provided collegial, in-person interactions, but lacked context

connected to teachers' classrooms. Hall and Scott (2007) engaged teachers in workshops at a university, through which the researchers intended teachers would transfer their experience engaging historical inquiry into their design and implementation of more effective classroom instruction. However, the researchers found that the external design did not sufficiently respond to the contexts in which teachers needed to apply their professional learning and teachers struggled to transfer new learning into classroom practice. Although a number of studies discussed initial workshop trainings or structured courses, reviewing the studies coded for pedagogical perspectives, revealed that in-person interactions in external courses were frequently supplemented by digital interactions, or by some level of support embedded within school contexts, as further discussed below. For example, Perkins and Cooter (2013) describe 150-hour PD project, across two semesters of enrolled coursework, with 60-hours of the PD work being "job-embedded" (p. 181).

Digital and virtual supports. Digital and virtual supports afforded greater flexibility in time and participation for teachers or supplemented a limited ability to coordinate in-person interactions within externally structured PD. Hutchinson and Hadjioannou (2011) described a study that used six digital learning modules across two semesters of enrolled coursework as structures to engage teachers in PD, to support instruction for students with limited proficiency in English. While the modules were external and virtual in nature, the digital learning modules guided teacher participants in inquiry to better understand the learners and learning needs within their instructional context. As a result, while the digital learning modules constituted an external structure, they served to facilitate participants' specific inquiry into the relevant contexts in which teachers were situated. Through the designed structure of the digital modules, the project provided flexibility for teachers to complete the professional learning objective based on their

own availability, while encouraging teachers to ground their learning and inquiry in ways that were context-sensitive and fostered participants' development of collaborative interactions expected to continue beyond the limitations of the two semester, enrolled course term.

While the researchers found significant gains in both knowledge and implementation of pedagogy for teaching linguistically diverse students, by analyzing participant surveys, in-course writings and classroom observations, the researchers did not discuss the lasting collaborative interactions they expected to be sustained beyond the course work. They did discuss the use of cohort-wide synchronous interactions, when participants connected and discussed in real time using webcams, as the hybrid supplement to the time-flexible modules. Although the nature of enrolled courses, within which the modules were provided and data was collected, suggested an expectation of similar levels of engagement by all participants, the researchers recognized that participants' varied levels of digital competency presented a significant barrier to engagement. The researchers did not specify the range of engagement or variation among the participants, but their assertion of digital competence as a barrier to engagement suggested both a range of participation and a limitation of this digital structure as an effective means of influence.

Harlow (2014) engaged participants in an external 15-hour workshop structured across six weeks using both in-person and computer-based activities, adapted from a 70-hour semester-long course to better-fit participants' expectations of typical PD in their district. The researcher did not discuss the characteristics of computer-based activities, and described the in-person sessions as including whole-cohort discussions and hands-on activities. Of note, the researcher found only three of the five participants demonstrated any level of transfer of new learning from the PD into observed teaching practices and that transfer was limited even within those examples. This suggested that teachers increased content knowledge through the externally

structured PD, but did not successfully or consistently transform their instruction, applying new knowledge in the context of classroom practice.

An important finding from my review was extensive focus given to PD embedded within the school contexts relevant to engaged teachers. While Hutchinson and Hadjioannou (2011) described the digital modules being supplemented with real-time virtual interactions, to respond to the busy schedules of classroom teachers, the focus on inquiry in their classrooms allowed professional learning to remain relevant to teachers' specific contexts. Meanwhile, Hall and Scott (2007) and Harlow (2014) found little successful application or transfer into practice by teachers who participated in external PD structures that lacked connection to relevant school or teaching contexts.

Experiential structures of influence were different in design from other external structures. Experiential structures were external to the context rich teaching setting but relied on a locus for immersion within the learning experience. However, external PD “rarely proves sufficient for making significant changes to individual teachers’ practice, “ (Penuel, Sun, Frank, & Gallagher, 2012; p.108). Although teachers’ ability to collaborate with colleagues across the school social network offers additional support for externally structured PD, these experiential and external PDs lacked the site-based, job-embedded follow-up supports and considerable time required to help teachers overcome the difficulty of translating professional learning from external PD into classroom practices that influence improved student achievement (Corcoran, 1995; Guskey & Yoon, 2009; Penuel et al., 2012).

Embedded structures. Embedded structures took on a variety of forms, but focused extensively on some portion of the PD structure being embedded within school or teaching contexts most relevant to the teacher participants. Some PDs described an external structure, but

included portions that were “job-embedded” without clarifying details or to what extent learning structures were embedded within the contexts relevant to the participants. Studies that described a significant emphasis on structured engagement embedded within the school or classroom context are discussed below, even if some portion of the workshop, training, coursework or digital interactions remained external. While reviewing these studies, I coded them into three subgroups all of which focused on variations of collaborative learning: thought partnership, which included dyads such as coaching or mentoring structures, professional learning communities (PLCs), which included small or larger groups of teachers working and learning together, and teacher driven interactions, when the PD structure itself was guided by or responsive to the teacher participants.

Thought partnering. Thought partnering included PD structures that paired a teacher with an experienced expert, mentor, or coach, as a means to support professional learning. Arnold-Rogers et al. (2008) and Brownell Leimann et al. (2008) both discussed the importance of experienced experts serving as “mentors” for early career teachers and teachers in a new school system. Glazer et al. (2005) discussed the role of “collaborative apprenticeship” to support the uptake and implementation of new classroom technology, and Glover and Harris (2015) focus on a collaborative “dyad”. However, each of these studies focused on collaboration between a teacher and an experienced expert in a non-evaluative partnership. Green and Kent (2016) discussed the development of new teacher leaders by removing them from their classrooms for a one-year fellowship, through which they learned how to support the instructional development of peer teachers, to serve as mentors when they returned to their own schools and classrooms.

Although the term dyad implies a neutral relational power between the two sides of a partnership, the terms mentor and apprentice distinctly imply an imbalance between a knowledge holder and a knowledge seeker. The term coach implies a similar imbalance between an athletic expert and trainee. Becker et al. (2013), Lane et al. (2015), and Perkins and Cooter (2013) all discussed the collaborative partnership between a teacher and an instructional coach, but the relational power among collaborations within all of these studies remained non-evaluative. While all of these studies focused on the structured partnership between a teacher and a more experienced peer, Glover and Harris (2015) dove deep into the dyad structure and found the relational component of the partnership to be an essential component of successfully supporting the teacher in the apprentice or trainee role of the partnership. Becker et al. (2013) discussed a coaching model with two distinct relational phases whereby a coach and teacher partner first connected to cultivate collaboration for implementation of new practices. Then, coaches responded directly to teacher partners in phase two, increasing or reducing collaborative supports based on teachers' success or struggle with instructional implementation.

All of these studies acknowledged some external training or collaboration, in addition to the essential support structure of the instructional thought partnership (Arnold-Rogers et al., 2008; Becker et al., 2013; Brownell Leimann et al., 2008; Glazer et al., 2005; Glover & Harris, 2015; Green & Kent, 2016; Lane et al., 2015; Perkins & Cooter, 2013). While none of the studies presented detailed discussion of additional structures that supported thought partnerships, this suggested that workshops (e.g., Becker et al., 2013; Lane et al., 2015; Perkins & Cooter, 2013) or ongoing collaborative trainings with a larger cohort (e.g., Glover & Harris, 2015; Green & Kent, 2016) may have played an important role in the relational formation and development of knowledge within thought partnerships.

Professional learning communities. Professional learning communities (PLCs) included a variety of small group collaborations across a school, district or broader community of teachers. Glazer et al. (2005) in particular, discussed the collaborative apprenticeship partner structure as being supported by the larger professional community learning to implement the same instructional technology throughout the school. In contrast, Howell and Saye (2016) discussed a structured series of lesson studies and the resulting formation of shared professional culture. Working with six teachers from three schools in three different school systems, Howell and Say found that the development of a professional culture was not shared, but varied by participant due to contributing factors in each context. Similarly, Hutchinson and Hadjioannou (2011) discussed using an external structure with an intention to support participants' formation of a context embedded PLC that would become self-sustaining after the PD. Although the researchers described the PD as "hybrid," the two support structures were both mediated by interactions through digital technology. Participants engaged self-paced learning modules to explore new knowledge ideas and also engaged virtual, real-time meeting sessions to engage peers in discussion of knowledge applications. While the researchers found the real-time virtual sessions supported successful engagement with knowledge learned in the modules, the researchers did not speak to any lasting shared culture or formation of professional community, or any engagement beyond the end of the enrolled coursework.

Liang et al. (2015), in comparison, discussed a blended learning structure that was intended to provide external, digital supports for new professional learning that participants would then engage with a context embedded team of colleagues. Although the researchers supported the digital learning structures and provided supports for school-based leadership teams responsible for planning and implementing PLC structures in each school, the researchers found

that 25-35% of respondents did not have sufficient support from colleagues, school-based PD facilitators or building administrators. In fact, 35% reported that the professional learning community or collaborative group had never been scheduled or formed, and 22-25% were not talking to colleagues about the PD or participating in any face-to-face activities within the context of their school. The on-line modules were found to be not engaging by 67% of the respondents, 57% reported motivation to engage the modules was difficult and 84% found the modules overwhelming to complete independently. Regular discussion with colleagues was reported by only 31.5% of respondents even though 62% reported regular implementation of the FIP content, and 75% reported using FIP to improve instruction. However, in focus group interviews, teachers indicated that focus on the FIP PD faded over time, and only 39.63% of the targeted educators statewide had enrolled in the program. While findings suggested the PD had some effect influencing teachers' implementation, the self-reported nature of survey, interview and focus-group data mean it is difficult to soundly assess the PD's true impact overtime. On the other hand, Johnson and Fargo (2014) discussed extensive structures designed to support the development of a PLC. They discussed the need to build a PLC as an essential component of support within a transformative PD that intended to develop teachers' capacity to improve instruction and resulting outcomes for student learning. Extensive support was given to structuring and building the PLC across the school starting with an introductory summer training workshop, regular work-release days for collaboration, and monthly grade-level support sessions. The PD intervention was provided over two years, with second and third year evaluations of student learning outcomes in intervention and control schools. Results showed that students benefited, demonstrating significant gains on mandated assessments, when their teachers were engaged in the PLC structured by the PD.

These studies suggested two important factors. First, the support of a PLC structure positively influenced teachers' effective engagement and implementation of PD content learning. Second, construction of effective PLCs may have relied on the support of internal or school-embedded structures, such as regular collaborative sessions and work-release days (e.g. Johnson & Fargo, 2014), because PD intended to support a shared practice or professional culture did not necessarily beget the construction of a broader collaborative community (Howell & Saye, 2016; Hutchinson & Hadjioannou, 2011; Liang et al., 2015).

Teacher driven. Teacher driven or responsive structures or responsiveness to the participant teachers is a theme that arose consistently among research related to thought partnership and learning community structures. Although teacher driven does not describe a specific structure, it does apply to the formation of, work within, and adjustments to both partner and community structures. The relevant research studies included a variety of different approaches to teacher driven, responsive structures, which were described with varied levels of attention and focus. The studies discussing induction and mentoring for new teachers all included attention to the idea that new teachers had particular needs for support (Arnold-Rogers et al., 2008; Brownell Leimann et al., 2008; E. Howe, 2006), while Hoffmeyer et al. (2005) described the need of early teachers to feel welcomed and invited to engage PD. Eros (2011) and Masuda et al. (2013) asserted the need for PD to respond to the needs of teachers across career stages, emphasizing that teachers' needs varied, across stages of the teaching career. Zhang et al. (2015) presented a needs assessment conducted with teachers from a three-year PD project, who even during the PD, felt their needs were not being met and that they needed more support for implementation of pedagogical instruction. This suggested a disconnect between teachers' needs for PD, and the PD that was planned and presented to them.

Jenkins and Yoshimura (2010) described assessing teachers' needs and desired approaches to PD as a first step in the process of designing PD content and structured means of influence for those teachers. Although both design and delivery of the PD were conducted within a single school year, the content and structured delivery of PD supports were designed to serve the needs of the teachers within the school. Ultimately, the researchers found the teacher participants responded positively to the PD, after it had been presented. Liang et al. (2015) described the need for teachers to engage embedded support structures, but found that the teachers' needs were not supported as intended because the embedded structures originally planned were not consistently provided to teachers within participating schools, and resulting implementation was low. In contrast, Strieker et al. (2012) focused on school-wide design and implementation of a PD project. School administrators and teaching staff were central to the initial design of the PD and desired structures for both delivery of the PD, and implementation of resulting professional learning. As a result, school-wide implementation was widely successful across participating schools and the staff supported within them.

Chinn (2015) described teacher driven responsiveness from a different perspective. Instead of discussing support structures within PD, Chinn described responding to teachers' need to reconcile the content of PD with their (and their students') cultural background knowledge, as an important means of effective influence. This "place and culture-based PD," process Chinn described as attending to the design of PD content drawing across multiple projects with attention to teachers' need to deliver effective science instruction using cross-cultural hybrid knowledge to be most aligned with the Hawaiian teachers and the students they teach. On the other hand, Glazer et al. (2005), and Glover and Harris (2015) both described responding to teachers' needs as part of the relational process between collaborative thought partners where by

an expert partner responded directly to support the emerging needs of the apprentice partner. Becker et al. (2013) applied this relational process to the formal structure of thought partnership and detailed a two-phase coaching model. The initial phase focused on developing the partner relationship to cultivate new practices, and the subsequent phase was driven by the apprentice teacher's need for more or less support within the collaborative partnership.

Kappler Hewitt and Weckstein (2012), Polly and Hannafin (2011), and Howell and Saye (2016) all gave central focus to responsive structures and described their studies using terms from pedagogy for inclusion and equity. Kappler Hewitt and Weckstein (2012) discussed differentiated PD as a way to both support and model differentiated instruction for involved teachers, and focused on teachers' asserted needs and goals, then engaging PD options that best suited their learning needs and learning styles. By designing the PD project to be centrally responsive to the needs of each participant and presenting differentiated options for professional learning, the PD presented a teacher driven, responsive structure to best support participants, and modeled the PD content of responsive differentiation teachers were learning to implement to support their students' learning. Polly and Hannafin (2011) discussed the influence of learner-centered PD on participating teachers' espoused and enacted practices. The researchers described the need for learner-centered PD to support teachers' implementation of learner-centered practices in instruction. Thought partner experts used scaffolded learning practices to support apprentice teachers through lesson planning, co-planning and modeling learner-centered classroom instruction. Then expert partners offered feedback and suggestions on independently designed plans or implemented instructional activities. Howell and Saye (2016) used a scaffolded PD structure and acknowledged significant supports during the first year, which diminished during subsequent years, as teachers became more experienced and skilled.

Looking across experiential, external and embedded structures, all had a situated context. Experiential structures placed participants within the situated context of a location or experience, while external structures were situated outside of the contexts they were intended to support. Embedded structures took place situated within the relevant school contexts. Although significantly important for the success of structured supports, the embedded nature of PD structures alone were not sufficient to adequately support teachers' professional learning and subsequent application of PD content in the context of classroom instruction. Though partnership and PLCs were important support structures with significant benefits, but it was teacher driven approaches within embedded structures that suggested the most impact on teachers' interest, willingness to engage, and subsequent application of PD learning for transformation of classroom practices. These studies suggested that effective PD structures should be both context embedded and teacher driven. It is essential for professional learning to be embedded within the rich contexts of schools and classrooms where participating teachers are expected to demonstrate and apply their learning. However, to best support teachers' professional learning the structured supports within a PD must also be responsive to the teachers they engage. Although the context rich settings of schools can be complex, when PD content and structures used teacher driven, differentiated and learner-centered approaches they supported teachers' ability to bridge professional learning of the PD content into classroom application through implementation and instructional transformation.

The embedded influence structures discussed here represent a variety of approaches that situated PD and ongoing support structures within the complex contexts that influence teachers and their classroom practices. Given the complex nature of schools and the social networks within them, it makes sense that individual learning, within collaborative social networks among

teachers, can vary widely (Meirink et al., 2007; Penuel et al., 2012; Tharp, 2012). However, each of these structures, thought partnership, professional learning communities and teacher driven structures all align with the recommendations that PD must respond to teachers' needs and interests, be situated within the complex job-embedded contexts that influence instruction, and provide collegial collaborations across networks of practitioners as a community of learners (Corcoran, 1995; Meirink et al., 2007; Patton, Parker, & Tannehill, 2015; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Penuel et al., 2012; Sun et al., 2013; Tharp, 2012). It remains essential to remember that collaborative, context embedded, teacher driven structures are not sufficient to support change if these structures do not consistently provide positive, ongoing supports for implementation of professional learning (Corcoran, 1995; Guskey & Yoon, 2009; Meirink et al., 2007; Penuel et al., 2007).

Term of Influence

When coding relevant studies for the term of the PD being discussed, I found it necessary to code for three distinct terms of influence. Deductively, I coding for brief and ongoing or continuous terms of influence and discovered the inductive need to code ongoing, short-term influence that engaged a group of teachers across a single school year, within PD projects or studies that span more than one school year, with ongoing, long-term influence that engaged teachers across more than one year. PDs coded as brief term of influence included specific trainings, but did not provide continuous opportunities to engage ongoing supports for implementation of the PD content beyond initial attendance in the training. The vast majority of studies discussed ongoing PD, but ongoing PD projects or studies that spanned more than one school year did not necessarily coincide with multi-year engagement by participants. A large portion of studies discussed ongoing supports provided over a short-term, during one school year

or less, following an initial training or implementation of a PD project. Fewer studies discussed ongoing supports provided over a long-term, across more than one school year.

Brief. Brief was the least used code for PD term of influence. Although many researchers asserted an ongoing PD approach in response to ineffective, traditionally brief PDs, such as specific in-service trainings or workshops (Jenkins & Yoshimura, 2010), only one study discussed a PD opportunity that provided a brief learning experience without any ongoing supports (Burroughs, Hopper, Brocato & Webeck, 2009). Although I did not review this study here, to avoid redundancy, it should be noted that the experiential PD, while brief in duration, was also an immersive experience during which teachers attended and participated in a camp or retreat-like structure that afforded a significant number of participation hours within a short period of time (Burroughs, Hopper, Brocato & Webeck, 2009). However, even with evidence of significant learning, there was no support for brief PD's impact on changes in classroom practices or application of PD learning by teachers subsequent to the immersive experience.

While this suggests a positive shift in the field away from brief trainings, toward ongoing supports, traditional brief PD through in-service and workshops have not been eradicated from the public school context (Guskey & Yoon, 2009). PD opportunities that are traditionally brief, such as specific training or workshops provided by the school or district, are not likely to be the focus of published, peer-reviewed, scholarly research studies, and therefore may be diminishing in the field and less evident in the literature, while still present in schools (Corcoran, 1995; Guskey & Yoon, 2009). Although these brief PDs can serve essential functions such as the dissemination of knowledge around policy changes, they cannot provide the ongoing, structured means of influence needed to effectively support intended change among teachers' regular classroom practices (Corcoran, 1995; Guskey, 2002; Patton et al., 2015; Penuel et al., 2007).

Ongoing, short-term. Short-term was a widely used code among studies covered in this review. While some studies discussed PD with ongoing supports and teacher participation that lasted less than one year (Harlow, 2014; Jenkins & Yoshimura, 2010), others discussed studies of PD and participation across a school year (Hutchinson & Hadjioannou, 2011; Lane et al., 2015; Meichtry & Smith, 2007; Perkins & Cooter, 2013; Polly & Hannafin, 2011). These studies were limited in duration, but were also limited by a short-term of influence engaging teacher participants. The focus on short-terms of influence through ongoing engagement was particularly common, even among studies discussing PD projects that spanned more than one school year. Many studies discussed an orientation toward ongoing PD, but few focused on engaging teachers in influence structures for support beyond a single school year, even when situated within a large-scale or multi-year, long-term study. Ongoing influence and engaged participation discussed in the literature reviewed here rarely attended to continuous engagement across more than one school year with the same group or cohort of teacher. A number of studies discussed a long-term or multi-year research context, while describing only a short-term of influence being presented to support and engage participants (see: Becker et al., 2013; Brownell Leimann et al., 2008; Chinn, 2015; Green & Kent, 2016; Hall & Scott, 2007; Obenchain et al., 2011; Zhang et al., 2015; Zwiép & Benken, 2013).

These studies provided ongoing influence through structured supports across a school year, which is consistent with recommendations for providing PD across extended periods of time with ongoing engagement for the teacher learners (Corcoran, 1995; Guskey, 1986, 2002; Guskey & Yoon, 2009; Patton et al., 2015; Penuel et al., 2007). However, recommendations for extended time engaging ongoing supports have not provided any definitive duration or length of

time that should be sustained, only that extended time and ongoing supports must be sufficiently provided. Whether a single school year is sufficient or not has not been identified.

Ongoing, long-term. Long-term was a code that required particular attention. While many researchers discussed multi-year studies, few focus on multi-year terms of influence with engaged participants rather than looking at school-wide outcomes of a multi-year project, or long-term outcomes after a short term of influence. Three studies discussed long-term engagement in PD across more than one school year, but presented only school-wide or student specific outcomes without discussing how teachers engaged ongoing participation (Bradshaw & Pas, 2011; Selfridge, 2004; Strieker et al., 2012). Four additional studies presented a focus on long-term, ongoing participation across more than one school year and discussed engaged teacher participants. Kappler, Hewitt, and Weckstein (2012) presented findings from their study of differentiated PD to support differentiated instruction. Although the researchers gave rich descriptions of structured options for support, from which teacher participants self-selected engagement, the study focused on a broad description of the differentiated approach to PD and only presented a synopsis of outcomes for a single participant, which they described as the results of that participant being involved for “several years” (p. 35).

Howell and Saye (2016) published a study of shared professional knowledge culture through the use of three, yearlong lesson study cycles. Notably, the researchers discussed this long-term PD as scaffolded through their three-year approach with significant supports during year one which diminished progressively during years two and three as participating teachers became more skilled with the lesson study process. The teacher-driven structure scaffolded diminishing collaborative supports, but the researchers discussed engagement and outcomes separately for six participants in three different school systems. As a result, the findings

presented provided no clear insight into the school-based contexts, structures or professional learning communities within which each participant was situated, that served to support or hinder the PD's effect on transformation in participants' classrooms. Johnson & Fargo's 2014 study engaged teachers for two years and followed student outcomes for a third year. Although the researchers focused on students' scores on high-stakes tests rather than engaged participation by the teachers, the findings showed statistically significant higher gains for the students whose teachers participated in the PD over students whose teachers were in control schools and did not participate. Furthermore, the highest student score gains were correlated with teachers who engaged the PD for two years instead of one, and for students coded as Hispanic over non-Hispanic. Although the researchers' findings do not support conclusions about the contexts that influenced teachers' participation, they do suggest that long-term participation in effective PD may have more significant outcomes for teachers and benefits for students when teachers are able to sustain engagement across more than one school year.

Possibly the most relevant study, Glover and Harris (2015) focused on their thought partnership across two years, as one of six dyads in a nation-wide cohort participating in the PD project. While the researchers presented insightful discussion of engaging the PD as partners and their relational development that supported effective outcomes across the ongoing, long-term engagement, they only provided insight into their singular context as a dyadic partnership. Since they did not present any discussion of other dyadic thought partners within the cohort, it is not possible to determine the influence or generalizability of the larger, structured PD, versus the thought partner relationship developed between the two researchers who were also the sole participants in their study.

While much discussion in the field focused on structured participation that was ongoing, little attention was given to teachers' perspectives seeking multi-year participation. As a result, the research in the field provides a depth of insight into short-term, ongoing PD structures. However, a dearth of knowledge remains around the significance, influence or possible importance of long-term, ongoing supports for participants who choose to engage PD to support equitable, inclusive and effective instruction for diverse students, across multiple year terms of structured influence.

Gap Analysis

This literature review provided a view of the field of empirical research on PD that discusses the need and influential impact of PD for teachers across their career and the design of instruction using pedagogical perspectives. These studies revealed that teachers continue to need the support of effective PD across the stages of the teaching career, even though their needs vary across their years of experience. It is also clear that PD must give attention to helping teachers design effective instruction that delivers content while also appropriately and responsively including of all diverse students. While the majority of studies focused on ongoing influence within context embedded structures, there remains a significant gap in understanding. There is a need to better understand the contexts that influence teachers who choose to engage PD structures over a long-term of influence. No study included here followed participants' engagement and perspectives across multiple school years, to better understand the complex contexts that influence teacher who choose long-term participation in context embedded PD structures that support pedagogically equitable instruction.

Focus of Inquiry

My study aimed to fill this gap by specifically examining the structured supports within a multi-year, research-based PD project and the experiences of teachers who self-selected ongoing engagement as long-term participants. In order to gain insight into my participants' perceptions, engagement and outcomes across multiple years, I drew on data generated in the field during each participant's active involvement in the project, as well as data generated in follow-up interviews. My inquiry focused on exploring the experiences that influenced teachers to seek ongoing engagement with PD content and structures they found most supportive, and the benefits, challenges and transformative classroom outcomes they noted when implementing pedagogy for equity, diversity and inclusion during instruction. Interview data was compared to field notes, memos, and classroom observations that were collected across the years of the project to determine the extent to which teachers' self-reported reflections were corroborated in their actual professional participation in the multi-year PD.

Chapter 3: Research Methods and Study Design

“[The] domain of inquiry is the acquisition of behavioral and attitudinal patterns, the building of the mind, and the building of consciousness itself – which results from intensely social processes, processes that do not cease during life.” (Tharp, 2012, p.xiii)

In this study, I explored the experiences of three teachers who voluntarily engaged a variety of ongoing support structures provided through a large, professional-development grant. Through this study I sought to understand the experiences that influenced teachers to engage in ongoing PD across multiple years, within a project that did not require their extended participation. The methods described here provided a deeper understanding of contexts that influenced teachers within embedded, ongoing PD for effective instructional pedagogy. With the explosion of content knowledge and increasingly diverse student identities within inclusive, multicultural, general education classrooms in the 21st century, effective PD is essential for teachers’ development and implementation of teaching practices that are effective for all diverse learners. Smith and Haack argued that teachers *should* value and seek PD (2000), but many opportunities are irrelevant or regarded as a waste of time by participating teachers (Wycoff, Nash, Juntune, & Mackay, 2003), even when teachers feel unknowledgeable in strategies they know are important for effective instruction (Collopy & Bowman, 2003).

Guskey (2000) emphasized that PD must be an intentional process for systematic change with clear purposes and goals, and highlighted multiple factors that challenge PD effectiveness. Among these challenges are situating PD at the appropriate level of engagement within the school system (e.g., district-wide, site-based, individual), designing PD with appropriate influence structures (e.g., training, study groups, mentoring), relevance of PD content and target learning or skills for the teaching context, and systemic support of professional learning (e.g.,

one-shot training, support for ongoing follow-up, inflexible mandate). While PD is most successful when superiors do not mandate participation, what experiences influence teachers' choice to actively engage collaborative supports across long-terms of influence is still unknown.

For this research, I employed a multiple-case study approach to focus on three teachers who actively sought ongoing involvement in a PD project, and chose to actively seek collaboration beyond a single school year. As an ongoing professional development project, teachers received multiple collaborative supports including thought partner collaborations primarily facilitated by this researcher. This partnership enabled me to firmly ground this study within the specific contexts of in-service teacher participants' lived experience in multiculturally diverse, inclusive, public, elementary school classrooms. These teachers, together with their students, shaped the culture and experience within their classroom, as a psychosocial unit within the broader psychosocial system of the school (Tharp, 2012). Therefore, these teachers are representative members of the school community who are both agents of influence as they facilitate learning in the classroom, and subjects of influence as they engage other teachers, supervising administrators and PD providers within the school or larger school system.

The purpose of this study was to explore the factors that influenced teachers to seek opportunities for ongoing professional development and what experiences motivated teachers' long-term, active engagement. I used cross-case synthesis of data to explore the perspectives of each teacher leading to, during and after receiving more than one year of collaborative support through the PD project (Yin, 2014), as guided by the following research questions.

Research Questions

Guiding question: What contexts influenced teachers who actively engaged long-term collaboration within professional development?

1. What challenges affected teachers' ability to provide effective instruction? (RQ1)
2. Why did teachers seek collaborative support? (RQ2)
3. What contexts influenced teachers' active or limited engagement in opportunities to collaborate? (RQ3)
4. What results from PD collaborations did teachers note in their classrooms? How did results influence equity for students? (RQ4)

Research Design

Through this comparative, multiple-case study, I endeavored to expand our understanding of in-service, public school teachers' experiences while engaging ongoing, support structures, provided within a three year PD project implemented from 2013-2016 (Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004; Kress, 2010). I employed qualitative methods drawing on rich field records (e.g., field notes, memos, reflections, recordings) generated during the three year project to understand the situational, psychosocial contexts within which each case is embedded (Prasad, 2005; Tharp, 2012; Yin, 2014). While the psychosocial context of the structured school-based PD was holistic in nature, I approached each participants' case individually, recognizing the varied sub-contexts that influenced each participant within the context of the larger project as a whole (Ellingson, 2009; Prasad, 2005; Tharp, 2012; Yin, 2014). The field records generated across the project documented conversations, interactions, instructional actions and reflections among project stakeholders and study participants. They provided a representation of the ways these interactions within the project influenced the immediate social and instructional contexts within the given expectations of the psychosocial world framed by the PD project and the participants' school (Prasad, 2005; Tharp, 2012). Methodological focus on situational contexts was particularly well suited to this investigation because it created a frame for understanding

how the situational structure of the teaching profession was produced and maintained through ordinary situations and interaction, while accommodating variations among individual participants as members of a complex network within a large psychosocial school system (Prasad, 2005; Tharp, 2012).

I created field records of conversations, interactions and observations with and among the three participants during regular situations across all three years of the PD project. These field records are used to triangulate and confirm participants' reflective perspectives gathered during follow-up interviews (Creswell, 2013; Ellingson, 2009; Yin, 2014). I drew upon these two data sets to explore teachers' motivation to seek professional development, perceptions of experiences that influenced their long-term participation and how experiences within the school-based project led participants to engage as subjects and agents of influence within the psychosocial networks within their school, as guided by the aforementioned research questions (Creswell, 2013; Tharp, 2012; Yin, 2014).

Each of the three participants were teaching in K-5th grade classrooms, in a K-8 school, within a mid-sized, urban, public school district in Colorado. In addition to giving consent to participate in research related to the larger PD project, the three participants central to this study consented to share their reflective perspectives with me during two follow-up interviews the year after the PD project had ended. Extant data gathered during implementation of the PD, as well as participant reflections during interviews, enabled a multi-level analysis to better understand participants' shared and disparate experiences across the project. In addition to triangulation of reflective data with extant data, utilizing both data sets allowed me to crystalize an impression of each participant and her experiences through rich, thick descriptions in vignettes. This also allowed me to apply deductive and inductive coding for relevant themes which were also

triangulated across varied sources within both data sets and served to strengthen my analysis (Creswell, 2013; Ellingson, 2009; Goodall, 2008; Yin, 2014).

Context and Delivery of PD

Each of the three participants voluntarily sought initial engagement in this PD through the e-Learning Communities for Academic Language Learning in Math and Science (eCALLMS) PD grant. As a nationally funded, five-year, professional development grant, eCALLMS included a variety of projects that provided training for pre-service and in-service teachers working in diverse, urban public schools. Designed to support widespread instructional implementation, the eCALLMS projects focused on supporting teachers' learning and use of culturally and linguistically responsive instructional practices. Differing opportunities were developed and offered to teachers in a variety of contexts, which teachers could choose to engage, or not. The two key projects within eCALLMS that were relevant to this study include the design, development and launch of on-line, e-learning modules (modules), and the CREDE Practitioner Partnership (CREDE-PP), which provided ongoing, in-school supports for teacher participants. Notably, the module project started during year one of the grant and continued across all five years as more modules were developed and launched for on-line participants. The CREDE-PP project started during year three of the grant and continued across the remaining years of the eCALLMS grant. As such, the CREDE-PP project represents a three-year endeavor within the five-year grant. For the purposes of this study, I will discuss the three years of the CREDE-PP project, which was launched during the third year of the eCALLMS grant, and the third and final cohort of CREDE-PP participants engaged the project during the fifth and final year of the grant.

This study focused on professional development activities and interactions within the CREDE-PP project and the participants who chose to engage them. The CREDE-PP project supported three cohorts of teachers across three academic school years. The first cohort included K-12 teachers from five schools, across three school districts, while the second cohort included K-8 teachers from only two of the previous five schools, and all from within a single school district. The third cohort included only K-3 teachers within one of the schools. It is important to note the school administrator, who expressed interest in supporting participation among the team of elementary teachers, determined the structured expectation of participation in cohort 3, while the PD grant administrators emphasized the importance of teachers' voluntary participation. Another notable difference is that participants in cohorts one and two were all veteran teachers in University partnership schools where they provided clinical support for pre-service teacher interns, while the third cohort of early elementary teachers included both veteran and first-year or early career teachers. While my study focused on the three multi-year participants who consented to additional interviews, my field records draw on all three years working with PD participants who consented to research on the PD, but did not continue with engagement across multiple years of the CREDE-PP project, in that these records are relevant to the three participants in this study because they were participating in the events being documented.

Over the three years of the CREDE-PP, the design of structured opportunities for PD support remained consistent, while means, methods and consistency of engagement evolved in response to feedback from stakeholders and participants. As shown in Figure 4, participants were

Cohort 1 <u>Summer:</u> Four-day, In-Person, Collaborative Training <u>Thought-Partnership:</u> Coaching, Co-Planning, Video Reflections <u>Cohort Collaborations:</u> Predetermined Saturday Cohort Meetings, Video Reflections, In-District Team Requested Collaborations as Classroom Visits and Collaborative Workdays	Cohort 2 <u>Summer:</u> Five-day, In-Person, Collaborative Training <u>Thought-Partnership:</u> Coaching, Co-Planning, Video Reflections <u>Cohort Collaborations:</u> Cohort Scheduled Classroom Visits, Video Reflections, In-Person or On-Line Cohort Meetings	Cohort 3 <u>Summer:</u> On-Line Book Study <u>Thought-Partnership:</u> Coaching <u>Cohort Collaborations:</u> Predetermined On-Line Modules, Meetings During Grade Level Team Planning Periods
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Figure 4. Opportunities to engage structured influence within CREDE-PP PLC, by cohort

offered three structures for PD engagement each year beginning with a summer training, along with ongoing thought partnerships with an instructional coach and collaborations with their cohort throughout the school year. In response to feedback from cohort 1, collaborations among cohort 2 were scheduled in-person or on-line, rather than on predetermined Saturdays. Feedback from cohort 2 around challenges using digital video and on-line meeting technology, informed a move away from these structures for cohort 3. Additionally, the school administrator requested that the summer training be offered as an on-line book study instead of an in-person session with the cohort. The development of successful eCALLMS modules leveraged a shift in cohort collaborations from inter-personal interactions toward whole-cohort participation in a series of modules specifically designed to present CREDE content for the CREDE-PP participants.

While this study investigated the perspectives of participants in the CREDE-PP project, this was not an efficacy study or an evaluation of the CREDE-PP initiative and will not specifically focus on the content of the PD, unless central to participating subjects' reflective perspectives. Data for this study were generated during the implementation of the CREDE-PP project, which was designed to engage teachers in an ongoing professional learning community (PLC) as a

cohort. The CREDE-PP PLC was intended to support teachers' exploration and implementation of the CREDE standards for effective pedagogy (Tharp et al., 2004). Each of the three opportunity structures provided within the CREDE-PP: summer training, thought-partnership coaching and cohort collaboration, was focused on this pedagogy for effective instruction to increase student learning and to support equitable classroom inclusion for culturally and linguistically diverse students.

Summer training. A collaborative summer training opportunity was provided for each of the three cohorts. Cohorts 1 and 2 engaged a four or five day, on-site training during which they collaborated with the other cohort participants to explore introductory materials and emerging understandings of the CREDE-SEP. As a cohort, participants co-constructed norms for the collaborative professional learning community, discussed the project and explored new understandings of the CREDE standards they would be working to implement. Participants in cohort 3 engaged the collaborative summer training mediated as an online book study, instead of an on-site, collaborative workshop. As requested by the new school administrator, this adjustment was intended to fit within pre-existing school norms for a summer book study although no explicit process was facilitated to construct norms for collaboration or participation within the PLC for the CREDE book study. In addition to training materials and field texts, the book studies allowed participant generated texts to be gathered capturing participants' discussions and responses to study chapters.

Thought-partnership coaching cycles. Thought partnership coaching cycles were provided for participants in all three cohorts. During the first two years, participants led their engagement by directly requesting collaboration at a time they specified to engage with me as a purposeful thought-partner. During the third year, the new school administrator supported

participation of teachers in kindergarten through third grade by encouraging the cohort to collaborate during a common planning period each week. As Figure 5 demonstrates, cycles of thought-partnership were iterative and engaged teachers across three focal processes: reflection on instruction, intentional revision of their instructional designs and testing their new designs during instruction.

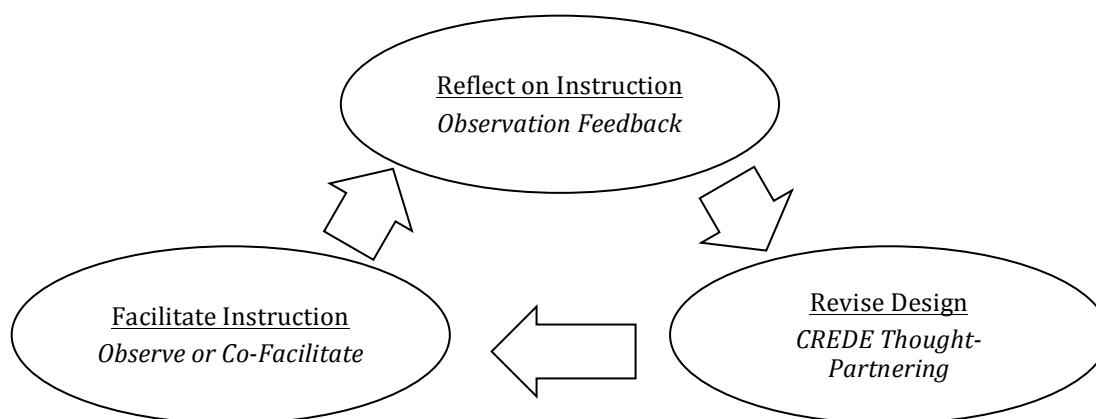


Figure 5. Thought-Partnership coaching cycles showing teacher's focus, above thought-partner's coaching role.

Reflections on instruction were guided by cognitive coaching conversations (Costa & Garmston, 2002) focused on teachers' instructional intentions and student-centered observation feedback (Sweeney, 2010). Subsequently, reflections lead to thought-partner discussions to generate ideas teachers could implement during future instruction. After reflecting and revising, teachers would then be observed facilitating another instructional activity to hone their implementation of the target strategy or to continue exploring new strategies. Field texts were generated during formal and informal observations, ranging from 30-90 minutes in duration, as determined by the participant. Field records were scripted narrative descriptions of the instructional dynamic facilitated by the teacher. Each teacher engaged thought-partnership coaching cycles, which increased in frequency across the three cohorts. In addition to field texts

and records, relevant artifacts were also copied or photographed during collaborative coaching interactions to support field texts. Observations and field records collected during thought-partnership coaching cycles for instruction are detailed below (see: Extant data and Table 4).

Cohort collaborations. In addition to collaborating with me as a thought partner for instructional coaching cycles, participants in each cohort were also given opportunities to engage collaboration with fellow teachers participating in the CREDE-PP cohort. Cohort 1 engaged periodic, whole cohort collaborative sessions on pre-determined Saturdays throughout the year along with team specific collaborations facilitated by the coach, as requested by the participants. Cohort 2 participants engaged grade-level or school team collaborations coordinated in response to participants' requests and availability, in lieu of extended sessions on specified Saturdays. These collaborations were facilitated by the coach, but increased focus on enabling participants to view and reflect on each other's instruction. Collaborations among Cohort 3 participants were integrated within the school day during weekly common plan time with grade-leveled teams, by request of school administration. Facilitation of collaboration was also shifted from the on-site coach to on-line training modules focused on the CREDE-SEP (produced under another eCALLMS project) rather than teachers guiding their own engagement, collaborations and coaching interactions.

Research Setting

This investigation took place in the Aspen Leaf School District (ALSD, pseudonyms used for all names including district, school and participants). Of the three urban districts in which CREDE-PP participants were teaching during cohort 1, ALS D is the only school district encompassing participants from all three cohorts. While smaller than the other two large, urban

districts in which CREDE-PP participants were teaching during cohort 1, ALSA supported a significantly diverse population of students, as seen below in table 1.

Table 1

Aspen Leaf School District Student Enrollment and Demographics by Percentage

#PK-12	FRL	EL	SpEd	GT	Hispanic	Other Minority	White
8670	57.7	29.9	9.9	2.5	60.4	7.6	31.9

Note. District-wide total and percentages based on data reported to the Colorado Department of Education. FRL- Free & Reduced Lunch, EL-English Learners, SpEd-Special Education, GT- Gifted and Talented.

Of the three ALSA schools where CREDE-PP participants taught, only two housed participants who actively sought ongoing engagement beyond a single school year. Of the five multi-year PD participants within these two schools, one teacher was not available to participate in the follow-up procedures needed to conduct this study. The remaining four teachers were all within one school which I will call the Community School (pseudonym), but one had not consented to participate in any of the PD research and was not asked to participate in this follow-up study. Table 2 shows the teacher participation and district reported demographics of K-5 students at the Community School.

Table 2

Community School Participation, Student Enrollment and Demographics by Percentage

Cohort	Teacher Participants	Students Enrolled	% FRL	% Hisp	% Other Minority	% White
1, 2, 3	15	488	73.4	69.7	8.6	21.7

Note. School totals based on data reported to the Colorado Department of Education for Fall 2014. FRL- Free and Reduced Lunch Program; Hisp.-Hispanic.

The Community School is housed in a relatively new duplex-style building connected to a high school, with each school structured in one wing of the building. The campus also included the school and district library, recreation fields and two other schools at the middle and high school levels.

Research Participants

The three subjects of this study were selected from a pool five of teachers who taught in ALSD public, elementary schools and participated during the CREDED-PP, long-term engagement, seeking PD collaboration. To support the focus of this comparative case study, of the five, long-term participants within ALSD, focal subjects were selected because they met the selection criteria as initially voluntary participants, who actively pursued collaborative engagement for more than one year and consented to participate in IRB approved research under the eCALLMS grant and for this study (see Appendix A). During their participation each teacher engaged at least one year as a formal member of a CREDE-PP cohort, during which time I provided support as a thought-partner. In addition, each participant also engaged at least one year of informal or peripheral participation with the project or cohort members. Since I had worked with all three study participants during their formal CREDE-PP engagement, I had previously gathered extant field records documenting their interactions within the project. These three teachers' level of instruction, teaching experience and years of participation are shown in table 3.

Table 3

Participants from the Community School in Aspen Leaf School District

Teacher	Level	Experience	Project Year
WG	Intermediate	Veteran, Mentor	1, 2, (3)
AJ	Intermediate	Veteran	(1), 2, 3
FB	Primary	Novice	(2), 3

Note. Novice<5 years teaching; Veteran>5 years teaching; Mentor= requested leadership role with colleagues during 2nd year of participation; () informal or peripheral participation

The study subjects detailed above include three women between the ages of 35 and 45 years old. During their participation, two of the women were veteran teachers, each with more than 10 years of teaching experience. The third woman was a novice teacher who participated during her first two years of teaching. As a first-year teacher, she had not been invited to participate in the CREDE-PP as a formal member of cohort 2. However, during her participation

as a member of cohort 3 she reported extensive involvement with colleagues in cohort 2 who had invited her to collaborate with them within eCALLMS modules. Although a peripheral participant instead of a formal member of cohort 2, she did voluntarily initiate and actively seek ongoing collaboration within the CREDE-PP project, supported by the larger eCALLMS PD grant, which she continued as a formal member of cohort 3.

Role of the Researcher

My background as a K-12 special education teacher and as a graduate research assistant prior to joining the eCALLMS project included extensive experience working to support classroom teachers' instructional practices for effective, equitable inclusion by drawing upon cognitive coaching (Anderson, Reder, Simon, Herbert, & Simon, 2010; Costa & Garmston, 2002; Sweeney, 2010). During my first year with the eCALLMS team, I used this coaching technique as a thought partner to three elementary teachers in three different ALSD schools. My work during the first year of the project included attending the predetermined whole cohort meetings scheduled on Saturdays, working collaboratively as a thought-partner coach with each of the three ALSD teachers and supporting them at team coordinating meetings, classroom visits and workdays they requested to increase their collegial collaborations. During this time the three teachers were invited to communicate with me directly and our email exchanges included conversations to coordinate scheduling, discussions of reflections and feedback, and two of the teachers asked me for letters of recommendation as they were considered for district assignment as a "model teacher" others could visit. All three expressed a desire to continue with the project and with me to support the next cohort of CREDE-PP teachers, despite having accepted new or different roles in the district.

Together, two of the original three teachers and I planned and presented the summer

training to the new cohort of K-8 teachers. After which, I was asked to support nine of the 12 new teachers. Although communicating directly with the three ALSD teachers had been easy to coordinate during the first cohort, with nine teachers and limited time I offered an online, web-scheduling page, so the nine teachers could easily request when they wanted my support in their classrooms. I continued to work with each teacher providing individual supports through thought-partnership, coaching conversations and reflections, and worked with the two mentor teachers, who had continued participation from cohort 1, to coordinate and facilitate whole cohort and leveled or school-team collaborations. While there had been an interest in visiting cohort members' classrooms, coordinating schedules and supports to accomplish this proved challenging so my roll also focused on helping teachers collect digital video of their instruction they could use to reflect and share with cohort members. I continued to facilitate cohort and team collaborations in schools, when schedules allowed, but also provided facilitation through online virtual meetings and off-site collaborations when the cohort expressed interest in these as alternatives to in-school collaborations.

During year three, the school administrator requested that the summer training for the cohort be eliminated, in favor of an online book study that could be offered to the whole school. Additionally, the grant administrator asked that I design online, collaborative modules for two CREDE specific books, structured as three-week intensive endeavors with interactive engagement. The structure I was directed to use by the grant administrator for the purpose of providing the incoming cohort with the essential foundation of CREDE did not match the school administrator's vision of a book study, however; so, I was directed to change the online structure to remove interactive collaborations and time-bound structures. Only a few teachers selected to complete the book study, while others started the school year with no foundational understanding

of the CREDE SEP, and no familiarity with me or cohort colleagues as sources for collaborative support.

Cohort 3 participants agreed to complete new CREDE specific modules, in addition to thought-partnership, because colleagues who had completed eCALLMS modules the year before raved about them. In contrast to previous cohorts, the school administrator set structured expectations for cohort 3 and collaborative interactions rather than participants being allowed to request support. The administrator decided that I would attend each of the grade-leveled teams' planning meetings once a week to support them and their work through the modules and coordinate classroom observations, in addition to attending the monthly PD for Write Up A Storm ®, which was being implemented school-wide.

Across the year, my role and interactions with cohort 3 teachers and their grade leveled teams varied. The kindergarten team of two teachers included a veteran teacher who was new to the project and resistant to both interaction and collaboration and a colleague who was a novice teacher and new to the project, but familiar with the CREDE SEP. As a result, I met and collaborated with only the novice kindergarten teacher. Similarly, the third grade team of two teachers included one veteran and one novice teacher. The veteran third grade teacher, who continued from cohort 2, was eager to continue the thought-partnership and collaborations started the previous year. In contrast, the novice third grade teacher was eager to engage and request feedback, but participated in team collaborations and the CREDE modules only intermittently. The primary team of five first and second grade teachers included one veteran teacher who continued with the project from cohort 2. She had resisted collaborations with colleagues in cohort 2, but took on a leadership role with her four novice teacher team members. Although this team was offered the same level of interaction and supports as offered to the other

teams, the dynamic of this group focused on procedural progress through the modules and resisted collegial interactions and collaborations.

As resistance grew within cohort 3, the school and grant administrators agreed to bring in a new graduate assistant who could engage the teachers with me. We were to function as a thought-partnership team. Although support through team meetings and thought-partnership included both of us, I alone continued to attend school PD and observe cohort member classrooms to collect data for the larger PD grant. The teachers who had been eagerly pursuing interaction and collaboration continued to seek my thought-partnership, even when my partner was not present. While my role as a thought-partner was consistent with all participants, the relational dynamic with each varied, as did their teaching experience and membership within the larger grade leveled or cohort team networks. Across the CREDE-PP project, I served as a thought-partner, collaborator and researcher all three years, but contexts informing me in these roles varied each year, as did my uptake of designing summer PD, online book studies and CREDE specific modules.

Data Generation

I used both extant and reflective data sets to strengthen the analysis within this study. Extant data were generated during CREDE-PP interactions with study participants among other participants and stakeholders, under the eCALLMS IRB approved research consent. Reflective data were collected during follow-up interviews exclusively with the three study participants during the school year following the end of the CREDE-PP project.

Extant data. During implementation of the CREDE-PP, I routinely collected field records in text, audio or video recordings with each participant I directly engaged as a thought-

partner coach and researcher, per each participant's level of consent. This investigation concentrated on a sub-set of the data pool generated during CREDE-PP implementation to focus on contexts and interactions related to the three selected study participants who consented to additional data collection, in addition to the PD data collected during their participation in the CREDE-PP PD project and my research journal, memos and reflections documenting meetings and planning conversations with school, grant and university stakeholders. Across the three years of CREDE-PP, opportunities for teachers to engage summer training, thought-partnership and cohort collaborations remained relatively stable, even while the contexts and details of these structures and participation varied, allowing data collection procedures to remain stable as well. This enabled my ability to gather field records in text and recordings, as well as supporting artifacts and training materials, during summer trainings and across participant engagement each year, as shown in Figure 6. Videos were collected with cohorts 1 and 2 but not cohort 3. These

Cohort 1: 2013-2014 <u>Artifacts</u>: training materials, lesson plans, instructional resources <u>Field Texts</u>: observations, coaching conversations, interactions and collaborations <u>Field Recordings</u>: coaching conversations and collaborations	Cohort 2: 2014-2015 <u>Artifacts</u>: training materials, lesson plans, instructional resources <u>Field Texts</u>: observations, coaching conversations, interactions and collaborations <u>Field Recordings</u>: coaching conversations and collaborations	Cohort 3: 2015-2016 <u>Artifacts</u>: training materials, participant texts <u>Field Texts</u>: observations, coaching conversations, interactions and collaborations <u>Field Recordings</u>: coaching conversations and collaborations
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Figure 6. Extant data sources

were used for teachers' reflection and were not IRB protected, and therefore are not included in the data set for this study.

Extant data gathered during CREDE-PP implementation provided essential historical context for this investigation. Since follow-up data collection procedures focus on participants' reflective perspectives, extant data found in the field records amassed during implementation of the CREDE-PP project, including audio recordings, observation and coaching notes, and memos, as shown in table 4, was used for analytic purposes, to triangulate reflections, and crystalize rich description of participants.

Table 4
Extant Field Records by Participant

Type	WG	AJ	FB
Observations	4	11	14
Field Notes	18	12	12
Audio Recordings	5	6	0
Participant Texts	0	6	9
Total	27	35	35

Note. Thought-partnership coaching cycles were captures within relevant observations, field notes and audio recordings, depending on the phase of the interaction within the cycle.

Follow-up data. Participants in this study gave additional consent to participate in follow-up data collection procedures including two reflective interviews and a member check, which will be described in more detail below. The first follow-up interview was semi-structured to guide participants' reflections on the CREDE-PP project (IRB approved protocol attached, see Appendix A). The second follow-up interview was semi-structured to gather participants' insight based on themes that emerged or gaps in information noted when reviewing transcripts from the first interview along with extant data in field records (Semi-structured protocol attached, see Appendix B). The final procedure, a member check provided each participant with the opportunity to review the narrative vignettes I construct from the data to crystalize an image of each study participant through rich descriptions of their participation, to ensure that my portrayal of each participant was validated by the participant (Creswell, 2013; Yin, 2014). Teachers were asked to identify the date, time and location that were most convenient for them for each

meeting, as shown in table 5. In addition to field notes, each interview was audio recorded to best preserve teachers' voices for the purpose of logging, transcribing and analyzing the perspectives they shared in reflection.

Table 5
Follow-Up Data Procedures

#	Procedures/Tools	Location	Duration
1	Reflective Interview: IRB approved Reflective Protocol	Participants' Choice	90 minutes
2	Follow-Up Interview: Emerging Questions Subsequent to Reflective Protocol	Participants' Choice	90 minutes
3	Participant review: Sharing Analysis to Confirm Participants' Perspectives	Participants' Choice	60 minutes

Note: Reflective interview protocol, see Appendix B; Follow-up interview, see Appendix C.

The first interview was guided by a reflective protocol designed to gather teacher reflections on their experiences while participating in the PD project under the eCALLMS grant. Teachers were asked to share what led them to seek the opportunity for PD and why they requested ongoing engagement. Additionally, they were asked to share any outcomes they perceived in their classrooms. Participants were also asked to share reflections on their previous experience collaborating with their cohort, including this PI, specifically in the context of their classrooms and instructional practices. Once collected, these initial interviews were transcribed, reviewed, logged for content and coded for development of follow-up questions. For this purpose, first analysis of initial interviews focused on subjects' shared and divergent perspectives to identify consistent themes and ideas shared, but not fully explained.

After the first interviews were conducted and reviewed, they were also compared with extant field records to identify relevant topics that emerged during participation, but not sufficiently covered within structured interview questions. These themes, ideas and topics were then used to develop questions for the second round of follow-up interviews, when each

participant was given the opportunity to clarify, extend or add new information to supplement their prior initial responses. This procedure was designed to clarify and deepen understanding of teachers' reflective perspectives, topics that were not sufficiently addressed previously, or any other perspectives the participants wanted to contribute. After follow-up interviews, recordings were again transcribed, logged, summarized and coded for themes related to teachers shared and disparate experiences and factors they recognize as enabling or limiting influence through the PD. As necessary for analysis, transcripts were generated for detailed interrogation of themes-of-interest from each subject across the aggregated pool of extant data records and follow-up interviews (Creswell, 2013), detailed in table 6.

Table 6

Aggregated Data Pool by Participant

Participant	Field Records	Interviews	Participant Reviews	Total
WG	27	2	1	30
AJ	35	2	1	38
FB	35	2	1	38
Total	97	6	3	106

Note. Totals include the sub-set of CREDE-PP data pool relevant to participants in this study.

After compiling extant data and follow-up data collected through interview procedures, the aggregated data pool, including approximately 720 minutes of audio-recorded interviews and 91 extant field records, I applied multiple layers of iterative analyses, as described below.

Analyses

My analyses began with an iterative coding process. After collecting the initial round of follow-up interviews, I first proceeded with open coding of the transcripts using key terms spoken by participants. Codes were then revised to expand and collapse nodes based on themes that emerged, such as discussions of collaboration with peers, coaches or in online modules which were subsumed within a parent node for structures within the PD project (see Appendix

D). Themes that surfaced during my coding of participant transcripts were then used to review extant data generated with each participant to formulate questions for the final round of follow-up interviews to ensure I had collected sufficient and consistent data among all three participants and to support further analysis of my research questions, emergent themes and outlying or discrepant perspectives found in the data. After the second round of follow-up interviews, I reread the body of extant field records related to each teacher using a holistic approach to develop rich portrayals of their participation across the years of the project (Ellingson, 2009). I then further coded the body of data including extant field records and reflective interview transcripts. I continued to apply inductive coding to explore emergent themes, and also applied deductive coding for features related to the CREDE SEP and delta theory of influence and change in psychosocial systems (Tharp, 2012; Tharp et al., 2000). I continued this qualitative analysis procedure, using inductive and deductive coding across extant and reflective data sets, systematically in later iterations of analysis once transcripts had been generated for both rounds of follow-up, reflective interviews.

While I discuss details of each approach below, all extant field records and interview transcripts were managed using NVivo qualitative research software, designed to facilitate in depth analysis of multiple data records, in varied formats, across multiple subjects (Richards, 2011). Due to the complexity of my analytic approach, this software enabled my use of multiple methods to strengthen the validity my analysis, including detailed interrogation of varied data types, using extant data to support validity of reflective data and triangulation across multiple data sources for each participant (Mathison, 1988).

Inductive coding. I used inductive coding to explore themes that emerged within the data and to identify discrepant or outlying perspectives shared by, but not common among,

participants (Creswell, 2013). This allowed me to further investigate the consistency of emergent themes across extant and reflective data for each participant and across participants. Inductive codes that emerged, but were not common themes were further explored as discrepant or outlying cases to deepen my understanding of the relevant contexts and strengthen my analysis, particularly of self-reported reflections by triangulating across data sources and comparing engaged with reflective perspectives for each participant (Creswell, 2013; Yin, 2014).

Deductive coding. I employed deductive coding to frame my analysis using the CREDE SEP and Delta theory (Teemant et al., 2009; Tharp, 2012). I coded specifically for the six CREDE SEP (JPA, LLD, CTX, CA, IC & CS), to explore teachers' reflections on influence and support specific to the CREDE PD content. I also applied deductive coding relevant for analysis of the collaborative structures within the PD using delta theory, to better understand the dynamic nature of influence and collaborative participation among the teachers and their colleagues within the PD cohorts (Tharp, 2012). In the context of this study, I attended carefully to instances that signified the agency, influence, subjectivity and dynamic alpha, beta or delta state experienced by each participant. I looked for indicators of influence including agents, subjects and means, evidence of each teacher's alpha, beta or delta state, and their perspectives about the school-based psychosocial network, within extant data that documented each teachers' engagement and within follow-up, reflective data. Although delta theory and CREDE Pedagogy are different constructs, they are mutually compatible and both support learning. In this analysis, the CREDE content of the PD project represents the message of influence while the opportunities to engage structured collaborations represent means of influence. As such, applying deductive coding for factors related to CREDE and delta theory enabled a rich exploration of the complex contexts that influenced teachers and deeper understanding of their long-term experiences during

ongoing professional development situated within a complex psychosocial school system (Tharp, 2012).

Crystallization. Since the contexts and analytic approaches I draw upon for this study were complex, I integrated crystallization as an essential component to support deep, rich understanding of participant teachers and their experiences (Ellingson, 2009). Crystallization is a process through which complex qualitative inquiry presents multiple representations of knowledge, such as using vignettes to provide rich portrayals of participants or descriptions of interactions, of which important and relevant subtleties may be lost within a parallel analytic approach (Ellingson, 2009). For this study, I used a holistic view of the data related to each participant to develop rich vignettes of those participants as whole, individual people within the complex contexts of the project, across each year of their participation.

While the social science analysis using inductive and deductive coding is essential to sufficiently investigate my research questions, a layered account of teachers' personal experiences, by providing vignettes in juxtaposition to analysis through coding, supported deeper understanding of the inductive and deductive analyses and strengthened the findings that emerged as a result (Ellingson, 2009). The vignettes I include in chapter five serve to crystallize participants' perspectives and experiences during the CREDE-PP, and portray rich accounts of each teacher whose experiences and reflections, captured in the data, were further subjected to inductive and deductive analytic interrogation (Ellingson, 2009).

Validity

Validity of findings from analytic procedures described above was supported through multiple approaches. In addition to long-term immersion within the situated context of the study,

during which time I collected rich and varied data across multiple sources, I have also comparison across time and participants, triangulation across data sources, investigated discrepant evidence and verified findings from interpretation and analysis through participant reviews (Maxwell, 2005).

Comparison and triangulation. Comparison and triangulation were used to check consistency of reflective perspective in follow-up interviews with evidence in extant data across each teacher's years of engaged participation, as well as across teachers. Comparison of reflective and engaged perspectives was essential to ensure follow-up data collected after participation ended was supported by data generated during participation (Maxwell, 2005). Constant and cross-case comparison were used to verify perspective across participants throughout their years of engagement to better understand how and why evidence in the data supports common or discrepant experiences (Creswell, 2013; Yin, 2014). Triangulation was used to further support analysis by checking analytic interpretations across multiple types and sources of data (Creswell, 2013; Ellingson, 2009; Mathison, 1988; Maxwell, 2005; Richards, 2011).

Discrepant evidence. Discrepant evidence and negative cases, when found, were further investigated using the comparison and triangulation methods described above. Discrepant evidence found in this study, particularly negative perspectives, were subjected to further interrogation to explore why participants had negative perspectives and what contexts influenced how those discrepancies occurred (Maxwell, 2005).

Participant review. To avoid undue influence from my personal biases as the researcher, I had participants review my vignettes and analytic findings to verify my interpretations and conclusions. This participant review procedure served to confirm or disconfirm my narrative

portrayals constructed from the data, by ensuring each teacher had the opportunity to clarify, correct, explain or add information they felt was not sufficiently or accurately described in each vignette (Creswell, 2013; Yin, 2014). Teachers also reviewed my analytic findings to verify that my interpretations and concept mapping were consistent with each teacher's understanding of their experiences within the context of the study. This member checking process was intended to minimize any researcher bias and to ensure that vignettes and analytic findings consistently reflected participant's own perspectives and thereby reduced any subjectivity that may have otherwise influenced my analytical interpretations which subsequently strengthened my findings (Yin, 2014).

Conclusion

By utilizing an iterative process for data generation and analysis, intermediary interpretations made during each round of analysis were adjusted prior to subsequent rounds of interpretation. Interview data, in conjunction with extant records supported a clear understanding of influence on the participants by including both experiences during ongoing PD participation as well as lasting perceptions when reflecting on long-term participation. After participant review procedures were completed and any necessary corrections made to participant specific vignettes, they served to crystalize deeper understanding of deductive and inductive analytic findings. Final analysis compared experiences and reflections across participants to support a broader analysis of any common themes of influence across the shifting contexts within which the project was situated, which may have been relevant to individual participants, as well as the group of participants within the PD. These methods supported a strong analysis of the complex contexts that influenced teachers who sought long-term PD, as guided by my research questions.

Chapter 4: Meet the Teachers

...the strongest evidence for the validity of Delta Theory is its correspondence with successful human practices of influence as they occur naturally...because they occur by and through the nature of Homo sapiens. Thus, grounding in science...is essential to my criteria for a valid theory of human behavior. Successful influence processes are successful because they operate through natural processes – those that are...historically conditioned, and socially influenced toward development. (Tharp, 2012, p. xvii-xviii)

This research study explored the experiences that influenced three teachers who participated in long-term collaborations to support instructional implementation of equity-oriented pedagogy, within a multi-year PD project. Analysis was done looking across extant and reflective data sets related to each teacher's participation within the project, which I have presented across the two following chapters. This chapter, Meet the Teachers, provides a narrative representation of each teacher's experiences and participation during the project. The next chapter, Analytic Findings, provides findings from my coded analyses and responds to each research question.

Prior to describing my findings from the coded data, I have provided a narrative representation of each teacher's participation in the CREDE-PP project, in an effort to humanize each participant as a whole-person and provide a broad picture of their changing participation roles across years of the project (Ellingson, 2009; Paris & Winn, 2014). In order to develop a rich portrayal of the teachers across their time on the project (Yin, 2014), I reviewed the body of extant data related to each participant including field records of observations, thought-partner and cohort collaborations, memos and transcripts of recorded conversations. These vignettes have been reviewed and approved by the participants, and have been presented here in a time

series to provide a narrative case-synopsis for each participant, within each cohort (Butler-Kisber, 2010; Creswell, 2013; Ellingson, 2009; Yin, 2014).

Cohort 1: 2013-2014

Ms. Wendal Grange, 4th grade teacher. Ms. Grange was teaching in a 4th grade classroom when the study began. After supporting a number of student teachers, she was invited to join the first cohort of the CREDE-PP during her 11th year of teaching because some of the practices she used in her classroom were aligned with the CREDE pedagogy her student teachers were learning. She participated during the four-day summer training with the rest of the CREDE-PP cohort, and dug deeply into exploring the CREDE standards while collaborating with the rest of her cohort. She and her two fellow elementary teachers in her district were eager to continue collaborations beyond the whole-cohort Saturday meetings to share ideas across their elementary classrooms. When the school year began, however, she was not sure “where to start” her exploration of the CREDE standards. She wanted to be observed first, and discussed where to begin, but she was hesitant to be observed during her class “morning meeting” because she did not think it was “academic.”

Since she was interested in finding a good place to start, she agreed that morning meeting would be a good time to observe her current practices, routines, and students. During morning meetings and across instruction in her classroom, she led rich conversations with her students, which she routinely started by modeling a question or sentence starter. During the morning meeting discussion of local news or current events, guided by students’ suggestions of contextually relevant topics, she often had students sit in a large circle, so she could facilitate rich discussion for all students in the class. She would have students turn and talk to a partner by modeling discussion language with a prompt such as: “What would you do if there was an

apocalypse?" or a sentence starter like "If I were in that situation, I would...." Her students would listen carefully, then burst in to rich conversations with their neighbors.

During instruction that she considered to be more "academic," this practice moved to students' table groups. Because the district had adopted a new writers' workshop curriculum, she felt she had plenty of support and strong instructional routines for reading and writing with her class. She was most interested in exploring CREDE to strengthen her practices during math instruction, where she felt she got little support from district training or instructional programs. She continued to model mature language use, and encouraged language development through joint productive group discussions. Especially during math, she often provided opportunities for the class to call out her mistakes when she made them, (intentionally or accidentally) allowing students to be critical of her instruction. Although she was not enacting all of the CREDE standards at the highest level of implementation, she routinely demonstrated practices aligned with each of the six standards.

After observations, she always engaged me in rich conversations to reflect on her instruction. When she looked at the Standard Performance Continuum Plus (SPC+) rubric, where I noted her instructional practices aligned with each standard, she would routinely respond with, "I didn't even realize I was doing that," or "I was focused on one standard, but look at how many you saw in my practices." She continued asking for opportunities to reflect on her instruction with me or to share ideas with her two cohort elementary colleagues. Although not structured for the whole cohort, Ms. Grange and the ALSD teachers requested support to coordinate and facilitate their collaborations, including after school meetings to talk about ideas, classroom visits to observe each others' practices and release days to spend time planning new lessons. Since they were all in the same district and worked in primary or intermediate level elementary

classrooms, in contrast to the rest of the cohort from middle and high schools in different districts, the three ALSD teachers appreciated sharing ideas and practices that they were certain aligned with the district expectations and curricula.

Every interaction was an opportunity to engage new ideas, change classroom practices and improve instruction. By the end of the year, Ms. Grange demonstrated synergy in the delta state as she sought ideas as opportunities to influence change and improve her instruction. While she and her ALSD cohort colleagues appreciated direct insight about the vast array of practices they already had in place, which they saw on the SPC+ rubric, they were also interested in continuing to improve their classroom instruction to better serve their students. Ms. Grange was eager for the opportunity to continue engaging her exploration of the CREDE standards and asked how she could help support the incoming teachers in cohort 2. In addition to preparing a session on the intersection of CREDE with the district's teacher evaluation framework for the upcoming summer training, she eagerly accepted a mentor role and recruited colleagues in her school to join cohort 2 of the CREDE-PP.

Cohort 2: 2014-2015

Ms. Wendal Grange, half-time 5th grade teacher and CREDE-PP mentor. After she recruited her colleagues and presented during the summer training, Ms. Grange continued in her mentorship role with her cohort colleagues in her school, but her teaching context and available time changed significantly when she took a half-time, co-teaching position in a 5th grade classroom. Although she cared a great deal about continuing to improve her instruction to best serve her students, she needed to spend more time supporting her own children at home. She shared that the continual change among programs and expectations within the school posed a great challenge and that she felt the nine month school year was not sufficient to both learn each

new set of expectations and to develop her best approach to implementation. Although she had much less time available during the second year, she was grateful to have another school year to continue exploring ongoing improvement and open-ended options to accomplish what she wanted to provide for her students through CREDE, rather than a limited perspective from any particular program that promised to “fix what [was] wrong” in her classroom. She recognized that she and her colleagues cared deeply about their students and that prescriptive programs often made them feel judged for the “problems” in their classrooms that a short-term PD would “fix” instead of respecting teachers’ best intentions and inviting them into an open-ended process of continual professional improvement, as she felt the CREDE-PP provided. She greatly respected the veteran teacher she was co-teaching with, but recognized they had very different teaching styles. As she navigated her new teaching context as a half-time teacher with significantly less time in the classroom, a new co-teacher with whom she needed to coordinate instruction, and her role as a CREDE-PP mentor she felt overwhelmed by new challenges that pushed her from the delta state she demonstrated the previous year, into an alpha state. Instead of coordinating instruction so she could continue her own practices, she reflected that her effort to take on her co-teacher’s instructional style was not successful for her or her new class. She was not using “what worked last year,” and felt increasingly overwhelmed by the classroom challenges, limited time, and departure from her successful routines and exploration of CREDE, in addition to the pressure to preserve the time she needed to support her own family.

She wanted to “get back to CREDE” and the practices she knew had been successful the previous year when she had found synergy in change through CREDE focused collaborations. As a mentor, she felt she was not able to support her colleagues as she wanted and struggled to find classroom synergy and to coordinate CREDE collaborations with her in-school colleagues since

she was only in the school two or three days each week and her time was particularly limited. It was a struggle to coordinate among the teachers in the cohort, and to find time to visit and observe each other's classrooms. The previous year the cohort had shared a few short videos of their instruction during Saturday meetings, but this presented challenges for the new cohort around using the iPad technology and remembering to record lessons they wanted to reflect on with their cohort colleagues. The school had also adopted two new programs for reading and writing, as well as significant changes in the school-wide schedule after beginning the year, and Ms. Grange found it incredibly challenging to coordinate collaboration time because the teachers had "too much on their plates" especially given the school's "crazy schedule." On top of the new reading and writing programs and the CREDE-PP work, the school administrator asked some cohort members to present their CREDE work at staff meetings. The school administrator expressed interest in sharing CREDE with the rest of the school, but that resulted in new responsibilities for the cohort members who were asked to coordinate and plan presentations. Ms. Grange reflected that the cohort members on the school PD team wanted to share their CREDE-PP work, but that they did not feel confident in their emerging knowledge and practice, and had not received sufficient guidelines from the school administrator on how to focus on CREDE to present school PD.

By the end of the year, Ms. Grange was able to refocus her instruction and continued to seek support, particularly in math. Even though she had limited time to collaborate, she pushed her own practices and began encouraging her students' metacognitive reflection on their own behavior and engagement in learning, but she had not felt as involved with her colleagues as she wanted to be as a CREDE mentor and did not have the time she wanted to engage CREDE collaborations for her own instruction.

Ms. Aneela Janedo, 4th grade teacher. Ms. Grange encouraged Ms. Janedo to test an eCALLMS module during year 1, and recruited Ms. Janedo to join cohort 2 when the opportunity arose. Ms. Janedo was unsure what she had been recruited to join, but engaged rich discussions about the CREDE standards with her cohort members during the summer training. She was excited to start her 17th year teaching, but the second day of class she unexpectedly fell while walking her students out of school at the end of the day. She broke her wrist very severely and missed the next two weeks with her new class of 4th grade students. She returned to the classroom, arm in cast, to find chaos. Her brand new student teacher was not able to develop the classroom norms and routines Ms. Janedo knew were needed for her students to work successfully as a community of learners. As a veteran teacher, Ms. Janedo had demonstrated delta synergy during the summer training when she had been eager to collaborate and engage new ideas to influence change and improve her instruction. However, the challenges she found in her classroom pushed her into an alpha state as she responded to unexpected chaos.

Ms. Janedo was eager to explore CREDE as a way to develop her own instruction, but she felt that she was not ready to engage instruction because her students still needed to learn the expectations and routines of her classroom. She knew they needed to “back up and start over,” but she also felt pressure to implement the school’s new curricular programs and prepare for student testing, and did not know “where to start” exploring CREDE. She already felt behind and did not feel like she could delay needed instruction to “go back,” even though she knew her students lacked the routines required to be successful with instruction. Simply put, she was not sure how best to proceed. She remained tense during our first meeting as she described the needs of her students and the challenges in her classroom. As she started telling me what support she desired from our CREDE collaborations, she dropped her shoulders, took a deep breath and

began to relax. As we talked about ideas she could use to support her in her classroom, she smiled and started to get excited. Although her classroom was in state of chaos, she was still interested in change and improvement.

Ms. Janedo was particularly frustrated when she tried to plan instruction using the school's new curricular programs. She felt they were in conflict with each other and other expected school programs, but she was eager to explore new ideas to strengthen and reinforce routines for her students because she had "so much to cover." During instruction, her students transitioned into small groups and rotated among different learning centers, but each group was loud, off-task, and engaged in social conversations not related to their work. Ms. Janedo became worried that her students were not able to hear or concentrate in their groups, which interfered with learning and caused behavior challenges and conflicts between students. Moreover, the class had gotten so loud and unproductive during rotations that they did not hear an emergency "Lock-Down" drill, so the noise had become a significant safety concern.

Ms. Janedo knew she needed to focus on ideas that would support and improve her morning rotations, so together we developed a selection of task cards that clearly structured the challenging academic tasks and joint productive expectations for each reading center. After she began using them consistently with her students, Ms. Janedo excitedly shared that her reading centers were "working awesome" with the support of her new resources and that students' challenging behaviors were "1000 times better." She was eager to use her new task cards during her afternoon writing rotations, and was excited to see how well they supported her students during both instructional times. As the year progressed, the busy school and observation schedules made it challenging for Ms. Janedo to schedule time for collaborations, but when she saw me in the building, she asked to arrange time with me. She was pleased with the huge

improvements during reading and writing instruction, but saw math as an area she still needed support and wanted to make improvements for her students. The school administrator, however, had reaffirmed to the grant administrator, who led the CREDE-PP project, that the school goal was focused on reading and writing, not math. Although Ms. Janedo was frustrated with the new curricula and complex expectations related to at least five different instructional programs, she had seen huge improvements through her CREDE collaborative work and saw the specific need among her students for further improvements during math instruction.

With almost half of her students identified as struggling readers or emerging multilingual learners, the reading heavy math curriculum meant her students' reading and language proficiency challenges presented significant obstacles during math. Since Ms. Janedo's exploration of CREDE during collaborations had focused on strategies for engaging her students in joint productive activity during challenging academic tasks, she was eager to shift the focus of her collaborations to explore how she could use CREDE to improve her instruction during math. Although she spent some time mid-year focused on supporting literacy in math and ways to improve her students' joint productivity during math, by spring, in alignment with the administrator's expectations, her focus had returned to the school's literacy goals.

Ongoing training and new expectations around the new writing program created new challenges as Ms. Janedo tried to present instruction that complied with the previously established requirements and the mandated components of the new program. In conjunction with the standard, ongoing classroom interruptions (e.g., calls over the intercom, students being pulled out or parents stopping in), the challenging behaviors that had subsided earlier in the year were again becoming a significant frustration as Ms. Janedo's student teacher took on more expectations and had a more significant role in the classroom. Although the classroom behaviors

had improved overall, periodic inconsistencies between Ms. Janedo's and her student teacher's expectations, were exacerbated by a few "very difficult" students who were new to the school and consistently demonstrated particularly challenging behaviors that were disruptive to the rest of the class. Although she was reluctant to send any students out of her classroom for the first time in her 18 year career, she noted other students in the class were consistently asking the three new boys who the class felt were not working well within the collaborative routines to "come on!" or "just get to work," since the rest of the class was trying to be productive. When any of these boys continued loudly disrupting the class with off-task behavior by targeting a single student to engage in conflict, Ms. Janedo decided to offer the option to get back to work or take their work and leave the classroom to focus in another predetermined location such as another classroom or an interventionist's office. Ms. Janedo was deeply disappointed that she had not been able to build a strong, equitable classroom community at the beginning of the year. She also recognized that most of the class responded well to the increased norms for their collaborative work. Although she wanted to serve all her students, including the three boys she knew continued to struggle, she also felt pressure to support the work she had done that worked well for the rest of her class. She recognized that her best efforts to improve and strengthen collaborative learning routines using CREDE ideas had supported her larger classroom, but did not remove the challenges related to her lack of ability to build a strong learning community among all students at the beginning of the year when she was out with her broken wrist.

Ms. Janedo felt she had accomplished a great deal to improve her classroom routines, and although not perfect, she knew she could not go back to previous practices and expressed that she wanted to continue moving forward. She remained particularly frustrated with the curricular programs that "d[idn't] fit together," so CREDE collaborations focused on requirements for the

multiple, disconnected sets of program expectations she was mandated to implement, and adjustments she could make to implement those programs well within her CREDE class structures. To this end, we explored ideas such as limiting the effect of classroom interruptions by decreasing the amount of time students waited for attention or sat through required direct instruction, which allowed students to progress more quickly into small, joint productive groups where they focused on tasks required by various programs.

By the end of the year, Ms. Janedo had repeatedly reflected that this had been her most difficult year in the classroom with a particularly difficult beginning of the year, which had a lasting impact on her classroom including a group of students she found particularly challenging to support. She was always eager to engage collaboration and grateful for new ideas she could implement to improve instruction in her classroom. She also recognized that collaborative improvement was an open-ended, ongoing process of revision, not a definitive “fix” with a set end, or an alternative to the needed community building she had always done at the beginning of the year. She continued to explore CREDE during collaborations to improve her instruction in a variety of ways and focused a great deal on supporting joint productive activity to strengthen and engage students within the classroom community, but CREDE did not provide an alternative to the strong community building process that her student teacher had not accomplished while Ms. Janedo was out with her broken wrist. She used CREDE collaborations to accomplish significant improvements, but the process did not remediate the ongoing interruptions, particularly when her student teacher was responsible for the classroom, including all the instances when physical therapy under worker’s compensation repeatedly removed Ms. Janedo from the classroom. Nor did CREDE collaborations address the specific challenges Ms. Janedo thought were related to the three boys who felt disconnected from their community of peers, particularly as new students

in the district without sufficient, strong community building at the beginning of the year. In addition, by the end of the year, Ms. Janedo's energy to surmount the ongoing challenges of her most difficult year teaching were further taxed by family challenges that loomed on her mind as she struggled to find daily inspiration in her classroom or cope with the frustrations she had not been able to address, neither of which had been significant challenges during her previous 17 years as a teacher.

Collaborations around CREDE had supported Ms. Janedo's needs in the classroom and provided her with opportunities to explore improvement for her instruction across multiple required programs, but CREDE collaborations remained an ongoing process for improvement, not a prescriptive "fix" with a definitive "end." While she sought delta synergy with change for ongoing improvement in her classroom, she had not been able to fully address her need to respond to some level of alpha state chaos in her classroom. As a result, while frustrated that she had not been able to accomplish everything she wanted for her students that year, she remained eager to continue her exploration of CREDE and collaborations to improve her instruction with a new group of students the following year. When the school administrator announced that cohort 3 in the CREDE-PP would only include the school team of K-3 teachers, Ms. Janedo moved from her 4th grade classroom into 3rd grade classroom for the subsequent year because she wanted to continue exploring her own instructional improvement through CREDE focused collaborations.

Cohort 3: 2015-2016

Ms. Wendal Grange, half-time interventionist and teacher-parent partnership program coordinator. Although Ms. Grange wanted to continue as part of the CREDE-PP project in year 3, the contexts of her instruction and the project itself changed in ways that

precluded her continued deep involvement. Ms. Grange had recruited the teachers who participated in cohort 2 of the CREDE-PP Project, but the school administrator decided that cohort 3 would include only the team of K-3 teachers, with the goal that they would establish a model for school-wide rollout. In addition, the school administrator insisted that the collaborative summer training be changed to an online CREDE book study all teachers in the school could choose to engage, or not. These changes meant that Ms. Grange did not have the opportunity she had had previously to present summer training, share her experiences on the project or to support her colleagues in the cohort as a CREDE mentor. She also moved out of a classroom position and took a new role in which she provided intervention support and coordinated the school's teacher-parent partnership program.

Since none of the new cohort had the opportunity to collaborate during summer training, and newly hired teachers had not had the opportunity to engage the online book study, the school administrator arranged a meeting in August to discuss the project, meet me, as the primary thought-partner, and make decisions about how to engage options provided by the CREDE-PP project. When I arrived, Ms. Grange along with another member of cohort 2, who was not on the K-3 team, met me at the front door of the school. They had not been invited to join the meeting with cohort 3, but very much wanted to be involved and offered support. Ms. Grange breathed a sigh of relief when I told her I thought she had a lot to contribute, explaining that the school administrator had told her she could join the meeting only if I approved.

While the meeting was intended to launch the year with the new CREDE cohort, many of the new teachers in the cohort had not participated in the book study and had not yet had an opportunity to meet or collaborate with each other, Ms. Grange, or me. Instead, the school administrator explained that the grade-leveled teams would be working with me on a weekly

basis and had to choose if the cohort also wanted to participate in the new CREDE modules. Ms. Grange advocated for the modules as strong resources for support, along with a number of other teachers who had engaged eCALLMS modules the previous year. The eCALLMS modules that had previously been offered to teachers and facilitated by the district the previous year, however, had covered different content than the CREDE modules that were offered to cohort 3 as part of the CREDE-PP project. Ms. Grange had been an avid participant and wanted to continue as a mentor, even in her new role within the school, but this meeting was both the beginning and the end of her formal involvement with cohort 3. Her role in the school continued to evolve across the year and although not formally connected to CREDE-PP as a participant or mentor for the cohort, she did end up serving as an in-school mentor to some of the struggling first-year teachers who were required by the school administrator to participate in cohort 3.

Ms. Aneela Janedo, 3rd grade teacher. Ms. Janedo changed grades in order to continue exploring CREDE as part of cohort 3. Rather than teaching 4th grade, she began the year as a 3rd grade teacher, the youngest grade level Ms. Janedo had taught, since the administrator decided unilaterally that only K-3 grade teachers would participate in the upcoming cohort. Enthused to continue her instructional improvement, Ms. Janedo participated in one of the CREDE summer book studies. However, the absence of collaborative summer training with the new cohort, which included a significant number of first year and novice teachers, including her new grade level teaching partner, left Ms. Janedo without a strong sense of connection with the new cohort members with whom she was intended to collaborate. Her team teacher, responsible for the other 3rd grade classroom, had been co-teaching for a couple years, but had only been responsible for teaching math and science content. She was interested in collaborating with Ms. Janedo, but wanted to do so by changing the structure of both of their classrooms to accommodate her own

experience as a subject-specific, co-teacher. Although Ms. Janedo was open to exploring how best to collaborate as a 3rd grade team, the school administrator was clear that both 3rd grade teachers were expected to teach literacy, even if they decided to team teach, and traded students during instruction in other content areas. Since Ms. Janedo's team teacher had not participated in an online CREDE book study, and had never taught reading, writing or any literacy before, she was frequently too overwhelmed to engage any CREDE-PP collaboration, or to participate in the online CREDE modules. As a result, Ms. Janedo's team collaboration times, which were intended to include both 3rd grade teachers, were frequently given to thought-partner engagements in which Ms. Janedo thought through her own instructional practices rather than engaging as a member of a grade-level team with her partner even after they adjusted to a co-teaching structure.

However, compared to the previous year, Ms. Janedo had a much better beginning to the school year. She experienced no circumstance requiring her to miss the first two weeks of school with her new class, did not have prolonged or frequent absences, and did not need to rely on an untrained student teacher. While Ms. Janedo was receptive to collaborations, her team teacher continued to struggle across the year as they worked through numerous changes to their co-teaching structure and the changes that resulted for their students' classroom schedules. Although eager to seek insight, Ms. Janedo's team teacher remained overwhelmed and mostly disengaged from team, cohort, module and thought-partner collaborations throughout the year. Engaged in CREDE collaborations and modules without her teammate, Ms. Janedo proceeded with her CREDE work and established a strong community of learners with her students, which had been absent in her previous class. Early in the year, collaborations focused on increasing her students' accountability for engaging instructional tasks and appropriate classroom behavior, as

she quickly implemented the work she had accomplished during CREDE collaborations the previous year. She quickly moved to build new skills with her students and encouraged more student-to-student collaborations within her classroom community. However, her frustration remained as she continued to struggle with the challenges of implementing multiple curricular programs that still seemed to be in conflict with each other.

As monthly training for the newest literacy program began, I joined the cohort teachers to better understand the programs they were being asked to implement, and how collaborative CREDE explorations could support successful implementation during instruction. The first few sessions presented new strategies that again seemed disconnected from Ms. Janedo's context of instruction. She had seen great success in her classroom implementing ideas from CREDE collaborations and resisted the idea of changing successful structures to implement new strategies that seemed disconnected from her classroom and the other programs she was required to implement. Her frustration and sense of feeling overwhelmed continued to increase because there were "too many pieces" and she could not figure out how to "do them all." This led a shift in focus during our collaboration once her class community and structures were in place. Instead, she needed support to process her understanding of alignment among the new strategies being presented in the school-wide training, her administrator's expectations of classroom instruction and her continued exploration of CREDE to continually improve her own practices. Frequently, these sessions brought a sense of relief as she reflected it was "so great to have help to figure out how to put all the pieces together when they [were] all so different." Her frustrations over the disconnected expectations were alleviated as we found alignment among the various programs, approaches, ideas and expectations that all influenced her classroom instruction.

As we approached winter break, her class and her groups were working well, particularly during literacy times. Students were on task and engaged in their work groups during instruction and Ms. Janedo began pushing her instructional facilitation to encourage more direct, student-to-student discussion. During one such collaboration while she worked to find alignment among multiple program, Ms. Janedo reflected that her students were, “writing better, love[d] working together and [were] really pushing each other,” since she had focused on and encouraged their joint productive discussions. “I love it,” she said of her collaborative explorations implementing CREDE to support her instructional programs, “last year I got it, but I just touched the surface. This year, I see it. I’m diving into it- even though it’s uncomfortable at times- but it’s Night and Day! Thank you so much. It’s been so helpful.” She had found a sense of stability in her classroom that she had never achieved the previous year. Although a constant level of change remained, the alpha state of chaos from the previous year was not evident. Instead, while not pleased with the ongoing structural changes in her co-teaching arrangement with her 3rd grade teacher partner, Ms. Janedo was able to focus on a sense of delta synergy with the ongoing changes as she embraced the opportunity for continual collaboration, reflection and improvement.

After returning from winter break the school began mandated testing. Instruction continued, but was perpetually adjusted for various testing or problems with the new computer based testing systems, so maintaining the instructional routines that had proven successful became more challenging. The focus of CREDE collaborations turned to the module that was presented to the cohort. Ms. Janedo had participated in an eCALLMS module facilitated by the district the previous year, and tested an early eCALLMS module the year before that, but she struggled with the year 3 CREDE modules, particularly without any collaborators. “They need a

facilitator,” she reflected considering her independent participation without any collaborative engagement from her team teacher or cohort members. Ms. Janedo was then invited to join the team of 1st and 2nd grade teachers within the cohort, who worked through the modules together, but resisted any CREDE thought-partner collaborations. Ms. Janedo was eager to engage ideas from the module with collaborators, but also reflected that the four new teachers on the team were “spoon fed” by the sole veteran teacher who led the process by going through the steps of each module, but prevented anyone from engaging collaboration or discussion of ideas. During one of the team module sessions, Ms. Janedo was particularly exacerbated by her veteran colleague’s prevention of any collaboration. Ms. Janedo’s burst out in objection, “you’re doing it WRONG. We’re supposed to be discussing ideas. It was so much better last year when we had [a facilitator] who came in when we asked for support with collaboration.” Simultaneously, her 3rd grade team teacher finally convinced the school administrator to allow content exclusive co-teaching. Ms. Janedo then began teaching literacy for the first time with 3rd grade students from her co-teacher’s classroom. The adjustment in the structure of their co-teaching instruction spurred old frustrations, when Ms. Janedo recognized that her team teacher’s students needed to catch-up with the literacy instruction they had not received throughout the school year. They also did not have the strong community or collaborative classroom norms Ms. Janedo had spent time building with her students at the beginning of the year. While she had been proud of the work she had accomplished with her students, she confided in me that she had experienced ongoing family struggles, and her patience for her non-collaborative cohort colleagues was in very short supply.

By spring, the 3rd grade students were moving between the two classrooms multiple times each day. Right after lunch, Ms. Janedo had both classes, almost 60 students, for a 15-minute

instructional block. Then they spent 15 minutes in her co-teacher's classroom, before splitting into separate rooms again. Students struggled with the transitions. Ms. Janedo used the time to present and facilitate student engagement in the district-required read aloud curriculum.

Although a challenge, particularly for students who sat on the floor instead of at tables, and struggled to see the book projected by the document camera, the students were eager to engage when Ms. Janedo prompted them to reflect on and discuss the book. During a book lesson that focused on figurative language, Ms. Janedo asked, "What do you like about school? Tell your neighbor." The almost 60 students listened carefully and thought about their answers then burst into a loud discussion with their peers. Ms. Janedo let them engage for a couple minutes before she facilitated a brief class discussion to hear and respond to some of the students' ideas as they called out examples like recess or PE being "fun like the waterpark." Although a brief lesson, Ms. Janedo had engaged all of the students to use figurative language (LLD) with their peers (JPA) in a way that was personally meaningful for each student (CTX), which thereby increased the level of challenge (CA) for each student during the read aloud.

Approaching the end of the year, Ms. Janedo worked to support each class and both were consistently working well in her room. She facilitated a mock trial of storybook characters, and worked with one class right before the other. The first class spent a large portion of the instructional time nominating themselves for various character parts, and justifying why the class should vote for them in the role. Although students eagerly engaged the discussion, Ms. Janedo knew she needed to give more time to the trial with the second class, rather than the process of deciding who would read each character role. Ms. Janedo promptly assigned roles for the second class, so they could jump directly into reading the text. When she reflected during our collaboration that the first class had given strong justifications for the character roles each

student wanted to read, she also noted that she allowed too much time for that process which was why she assigned roles for the second class. When I mentioned the disproportionate number of boys who had nominated themselves for multiple roles when very few girls were nominated or awarded character parts, Ms. Janedo decided she wanted to increase her attention to engaging students with a critical stance conscious attention to social inequities in their classroom practices, which had been a CREDE standard she had not yet focused on during her CREDE explorations.

By end of year, Ms. Janedo was proud of what she accomplished in her individual classroom, with both students from both classes, but remained frustrated with lack of cohesion among the cohort or with her team member. In addition to challenges around implementing all of the school's instructional programs, she had new concerns about the students who had fallen behind and had not received sufficient literacy instruction from her co-teacher since the beginning of the year. When a new position opened, Ms. Janedo eagerly transitioned from the lower elementary classroom into an art classroom for the following year. She was excited to focus on cross-curricular connections between art and literacy and to use her CREDE explorations to support students from each class in the school, but she was also relieved to stop negotiating collegial relationships with team members who resisted collaboration.

Ms. Frea Breech, kindergarten teacher. Ms. Breech came to the August meeting new as a member of the CREDE-PP cohort, but not new to CREDE or the CREDE-PP project. In addition to learning about the CREDE SEP in coursework within her teacher preparation program, as a first-year kindergarten teacher the previous year, she was invited to collaborate with two of her first grade colleagues who were then members of cohort 2. They had been discussing and exploring CREDE for their instruction and invited Ms. Breech to collaborate in an eCALLMS module that the district facilitated. While not a formal member of cohort 2, Ms.

Breech had engaged the CREDE-PP project peripherally through the module and her collaborations with colleagues in the CREDE-PP cohort. Although she recognized her familiarity with CREDE, she was happy to engage the CREDE summer book study offered at the end of the previous year, but Ms. Breech remained quiet during the first CREDE-PP meeting in August. Then beginning her second year teaching, the first grade colleagues with whom Ms. Breech had collaborated the previous year left the school. The new K-3 team cohort, including herself, consisted of nine teachers: five brand new or early career teachers, and three veteran teachers. Of the three veteran teachers, two were returning for their second year in a CREDE-PP cohort, while the third, Ms. Breech's grade-level team teacher, resisted participation in the module or any collaborations. Although Ms. Breech had not participated in the cohort collaborations or thought-partnering the previous year, and had not benefited from collaborations during summer training, she started the year eager to collaborate as she had done with her CREDE colleagues the previous year. Ms. Breech wanted to discuss ideas during weekly meetings, even when her team teacher did not show up. Repeatedly, Ms. Breech reached out to her team teacher and asked for time to collaborate and discuss ideas, but Ms. Breech was met with resistance, refusal or a description of lesson plans with no room for collaboration or discussion.

Ms. Breech took every opportunity to engage collaborative thought-partnership to continue the work she had begun the previous year, even though she no longer had collaborative colleagues. Early in the year, she established routines for instructional rotations and allowed her students to work in small groups, but she wanted to start our collaborations by having me observe her class, so we could "figure out where to start." Her young kindergarten students understood the structure of rotating among instructional work centers, but struggled to focus and complete their work in small groups without direct attention from the teacher. At her teacher-led

center, Ms. Breech worked with one student at a time, while the others sat quietly, waiting for her attention and instruction, which left her little time to work with each student.

During early thought-partner collaborations, Ms. Breech reflected that there were too many programs for her to figure out and that some of them were “too much” or too high for her young kindergarten students who struggled to write words or focus on tasks in their groups. After a lesson early in the year, she reflected, “That was awful...I need to stick with what I did last year that worked. They aren’t ready to do all these programs.” We debriefed about the success she felt at the end of last year and focused on the new expectations and work routines this new class of students still needed to learn early in the year. Ms. Breech used collaborations to explore CREDE ideas that could support her students’ success across demonstration (demo) lessons and independent practice. The demo lessons served as models for student work when they moved to the independent practice center. In her teacher led group, rather than having the group wait while she worked with one student at a time, she wanted to engage the whole group. When she requested a model of implementation, I used some of the ideas we discussed during one of her lessons. After, she remarked that it was “SOOO helpful” to see a model of implementation during instruction within her own classroom context. She was eager to make her own adjustments to engage the class and to use the new ideas for joint production, contextualization and language development to better support and respond to her students. She found delta synergy in the collaborative process to make adjustments in her classroom that she felt provided benefits for her students.

Ms. Breech was proud of the success she saw in her classroom after implementing the new adjustments in her demo lessons and groups. She was eager to show me what her class accomplished, but her frustration escalated after the monthly training for the new writing

program began. The strategy the program coach presented was “too high” for her kindergarten students and did not work for them during the coach’s grade-leveled model. Ms. Breech liked the changes she saw using ideas from CREDE collaborations and did not want to change what was working for her class for a strategy that she believed would not work. Her routines were working for her students, and she wanted to increase their independent focus and success in each center. She recognized that her students needed to learn new content skills, but also needed to develop new classroom behavior skills. Many of her students still struggled to focus on their work and to complete the expected tasks without seeking constant reinforcement and attention. A couple students had particular behavior needs. We explored ideas she could use to continue to improve each center, and attended to processing how strategies presented during training could be adjusted to support her students’ needs appropriately and align with her instruction. Ms. Breech expressed how helpful it was to have support putting all the pieces together during a collaborative discussion of CREDE ideas and how they related to the various programs she was expected to implement in her room.

However, as a second-year teacher, Ms. Breech was overwhelmed by the number of observations in her classroom from the new school administrator, her new teacher candidate’s supervisor and the strategy coach from the monthly trainings for the new writing program. She wanted to practice implementing her ideas during instruction, so she took a couple weeks and focused on working through some of the CREDE module. Since her team teacher had made clear she was not interested in collaborating, Ms. Breech worked through the module on her own. A few weeks later she shared that she had gotten through the CREDE module well, and that the format felt familiar to the module she had collaborated on the previous year, but she thought the CREDE content felt redundant. She had learned about CREDE in her teacher education program,

completed an eCALLMS module collaborating with her CREDE colleagues the previous year and participated during the CREDE summer book study. Since she was already familiar with CREDE, she thought the module was better suited to support first year teachers and others who had not yet been exposed to the CREDE standards.

Throughout the school year, periodic student testing interrupted routine instruction, but Ms. Breech made adjustments using ideas from CREDE collaborations and continued to improve her instructional centers. When she was ready to figure out what to consider next during collaborations, she shared that she saw growth in her students with the sustainable adjustments she had put in place and wanted to keep them consistent. In addition to challenging behaviors she was trying to manage with a couple of students, a particularly volatile and violent 2nd grade student was sent to Ms. Breech's kindergarten room to "learn kindness". While de-escalated, his avoidance, attention-seeking and sometimes dangerous behavior, continued in her classroom and caused more disruptions when he distracted Ms. Breech's students from their work. When we debriefed about the challenges, she concluded he should join her highest group of students when he was in her room, to avoid reinforcing his avoidance behavior and to maintain an expectation that he engage instruction.

There had been a number of students struggling with behavior across the K-3 team and the school, and the disruptions were impacting multiple classrooms. In addition to the student from 2nd grade, whose classroom violence landed him in Ms. Breech's room, her team teacher had a student who regularly cried the first half of the day and refused to go into his classroom. Ms. Breech offered support early in the year, but she felt that her own struggling students needed her attention. Approaching Thanksgiving, both the kindergarten and 2nd grade students, along with a number of other students who had been struggling in their classrooms, were moved to new

classrooms at new grade-levels. Simultaneously, a new thought partner joined the CREDE-PP team to support collaboration with the cohort members who had been particularly resistant to any collaborations, which allowed me to focus on collecting CREDE collaboration data, needed for the grant report. After meeting the cohort, she joined the cohort teachers during assigned collaborative meeting times. Ms. Breech wanted to continue what she had already begun because she “loved” the work she had started and saw great improvements in her classroom. While receptive to collaborating with a new thought-partner, Ms. Breech resisted starting over or changing the focus of her explorations.

Ms. Breech continued her work to implement the CREDE ideas we had been exploring including increasing her students’ ability to focus on their independent work, finish instructional tasks and work well together in their groups. By winter break, Ms. Breech had strengthened the instructional practices she had been focusing on since the beginning of the year. She was leading her demonstration lessons by engaging her students in the co-construction of strong writing models they would use as support during their writing center. When students transitioned from her teacher-led group to the writing center, students were starting to discuss their writing ideas with their group members to successfully construct sentences they were then eager to write to complete the task expected at the instructional center.

In the New Year, Ms. Breech continued to strengthen her implementation and saw improvements across her classroom, but she continued to struggle supporting one student whose behavior had become increasingly disruptive. One of the students told me she was learning “caring and sharing” and saved two of the three cookies she got for snack to share with her friends. Ms. Breech worked to strengthen her students’ community within the classroom, but her struggling student spent an increasing amount of time working at a separate desk or sitting “three

feet away” from other students when on the floor to ensure she kept her hands to herself.

Although the challenging behavior continued through the end of the year, Ms. Breech used clear expectations for acceptable behavior more consistently with the girl, and after a foot-stomping declaration of “No!” she generally followed Ms. Breech’s specific directions.

Ms. Breech was ready to continue exploring CREDE and how best to increase her students’ ability to work together and support each other while holding themselves accountable for doing their best work during instruction. After observing a reading lesson, we discussed ideas to scaffold reading responses and feedback to use joint productive activity and encourage student-to-student collaboration. After the thought-partner collaboration, Ms. Breech commented to me privately that she was having a rough week outside of school, which had made her week at school particularly tough. She wanted to connect and process the challenges, but did not want to have a personal conversation with my partner with whom Ms. Breech did not share the same collegial connection.

Since most of the school was engrossed in mandated spring testing, thought-partnership collaborations decreased. The school and grant administrators decided that I should continue observing the cohort after spring break to collect data needed for the grant report, but that my CREDE team partner should no longer engage collaborations at the school. Despite that decision, Ms. Breech and others continued to specifically request time to collaborate when they saw me in the school. Observing a morning lesson, Ms. Breech started by reminding her students about the upcoming field trip and facilitated a contextualized discussion among the class about the frogs and toads they were going to visit at the zoo. She had students describe and tally the differences between frogs and toads to support students’ language development within a joint productive, challenging activity. To add context for a challenging and abstract transition into a math lesson,

Ms. Breech used students' tallies to frame a subtraction problem as a measure of difference between their knowledge of Frogs and Toads. Before I left, her students were eager to sing the new song for me and show the new language they had developed to identify coins. As her students transitioned out of the classroom she stopped me briefly to connect. Her classroom instruction and student engagement were working well, but the highly problematic dynamic among her non-collaborative colleagues in the cohort had become untenable. She struggled with the mean behavior she saw among her cohort colleagues who did not care that they were "talking behind each other's back and smiling to their face." She was frustrated that her colleagues were "not reflective at all." While Ms. Breech saw observations and collaborations as a support and a helpful tool as she embraced delta synergy with change to continually improve her instruction, she noted her resistant colleagues saw observations and collaborations as burdens to avoid. "It was NOT like this last year," she said when she described that she continued to stay in touch with her collaborators from the previous CREDE cohort, even after they had moved to new schools, particularly disappointed that her own cohort, "ha[d] been so negative."

By the end of the year, Ms. Breech's class worked smoothly through instruction. Although one student continued to struggle with her own behavior, the class transitioned and got to work without specific or repeated prompting, since students knew where they were going and what to do when they got there. The students helped each other, collaborated to accomplish instructional tasks, read and responded with their partners, discussed ideas for writing, reminded each other of expectations and negotiated rules during instructional games. Ms. Breech had embraced collaboration focused on implementing CREDE to influence change and support her class across the year. She found delta synergy as she explored CREDE ideas to continually improve instructional engagement among her students, which influenced results she saw in her

classroom when students were eager to engage instruction and work together, as they gained mastery of content, instructional routines and expectations in the classroom community. Ms. Breech then used transition times strategically to check in with her struggling student before everyone got back to work at the next center. Although challenges remained, in the classroom, with non-collaborative team and cohort members and negotiating instructional alignment among the expectations of multiple curricular programs, Ms. Breech noted students' development within her kindergarten classroom community and the growth they made in instructional content areas.

Conclusions

The vignettes presented above were provided to support a rich understanding of each teacher and the contexts that influenced their experiences across multiple years engaging collaboration through the CREDE-PP cohorts. While they are essential to paint a picture of the teachers situated within complex school contexts they provide important insight around two key ideas. First, they portray how dynamic change among complex contexts influenced each teacher's engaged participation. Second, these vignettes demonstrate how, regardless of the alpha, beta or delta state within the classroom, teaching team or cohort, the three teachers who participated in this study engaged collaborative support in their ongoing pursuit of continual improvement. Ms. Grange, Ms. Janedo and Ms. Breech all sought a delta state of synergy with ongoing change for improvement as a continual process. CREDE focused collaborations were not a definitive "fix" to the challenges that affective teachers; for these teachers, CREDE collaborations were opportunities to engage different ideas and pursue change as part of an ongoing process to improve instruction in their classroom. Notably, the portrayals above show significant attention was given to the CREDE standard of joint productive activity (JPA), based on each teacher's focus for collaboration. Not only did focus on this standard support needs

related to the community of learners and classroom management, the focus on designing JPA structures into classroom instruction gave teachers the opportunity to integrate language and literacy development (LLD) and contextualization (CTX) by supporting students' rich engagement in small groups and student-to-student discussions. This also enabled teachers to increase the level of challenge in activities (CA) students engaged in small groups or at learning centers as students focused on engaging and supporting each other. Once teachers felt their students were engaging well as a class, teachers were interested in opportunities to improve their instructional conversations (IC) in their teacher-led small groups. It is also important to note that critical stance (CS) was generally engaged least and teachers expressed that they found it most difficult to work into instruction. However, when classroom communities were somewhat stable in a beta state, and teachers did not feel the need to respond to alpha state chaos, CS emerged as a way to enrich student engagement by either empowering students to engage critique or when teachers recognized students needed an opportunity address inequities that related to contexts within the classroom.

Chapter 5: Analytic Findings

...the dynamics of psychosocial systems can be aided by considering the circular flow of four processes: propinquity...; joint activity...; intersubjectivity...; and affinity... In the circular dynamic, the greater the degree of one of the four processes, the greater the likelihood of an increase in the degree of the next... (Tharp, 2012, p. 54)

After I developed the vignettes presented in the previous chapter, I used inductive and deductive coded analyses to further explore the guiding research question: What contexts influenced teachers who actively engaged long-term collaboration within professional development? I then engaged an iterative process of concept mapping to create a visual graphic that would help make sense of the significant themes that had emerged from my data (Butler-Kisber, 2010). In this chapter, I have presented that concept map along with my findings related to each section of the graphic, as they relate to each of my research questions. I present the concept map first, to give a general overview of my findings, which I then describe in further detail to build strength toward synthesis of an answer to my guiding question. In order to fully support a deep understanding of the contexts that influenced teachers' long-term collaborations through the CREDE-PP PD, my findings are presented in the following subsections: first is an overview of the substantive process of challenges that influenced collaboration, second is a detailed description of the challenges that influenced teachers during collaboration, which address research question 1; third is a detailed description of the contexts that influenced teachers to seek active or limited engagement, which addresses research questions 2 and 3; fourth is a detailed description of results from collaboration including the cycle of support, which addresses research question 4; and last is a description of additional factors that influenced teachers'

engagement across the substantive process of collaborative support that emerged from the data across participants' situational contexts.

Substantive Process of Collaborative Support

Through my iterative process of analysis, a number of common themes emerged across participants' experiences during the CREDE-PP project. Key themes were further interrogated across the conditional contexts that influenced teachers during their collaborative engagement (Richards, 2011). The challenges that influenced teachers' desire to seek engagement and the cycle of collaboration are discussed in further detail below, but I have presented this concept map first to support a deeper understanding of the complex contexts that emerged from the data. These key themes were found to be common when compared across data sources, participants and their years of engagement. Therefore, my use of constant, cross-case comparison produced a substantive theory, grounded in the data, situated within the conditional contexts of this project (Richards, 2011).

The substantive process represented in the following concept map (Figure 7), shows three key components: the challenges that influenced teachers (RQ1), their desire to seek engagement in collaborative support (RQ2 & 3), and results of the collaborative support that teachers engaged through a cyclical process (RQ4).

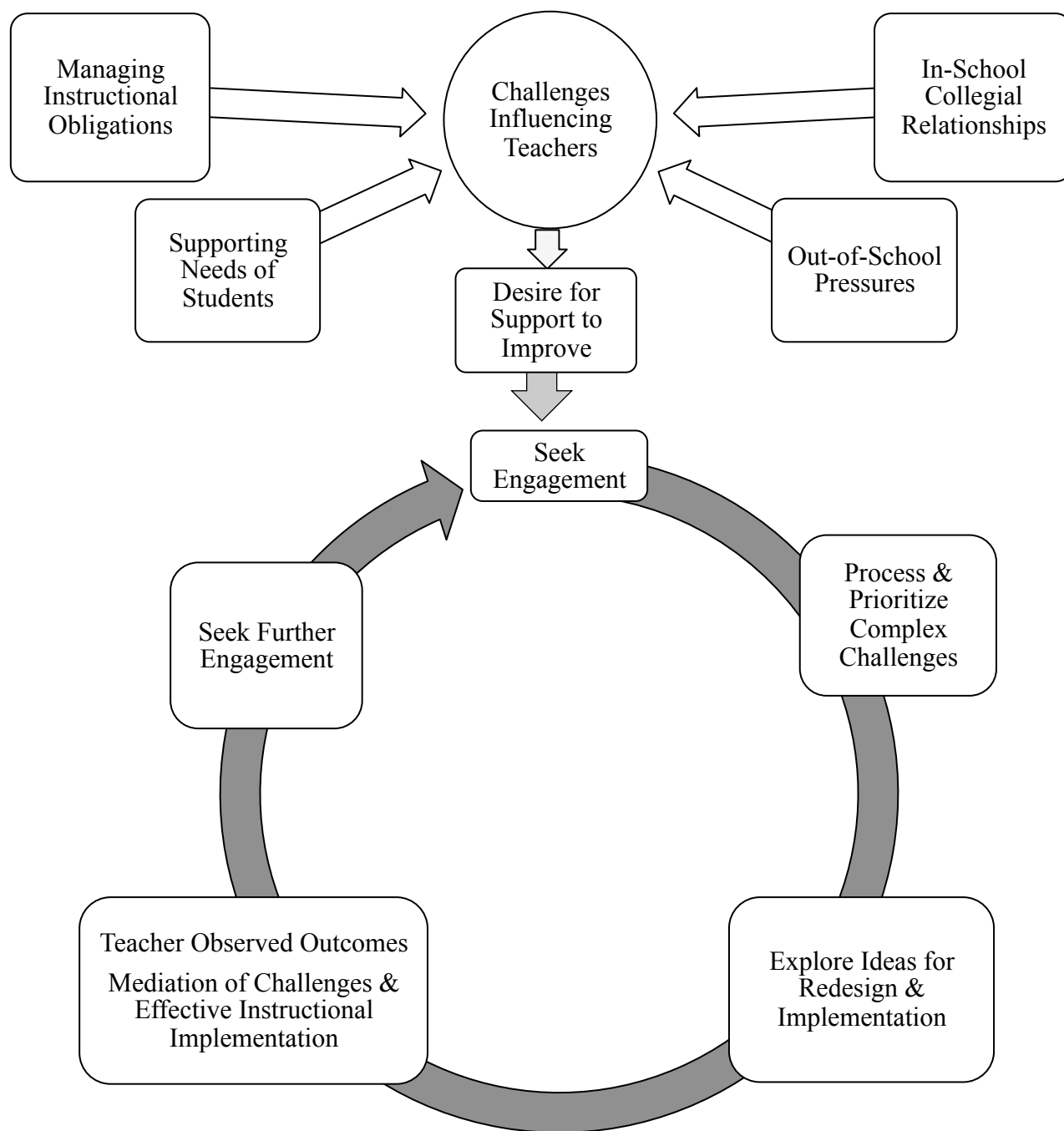


Figure 7. Substantive process of challenges that influenced teachers through the cycle of collaborative support.

The top section of the figure shows the challenges that influenced teachers that were coded into four spheres of influence. The center of the figure shows the teachers' desire to seek engagement in collaboration, and the lower section of the figure shows the results of collaboration, which included both teacher observed outcomes and a cyclical process of engagement in collaborative support. Each of these sections are presented below with further detail and support, along with additional factors that emerged from the data, which were found to have significant influence on teacher participants throughout their substantive process of engagement in the CREDE-PP project.

RQ1: Challenges That Influenced Teachers

The challenges that influenced teachers and their ability to provide effective instruction were coded into four spheres of influence. These challenges included: managing instructional obligations, supporting needs of students, navigating in-school collegial relationships, and balancing out of school pressures. While none of the challenges across these spheres of influence are surprising, it may be important to recognize the challenges teachers face that can be anticipated, due to the nature of the teaching profession within complex school and classroom contexts where teachers have many responsibilities with limited available time. Each participant experienced multiple challenges across the four spheres and these influenced their classroom instruction during their participation within the CREDE-PP project. While each participant wrestled with different contexts at different times, all three teachers consistently expressed challenges in these four spheres across their participation.

Managing instructional obligations. Managing instructional obligations included learning to implement required instructional programs, changing school schedules and expectations, and student testing. Data related to each of the participants showed that all three

teachers struggled to manage all of the instructional obligations they needed to accomplish as required components of the teaching profession. Ms. Grange mentioned the challenges related to new instructional programs expected by school administrators during both of her years of participation (Field Records, 2/20/14; 11/11/14; 1/28/15), and noted, “it’s hard to keep up with all of it,” (Field Records, 11/11/14). Ms. Janedo discussed not liking new programs they often did not work with the other programs she was expected to implement (Field Records, 9/17/14; 11/11/14; 3/19/15; 9/14/15; 10/1/15). Ms. Breech suggested that the expected programs did not fit together within her instruction (Field Records, 9/3/15; 9/14/15). All three teachers demonstrated a consistent challenge with managing what that they felt were too many programs and expectations, which Ms. Janedo described as having “too many pieces,” when she felt she “c[ould]n’t do them all,” and meet the expectations of each program (Field Records, 9/14/15). This was particularly evident when classroom instruction was interrupted or postponed due to student testing.

Overall, across the project, participants noted their need to attend to a minimum of seven different testing procedures and fourteen different required programs, approaches to instruction or sets of instructional strategies. While the obligation to attend to multiple expectations for instruction and testing is a context that can be anticipated in any school, these data demonstrate the particular challenge that teachers faced when the list of obligations was perceived to be too extensive and complex, which influenced content and strategy overload as teachers perceived each requirement as an individual puzzle piece that did not fit with the other required pieces of the instructional puzzle when attempting to put all the pieces together effectively in the classroom. Each school system may have a different set of testing and instructional expectations, but this finding demonstrates the vast dynamic influence of complex instructional obligations as

a challenging context for teachers as they design and implement instruction. Each of the instructional program and student testing obligations were external obligations teachers were held accountable for providing by the school, district or federal requirements.

Supporting student needs. The teachers also attended to the internal obligation to support the needs of each student within their classrooms. Although a basic obligation of all teachers, particularly in diverse, inclusive classrooms, the participants noted the complex challenge of designing and implementing instruction that delivered all of the requirements while also meeting the needs of all students in their classrooms. This included attention to the class as a whole, as well as specific students and diverse learning needs in the classroom related to language learning, behavior, classroom management or varied levels of achievement across content areas. Each of the teachers drew on their knowledge of students' formally identified needs, in addition the needs they saw demonstrated in their classrooms. While each of the teachers utilized leveled groups during instruction, they also showed that supporting the level of instruction needed by each group by designing appropriate strategies into instructional implementation remained a challenge, which represents another component of strategy overload.

In addition, each of the teachers struggled to support all students as engaged learners through effective classroom management. This was evident across teachers' classrooms as they worked to strengthen community and engagement for their classes, but was also evident when teachers struggled to support particular students with more significant observed or identified needs, especially when they noted disruptions in the classroom, conflict between students or safety concerns, which impacted both individual students and the larger classroom as a whole. For example, during an early year meeting, Ms. Janedo described a variety of classroom needs she wanted to focus on during our collaborations including new students with emerging English

or attention seeking behaviors that distracted the class, supporting learning particularly for her students in lower leveled groups and managing the classroom community as a whole, especially in regard to the typically loud level of noise (Field Records, 9/17/14). In contrast, a couple months later, she felt she was starting to see improvement in the room during literacy instruction but shared, “I think with math I don’t feel like I’m meeting their needs,” (Field Records, 11/11/14).

Ms. Grange shared that her classroom needs included a new student whose level of English proficiency was still unknown, and a number of concerns around problematic behavior, particularly from a group of students she described as “easily a brain-level ahead” of the rest of her class. As a result, she noted those students were engaging in distracting behavior that was problematic for the rest of the class when the group of students working at a higher instructional level were bored during math (Field Records, 10/10/14; 11/11/14; 1/28/15). On one occasion she noted, “it’s been a madhouse in here in the afternoons. Madhouse” and that the class “just imploded” because she was struggling to provide instruction with the success she had seen in previous years, while she was adjusting to her new co-teaching structure (Field Records, 11/11/14). She also shared a concern about one of her students who was advanced in multiple instructional areas, and as a result, was often burdened by multiple classmates asking him for help. Although Ms. Grange had a strong classroom community in which students were welcome to ask for and offer help with other students, Ms. Grange noted that this one student felt overburdened and started to avoid being the helper for everyone else in the class (Field Records, 11/11/14).

While the complex contexts of diverse needs should be anticipated in all classrooms, this demonstrates the complexity of this challenge, which teachers must address through their design

and implementation of instruction, including classroom management that supports equitable engagement for every student. The teachers knew and explicitly attended to the identified needs of students in their classrooms. However, during CREDE collaborations they tended to focus on both identified and observed needs among their students rather than deficit labels. The teachers expressed attention and a desire to support all of their students, but they also expressed a need for help to both apply strategies through instructional design and develop those strategies as new practices in instructional implementation.

Navigating in-school relationships. In-School collegial relationships included colleagues and supervisors with whom each of the teachers engaged within the school or school district. Colleagues included grade level team members, co-teachers and instructional collaborators, such as in-district cohort members, in addition to school administrators in supervisory leadership roles. This represents the complex and dynamic psychosocial networks within a school and larger school system. While collegial relationships can be positive or negative, all of the teachers struggled with collegial relationships in different ways. Ms. Grange noted struggles with a school administrator, whom she respected but did not perceive as fully understanding the challenges that influence classroom teachers. Ms. Grange was asked to present her work within the CREDE project for school-wide PD, but without guidance from the administrator on how to focus a presentation appropriately for the teachers across the school Ms. Grange was not confident about presenting CREDE to the rest of her colleagues (Field Records, 11/11/14). Later, when she told me teachers were required to implement another new program the school administrator had just added, Ms. Grange reflected:

...she's supportive but that's been the hard part, too. It's because we had so many initiatives to start at the same time and...she's fabulous... but she is as equally excited

about one thing as she is the other so it becomes a balancing act. It's like a kid at Christmas, you want to open every present but you can't play with them all at once. (Field Records, 1/28/15)

During the same year, Ms. Grange struggled to navigate collegial relationships with her co-teacher and her cohort colleagues. Although she requested a mentorship role to support her teacher colleagues new to the CREDE-PP project, she expressed that she had not been able to find the time to engage, collaborate or coordinate with her colleagues as she had intended (Field Records, 11/11/14). However, she “really enjoyed” the collaborative lab visits she had done with her ALSD cohort colleagues, and upon reflection shared:

...the preset Saturdays, well, I would have found them useful but we hadn't yet developed a trust within the broader group yet to make those as effective as in reviewing each other... Once the trust was built in my own group, that was easier... Saturdays were hard but I don't know how else you do it. I almost would have preferred rather than preset Saturdays having the grant pay for subs. That's a hard one because a lot of teachers don't prefer that. But I would have preferred it more in a professional development setting, rather than a get-together. Peer mentorship, I didn't get the opportunity to do as much of it as I would have liked. (Interview, 10/13/16)

In response to the struggle with Saturday cohort meetings across the three districts involved in cohort 1, during cohort 2 the grant did arrange to pay for substitute teachers for in-person cohort collaborations, but many of the teachers were very resistant to leaving their classrooms in the hands of a substitute, particularly while struggling themselves. Cohort collaborations through labs were rich collegial engagements, facilitated by a thought-partner, and while perceived as supportive, were very limited among cohort 2. This was at least partially due

to Ms. Grange's reduced availability to coordinate collaborations, with only two or three days a week in the school. That year Ms. Grange also struggled within her co-teaching structure.

Although she greatly respected her co-teacher, not a cohort member, Ms. Grange recognized that collaboration to coordinate or co-plan was a struggle since they were not in the school at the same time or on any of the same days. As a result, Ms. Grange described a significant change in her own instruction as she worked to mirror her co-teacher's style of instruction instead of maintaining her own practices and CREDE implementation, which she had previously found to be successful. Ms. Grange described:

It's been trying to get the job, co-teaching and everything under control, or working smoothly... I keep trying to make this work, the same format as my partner teacher, and she's amazing, don't get me wrong, but we just have different styles, and I just need to go back to doing [CREDE]. (Field Records, 11/11/14)

While a positive collegial relationship, limited time to address the challenges of managing instructional obligations and needs in the classroom emphasized the struggle of navigating her collegial relationship and sufficient collaboration with her co-teacher.

The challenge of navigating collegial relationships was most evident during the third year of the project with the emergence of involvement from a school administrator. While Ms. Grange did not participate within cohort 3 a number of other teachers struggled to engage the cohort as a new requirement by the school administrator, particularly as first year or early-career teachers. During the first follow-up interview, I asked Ms. Grange to reflect on her experience implementing CREDE, but she spoke mostly of cohort 3 interactions, in which she had not been a formal participant. She shared negative reflections of coaching rather than collaboration through thought-partnership, and struggled to think back to her own engagement during the prior

two years (Interview, 9/13/16). While this is a weakness of reflective data generated more than a full year after her formal participation concluded, this also suggests the powerful influence of collegial relationships. In this case, Ms. Grange had been peripherally involved with members of the third cohort although not a member herself. Initially, Ms. Grange's negative perspective struck me as discrepant from extant data generated during her participation. However, upon further analysis, Ms. Grange's peripheral participation with cohort 3 was primarily with one first-year teacher and one early-career teacher who resisted collegial collaborations with their grade-leveled teams, cohort members and thought-partners throughout the year. Cross-case comparison revealed that Ms. Grange's negative reflections related to cohort 3 were not discrepant at all. Both Ms. Janedo and Ms. Breech expressed frustration and negative perceptions of non-collaborative colleagues within cohort 3, during their engagement and during follow-up interviews, specifically including the two teachers with whom Ms. Grange had been an in-school mentor, when the school administrator dictated cohort membership.

Ms. Janedo expressed significant frustrations with non-collaborative colleagues among the cohort whom she felt were being "spoon fed" by a veteran teacher who was also non-collaborative and participated minimally while meeting the administrator's required expectations (Field Records, 10/8/15). Ms. Janedo was particularly frustrated with her team teacher who pushed for multiple changes that influenced both of their classrooms across the year as they navigated co-teaching. While Ms. Janedo was open to collaboration, her team teacher was friendly but remained disengaged from CREDE focused collaborations due to her own struggle to manage instructional obligations while unfamiliar with the content, which left her overwhelmed. Ms. Janedo, attempted to provide support however she could and agreed to change their co-teaching structure multiple times throughout the school year. However, by the end of the

school year, Ms. Janedo felt that the students suffered from a lack of instruction from her team teacher, and Ms. Janedo struggled to support students with the needed instruction her team teacher had not provided previously (Field Records, 4/14/16). During her first reflective interview Ms. Janedo shared:

... it was just that bummer year of people being forced to do something, because the original staff that was there had already been trained. I think it would have been totally different had it been the different staff. If it was the staff that we were trained together, we were all bought in, we were ready but it was new year, new first-year teachers who were struggling to teach for the first time and then they have this added piece on their plate and it was just overwhelming for them... I was still excited to use it in the classroom but I was so angry, I'll be honest, with the rest of the cohort because they were slacking and really pushing and just not doing things the right way. I was just disappointed...they were so resistant and I understand they were overwhelmed but it's just a bummer. Some people spoon-feeding. There is a person who spoon-fed her whole team, which we knew, and told them what to do and how to do it, and that's not what we were there for, they weren't learning. (Interview, 9/21/16)

Ms. Breech expressed similarly explicit frustration with non-collaborative colleagues among the cohort whom she perceived as non-reflective, uncaring and at times, outright mean, but she struggled most with her veteran team teacher who refused to collaborate in any capacity within a CREDE focus or beyond (Field Records, 9/10/15; 9/24/15; 04/07/16; Interviews, 10/13/16; 12/11/16).

Finally, it was evident that navigating collegial relationships was a particular challenge with outsiders not familiar with the situated contexts of the classroom requirements and specific

students. In addition to Ms. Grange's reflection that the school administrator did not fully understand the contexts of classroom challenges as she added a new writing program, during cohort 3 it was evident that the trainer who provided monthly PD for the new writing program was not well received. Both Ms. Janedo and Ms. Breech did not like the strategies the trainer presented in model lessons and after-school trainings, during the first two monthly sessions with the school administrator in attendance. Ms. Breech thought the strategies were not appropriate for her class, while Ms. Janedo thought the strategies conflicted with the other instructional programs she was required to implement (Field Records, 9/24/15; 10/26), but the PD trainer only had access to the contexts of the program she was supporting and the grade level of the classroom in which she delivered models. She did not understand teachers' challenges related to managing obligations of multiple instructional programs or the particular needs of students in each classroom and could not support teachers to bridge the gap between the modeled writing strategies and effective design of the strategies into each teachers' instructional implementation. This was exacerbated by the administrator's attendance since teachers were aware that the administrator expected implementation of the program as modeled and that the administrator was responsible for evaluating their classroom performance as a teacher.

Navigating in-school collegial relationships proved a challenge for all three participants. While some collegial relationships were positive, as were those among Ms. Grange's ALSD colleagues in cohort 1, or between Ms. Grange and Ms. Janedo, collegial relationships were influenced by the contexts surrounding collegial interactions. When teachers did not have time to collaborate, or attempts to collaborate were met with resistance, lack of understanding or disengagement from other colleagues, navigating those collegial relationships remained particularly challenging, especially during cohort 3 when collegial interactions were forced by

the school administrator who coerced participation in the writing program PD in addition to the CREDE-PP.

Balancing out-of-school pressures. Out of school pressures included personal factors that, while not directly related to instruction or the school, clearly influenced teachers within their school and classroom contexts, such as teachers' physical or health related needs, and challenges related to personal or family relationships. These out-of-school pressures varied across participants and their time engaging CREDE collaborations, but all encountered different levels of challenge while they attempted to balance out-of-school pressures and provide effective instruction in their classrooms.

Ms. Grange shared her struggle balancing out-of-school pressures at the beginning of her second year and later explained that she took a half-time, co-teaching position, when she recognized that support for her own family meant leaving a full-time classroom position:

I basically had to do this because my oldest daughter was having problems. And she's doing great now, but I want to keep that same trajectory...basically, I am doing a little school for them...that's the reason this has been hard to figure out...Anyway, those are just my own personal problems. (Field Records, 11/11/14)

Although influenced by "personal problems" beyond the school, this change created new in-school challenges for Ms. Grange as she struggled to negotiate collegial collaboration with her co-teacher, mentor collaborations with her cohort 2 colleagues, and manage instructional obligations to support her students through instruction, which she had not found as challenging the previous year. For Ms. Grange, balancing the out-of-school pressures eventually meant an exit from a classroom position, which was part of the reason she was not a member of cohort 3. The co-teaching structure she navigated during cohort 2 had been a significant challenge she did

not want to repeat but she did not feel she could return to a full-time classroom position and balance the needs of her family. As a result, she moved into a half-time intervention position to provide support within the school. In a role that evolved over the year, she primarily supported first-year and early-career teachers who were struggling with their first year in the school, and coordinated the school's parent-teacher partnership program, but Ms. Grange did not continue to provide direct instruction.

For Ms. Janedo, this challenge was most evident even early in her participation when she broke her wrist at the beginning of her first year engaging the CREDE-PP as a member of cohort 2 (Field Records, 9/17/15). Although financially supported by worker's compensation, early in the year Ms. Janedo struggled to manage her pain and compensate for time she missed in the classroom, in addition to perpetual absences throughout much of the year when she attended physical therapy. By the end of the school year, her wrist had healed, but she shared that she was struggling with a personal family matter. Her concern for her parents, nephew and brother's family kept her distracted and remained a significant challenge for her the following year when she was part of cohort 3.

In the pool of data collected during formal engagement, there was less evidence of out-of-school pressures related to Ms. Breech, for whom the data only includes one year of formal engagement, but not her first year of peripheral engagement. However, as an early-career teacher, she shared in the fall that she was shocked at how much money she spent on resources and materials needed for her classroom the previous year, and how little of her expenses were reimbursed by the school or deductible on her previous year's taxes. She was concerned that she did not have access to the resources she needed to support her students, but struggled to balance the need to buy resources with the need to save money she could not afford to spend. The

significant cost of supplies needed for her classroom, while not reimbursable or tax-deductible, caused stress for her as she began a new school year and tried to avoid spending her own money for classroom expenses. Later in the year, Ms. Breech took me aside, and shared that she was struggling that week to balance a “tough time outside of work,” that she felt was “carrying over” into her work at school (Field Records, 1/28/16).

Although I did not have a chance to follow up with Ms. Breech to further debrief her challenges on that occasion, upon examining the data across participants, Ms. Janedo had not shared personal struggles to balance out-of-school pressures related to her family until then end of her first year collaborating with me through the CREDE-PP. Ms. Grange shared that she took a half-time position to have more time at home, as we approached the summer training but did not share any details of the personal pressures that influenced her decision until later during her second year working with me (Field Records, 11/11/14). In comparison, after a collaborative debriefing with both my collaborative thought-partner and me, Ms. Breech had been careful to take me aside and shared the personal challenge she struggled to balance with me alone (Field Records, 1/28/16). In addition to the challenge teachers face as they struggle to provide effective instruction while balancing out-of-school pressures, this suggests that teachers may need time to build trust in collegial relationships before they are comfortable revealing any struggles to balance out-of-school pressures that are more personal in nature, but clearly influence them within their classrooms.

Challenges across these four spheres influenced teachers within the complex contexts of the school across their engagement. While many of the specific challenges that influenced teachers varied, particularly among in-school collegial relationships and out-of-school pressures, the struggle to manage all instructional obligations and provide instruction that supported all

students effectively was both common among participants and consistent across the years. None of these challenges are particularly surprising given the contexts and obligations of the teaching profession. However, they do demonstrate the vast and overwhelming challenges that influence teachers. As shown below in figure 8, all of these challenges contributed to participants' varied

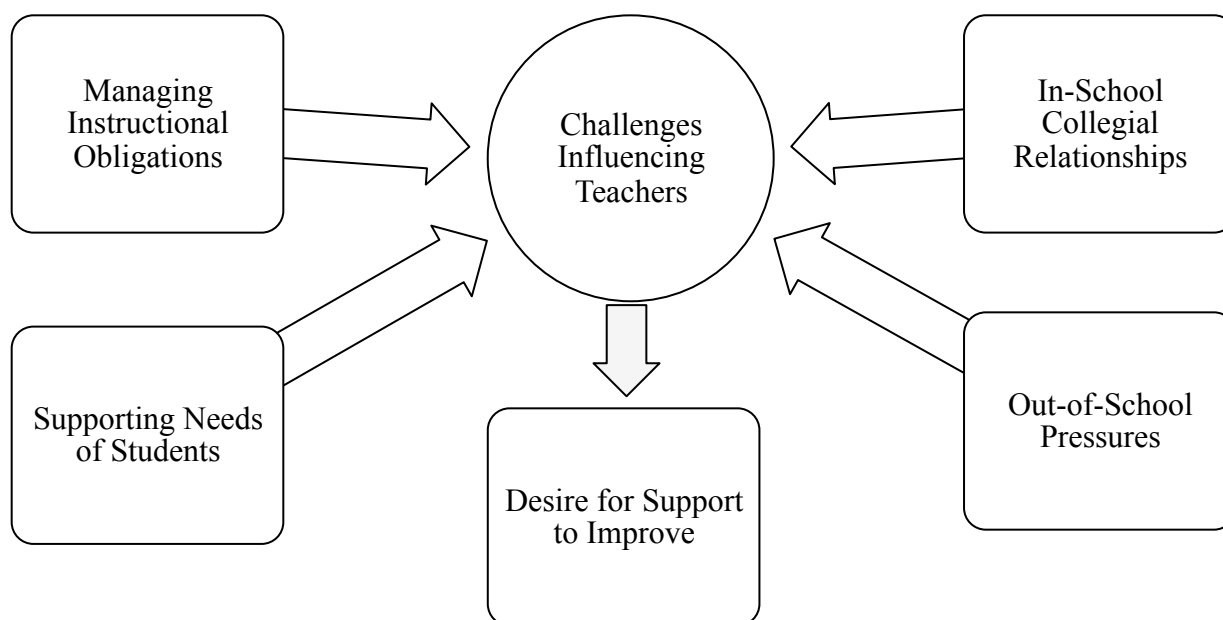


Figure 8. Challenges that influenced teachers with desire for support

sense of feeling overwhelmed as they struggled to accomplish every obligation, serve every student and navigate effective work relationships with all colleagues, while balancing all the pressures of their personal lives beyond school. It is not reasonable to expect any of these challenges can be eliminated in complex psychosocial school systems. However, it may be important to support teachers by mediating, simplifying or building capacity to manage these complex and challenging contexts so they can best support all students in their diverse, inclusive classrooms. Although each of the participants struggled with a sense of overwhelm due to the complex influences felt across these challenges, they also had a personal desire to engage

support and improve how they managed these complex challenges, to better support students within the contexts of their classrooms.

RQ 2 and 3: Contexts That Influenced Engagement

While the participants in this study all expressed a desire for support, it is important to understand why they sought support through collaboration. Since participants were offered multiple means of collaboration across the project, an opportunity arose to examine how the participants sought initial engagement, which addresses research question 2 and how their subsequent engagement varied across collaboration structures throughout the project, which addresses research question 3.

Why teachers sought engagement. Each of the participants shared a desire to improve by engaging in collaborations supported by the CREDE-PP project. All three of the teachers had a common desire to engage support, but also shared another common experience. All three began their initial engagement after receiving a direct invitation.

Ms. Grange was approached by a student teacher's university supervisor the year before the first summer training. She shared:

I had multiple student teachers at that point and I was approached by their advisor whether or not I wanted to be a part of this program... They were very complimentary and had pulled us together as a team... It was actually quite an honor, I think, to me at the time. They had said that they had seen a lot of practices in my classroom that seemed to fit in line with the model, so what I will ultimately say, that CREDE was amazing because it allowed me to put a name to some of the strategies that I had already decided were effective. (Interview, 9/13/16)

The invitation to join the first cohort validated practices Ms. Grange already demonstrated an approach to instruction that consistently aligned with some of the CREDE SEP. Ms. Grange reflected that the invitation to explore CREDE as a participant in cohort 1, gave her the opportunity to name, better understand, and improve methods she was already using in her classroom.

Ms. Janedo received a direct invitation from Ms. Grange. The two had worked together for a number of years and when Ms. Janedo trusted Ms. Grange's invitation served her own interest and laughed slightly as she described that she had:

hear(d) about it from [Ms. Grange]. [She] was doing something with [CREDE] and then [Ms. Grange] said on the fly, 'by the way, I signed you up for something. Don't kill me.' she's like, 'No. Trust me. You'll like it.' And that's when I started to do the modules and heard about the grant and everything. (Interview, 9/21/16).

While Ms. Grange was a member of cohort 1, Ms. Janedo participated peripherally and tested one of the early eCALLMS modules, which were not specific to CREDE, but did focus on strategies for supporting diverse learners through collaborative engagement. At the end of the year, when Ms. Grange recruited colleagues to join cohort 2, including Ms. Janedo, Ms. Grange was not in an evaluative position over Ms. Janedo, and she could have chosen not to participate without fear of judgment or repercussion from Ms. Grange, but Ms. Janedo trusted the invitation would again server her own interest in continual improvement for her classroom.

Ms. Breech experienced a similar path into participation. During her first year of teaching, she had two colleagues who were participants in cohort 2. These first grade teachers invited Ms. Breech to collaborate with them as early-career, primary level teachers, when Ms. Breech's kindergarten team teacher, a veteran, was not interested in collaborating with Ms.

Breech. Her first-grade colleagues were exploring CREDE as members of cohort 2 and Ms. Breech had learned about CREDE in her teacher education program. Since the first-grade teachers also had a veteran teacher within their grade level team who was not interested in collaborating, they invited Ms. Breech to collaborate with them as a cross-grade level team, which enabled her peripheral participation. Although Ms. Breech was not invited to join cohort 3, in which the school administrator required participation, Ms. Breech was already interested in and familiar with the CREDE SEP. She had also spent the previous year engaged in peripheral participation with her colleagues from the CREDE cohort, and was receptive to using the CREDE pedagogical content through collaborative structures to continue improving her classroom practices, even though she:

...didn't really think of it as an option. But with us, we didn't have that option. We were told, 'You are going to do this.' So, it's hard to be saying, 'Yes, I practiced this stuff. And yes, I'm engaged in it.' Because you are so like this. Because I was forced to be like that... (Field Records, 10/13/16).

This is particularly telling because Ms. Breech had felt very invited to collaborate the previous year and continued to actively seek thought-partner collaborations to engage CREDE throughout the year she had been required to join cohort 3. However, she resisted the structures that required her to interact with the non-collaborative colleagues in the cohort, whom were very negative and resistant of any collaboration (Interview, 10/13/16).

This common experience of invitation into participation is important because it demonstrates proximal propinquity to opportunities for support (Tharp, 2012). Each of the participants felt welcomed into an opportunity, rather than required to participate. Also, they each felt a sense of alignment with the invited opportunity: Ms. Grange was told she was already

using some of the CREDE SEP in her classroom, Ms. Janedo felt she could trust Ms. Grange, who had previously collaborated to offer support and invitations that proved to serve Ms. Janedo's interests, and Ms. Breech was previously familiar with CREDE and found support collaborating with two cohort 2 colleagues after all three of them experienced their veteran, grade-level team teachers refusal to engage when collaboration had been invited or requested. This suggests that feeling welcomed into an opportunity to engage support may be a significant factor whether the invitation or participation are formal or informal. It also suggests that receptiveness to an invitation may be influenced by the invitee's perception of alignment with the opportunity to engage, in terms of potential for further development of current knowledge, trust in colleagues who are receptive to collegial engagement in positive collaborations as a support structure, or their own interests in improvement and desire for new growth. This perception of alignment with the PD opportunity can be described as psychosocial propinquity.

While Ms. Breech already had an understanding of the CREDE SEP, she also began developing a collaborative collegial relationship through peripheral participation, which supported her interest in engaging activities even when later forced to participate more formally. However, Ms. Breech also distinguished between the coerced cohort participation she resisted and the thought-partner collaborations she continued to seek actively in lieu of cohort or team collaborations that ceased to be supportive. Ms. Grange had not been familiar with CREDE but did have a sense of psychosocial propinquity with the SEP, which validated practices she already had in place before she learned more about the pedagogy during collaborative summer training. This enabled her to further strengthen those practices during subsequent collaborations throughout each school year. Ms. Janedo did not have CREDE background knowledge but did participate in a collaborative summer training. Ms. Janedo noted psychosocial propinquity

through the collaborative collegial relationship she had previously developed with Ms. Grange, which was further strengthened by her peripheral participation in an early eCALLMS module. Notably, Ms. Janedo and Ms. Grange both reflected a sense of psychosocial propinquity with the cohorts with whom they had engaged collaborative summer training. Propinquity, in this sense, was more than just proximal closeness to an inviting opportunity, it also included a sense of psychosocial alignment with the CREDE content, and a common goal to improve instruction through collaborative engagement among members of the first two, voluntary cohorts.

Once teachers recognized their desire to improve instruction within their complex contexts, they sought support through collaboration. However, to answer research question 3, it is also important to understand what contexts influenced teachers' limited engagement in some opportunities to collaborate while they actively engaged others across multiple years, as shown in figure 9.

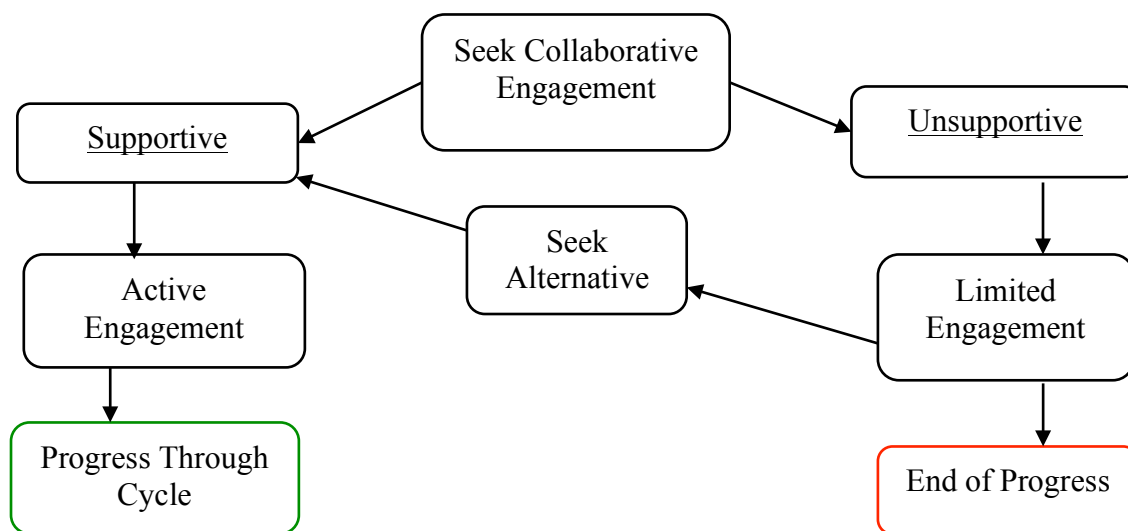


Figure 9. Active versus limited engagement

Contexts that influenced active engagement. Opportunities to collaborate that were actively engaged by participants, were somewhat varied across the project. Ms. Grange actively sought engagement with her two ALSD colleagues within cohort 1 in addition to thought-

partnership (Field Records, 11/11/14; Interview 11/15/16). However, the opportunity to engage cohort colleagues changed significantly as the ALSD participants increase from three in cohort 1, to 11 in cohort 2. Although perceived as a support, it became a logistical challenge to coordinate cohort collaborations that removed participants from their classrooms, even though the team collaborations were engaged actively the previous year. Within cohort 2, Ms. Grange and Ms. Janedo expressed more interest in thought-partner collaborations, which could be arranged more easily with direct communication to coordinate between the teacher and the thought-partner. Ms. Janedo had previously developed a collegial relationship through collaboration with Ms. Grange, so although whole-cohort collaborations were difficult, Ms. Janedo and Ms. Grange continued to connect when possible to support each other's CREDE explorations. Ms. Breech had not yet developed a collegial relationship with her first-grade colleagues from cohort 2, but their common interest in CREDE, desire for collaboration their team teachers resisted and the invitation into collaborations as an informal, cross-grade level, early-career team created a welcoming opportunity to engage in a way Ms. Breech perceived as a positive support. In addition, Ms. Janedo and Ms. Breech actively engaged with their collaborative colleagues through a district-facilitated eCALLMS module that year. They shared that the modules provided relevant information through a structure they thought was easy to engage and allowed them flexibility to explore ideas for the contexts specific to their own classrooms. However, a district staff member, who emphasized the collaborative reflections structured into the modules, which teachers were expected to engage with colleagues, facilitated the eCALLMS modules. Without an independent facilitator or collaborative colleagues during cohort 3, both Ms. Breech and Ms. Janedo later limited their engagement in CREDE specific modules, even though they had been actively engaged through the eCALLMS modules the previous year.

Moreover, Ms. Janedo's frustration with the loss of an independent facilitator and collaborative colleagues during cohort 3 led her to express her frustration directly to her resistant colleagues (Field Records, 2/4/16). She shared that a veteran teacher was "spoon fe[eding]" resistance to her first-year and early-career team members, and was "doing it WRONG" when she led the module by sequentially clicking through links without allowing any discussion or engaged collaboration. Exacerbated, Ms. Janedo then exclaimed that the team "need[ed] a facilitator" to work through the module and actually engage collaboration, before leaving the room. Particularly during their participation within cohort 3, Ms. Breech and Ms. Janedo engaged most actively in thought-partner collaborations. Since both teachers had cohort team members who did not engage, times allotted for team collaborations became more flexible opportunities for thought-partner collaborations. In addition to avoiding the negativity and resistance demonstrated by their colleagues, thought-partner collaborations were facilitated by the CREDE thought-partner, but driven by the teacher's prioritized classroom needs. Rather than a set expectation of a specific instructional program, strategy or component of a module, thought-partner collaborations focused on the contexts teachers wanted to improve within their classrooms and instruction, and attended to both classroom needs and instructional obligations.

Teachers had a great deal of power in thought-partnership collaborations. They determined which challenges related to instructional obligations and classroom needs they wanted support to improve and explore. These ideas were always specific to their individual contexts and were discussed with a non-evaluative, non-judgmental, positive and willingly available colleague. Looking across teachers' participation, active engagement in collaborative opportunities was sought when collaborations were perceived as positive and supportive, and particularly helped teachers address specific challenges that influenced the contexts of their

classrooms. When participants felt support through collaborative engagement they engaged actively and progressed toward improvement through the cycle of collaboration, discussed further below. In addition to figuring out how to better manage instructional obligations and students' needs in the classroom, active engagement in positive opportunities to collaborate served to mediate challenges and frustrations influenced by negative collegial interactions, and provided positive support as an alternative to other collaborative opportunities that proved unsupportive, which allowed the participants to reduce or avoid further negative interactions with resistant cohort colleagues among cohort 3.

Contexts that influenced limited engagement. When participants perceived opportunities to collaborate as unsupportive, participants limited their engagement, which ultimately ended the opportunity for support or progress toward improvement through those collaborative activity structures. This represents many of the short-term participants in the CREDE-PP project when required to participate as a member of cohort 3, such as Ms. Breech's kindergarten team teacher who resisted all participation and collaborative engagement. While the teachers central to this study demonstrated limited engagement in some opportunities, they sought active engagement in the ones they perceived as supportive alternatives.

I found evidence of limited engagement by each of the three participants, across multiple collaborative structures. While in cohort 3, Ms. Janedo and Ms. Breech both limited their engagement through the CREDE modules and with their team teachers. Both teachers engaged the module without the support of a collaborator because their team teachers resisted opportunities to engage collaboration through the module, with the cohort or their grade level team members (Field Records, 9/24/15, 2/4/16). As a result, both teachers had limited engagement with their team members because those team members were not willing

collaborators and did not contribute in a positive way when present. In the context of the modules, this meant both Ms. Janedo and Ms. Breech worked through each component of structured online module as expected by the school administrator, but they did not engage collaboration to discuss ideas from module content or explore how those ideas could be implemented in classroom practices. However, since both were familiar with CREDE and the module structure, the CREDE specific modules were perceived as redundant.

When collaborative engagement increased the complexity of challenges that influenced teachers, the teachers limited their engagement. This was particularly evident when Ms. Grange asked to serve as a CREDE mentor with cohort 2. Although she appreciated cohort collaboration during classroom lab visits, the increased responsibility to coordinate cohort collaborations when she had limited available time and cohort teachers were overwhelmed, increased the complexity of coordinating collaboration across the complex contexts among cohort participants (Field Records, 11/11/14). As a result, even though Ms. Grange thought the collaborations were supportive, the increased challenge of managing complex challenges with significantly less time in the school effectively limited cohort collaborations.

Limited available time influenced all three teachers, who temporarily limited engagement in thought-partner collaborations, especially when time was limited by mandated testing. Ms. Janedo and Ms. Breech also noted they needed time to practice implementing new ideas generated during collaborations before engaging more collaboration for further improvement. Even when given a weekly time to explore CREDE through team and cohort collaborations, the coercive participation which was required by the administrator was resisted, ultimately by all members of cohort 3. This was in direct contrast to previous cohorts which had no administrator

involvement and were able to coordinate a convenient time to collaborate with their thought-partner directly when they were ready and available.

Although Ms. Grange's negative perspective of cohort 3 collaborations during reflective interviews was initially perceived as an outlier, Ms. Breech and Ms. Janedo also expressed extreme frustration about their attempts to collaborate with resistant colleagues who proved unsupportive and even negative when frustrations continued to grow. Importantly, Ms. Grange's negative perspective was only evident during the first reflective interview, which took place during fall more than a full year after she concluded formal participation (Interview 9/13/16). After participating in cohort 2, Ms. Grange left the classroom and was not invited by the school administrator to participate formally with cohort 3. Instead, Ms. Grange participated peripherally with resistant members of cohort 3 who were struggling first-year or early-career teachers required to participate by the school administrator, which did not include Ms. Janedo or Ms. Breech. Ms. Grange's peripheral participation as an in-school mentor focused on her experience as a successful teacher within the school, not the CREDE SEP or structured engagement connected to the CREDE-PP project. As a result, Ms. Grange's negativity reflected the reluctant cohort members she engaged for a full school year, after her participation for her own instruction had ended. Notably, Ms. Breech and Ms. Janedo echoed similar frustrations and distinctively negative perspectives about resistance among the same colleagues who struggled during cohort 3. This suggests that Ms. Grange's negative perspective was not grounded in her own experience during formal participation, but was influenced significantly by her peripheral engagement with teachers who demonstrated resistance and negativity, which were perceived as unsupportive and limited other's willingness to engage those teachers in any structured collaborations.

Across all participants, during their engagement, the teachers limited how much they engaged opportunities to collaborate based on how much time they had available, which presents a need to attend to teachers' capacity to give additional time to engage collaborations. The teachers particularly limited how much time and energy they gave to collaborations when their colleagues resisted collaborative engagement or were perceived as negative, behaviors which Ms. Breech described as, "mean," "not reflective," or that they "just did not care" and refused to collaborate (Field Records, 4/7/16). The absence of positive engagement during opportunities to collaborate, resulted in a lack of support. More importantly, the presence to negative interactions and collegial resistance by those who did not want to engage collaborations deterred the participants who did want to collaborate. As a result, the participants in this study limited their engagement with colleagues in cohort 3, while they participated minimally to fulfill the school administrator's requirements.

It is also interesting to note the teachers' reflections on the project and their intersubjective perceptions of alignment, capacity and psychosocial propinquity. Early in the year, Ms. Breech noted that the CREDE overview module presented to cohort 3 was easy to navigate but felt redundant since she was already familiar with CREDE, and thought it would be better suited to support teachers who did not have previous knowledge of the CREDE pedagogy. While many members of the third cohort did not have previous knowledge of CREDE, they were required to engage the overview module while also required to engage their team, cohort and thought-partners without previously establishing a collegial or collaborative relationship, in the absence of a collaborative summer training. During her reflective interview, Ms. Breech also noted that the PD for the new school writing program involved too much required training during the first year, when she did not yet know or understand the program but that during the

subsequent year she felt that she had more capacity to engage although the intensive engagement and available supports had diminished (Interview, 12/11/16). This reinforces the idea that, in addition to intersubjectivity, psychosocial propinquity and capacity to engage are more important for intentional influence toward successful change, than proximal propinquity with a requirement to engage.

However, since the participants in this study actively sought engagement across multiple years, it is essential to understand that collegial resistance, which deterred engagement in some collaborations, also led participants to seek alternative opportunities to engage collaboration they perceived as supportive. Such an example is when Ms. Breech knew her team teacher was not planning to attend the grade-level team CREDE time assigned by the school administrator, so Ms. Breech asked to use her team specific time as an opportunity to engage in a more focused, thought-partner collaboration (Field Records, 9/24/15). This finding of pathways that led to active and limited engagement in collaborations demonstrates the influence of intersubjective perceptions the teachers developed through collaborative activities with their colleagues (Tharp, 2012). As Tharp suggests, “there is no human who is not under social influence, much of which is not benign” (2012, p. 3).

Results of Collaborative Support: Research Question 4

Upon engaging an opportunity to collaborate, whether through modules, with colleagues or with a thought-partner, effective collaboration allowed teachers to mediate the complex challenges that influenced them within their classrooms. The substantive cycle that emerged across the data, as depicted above, is shown below (next page), in figure 10, with the pathways

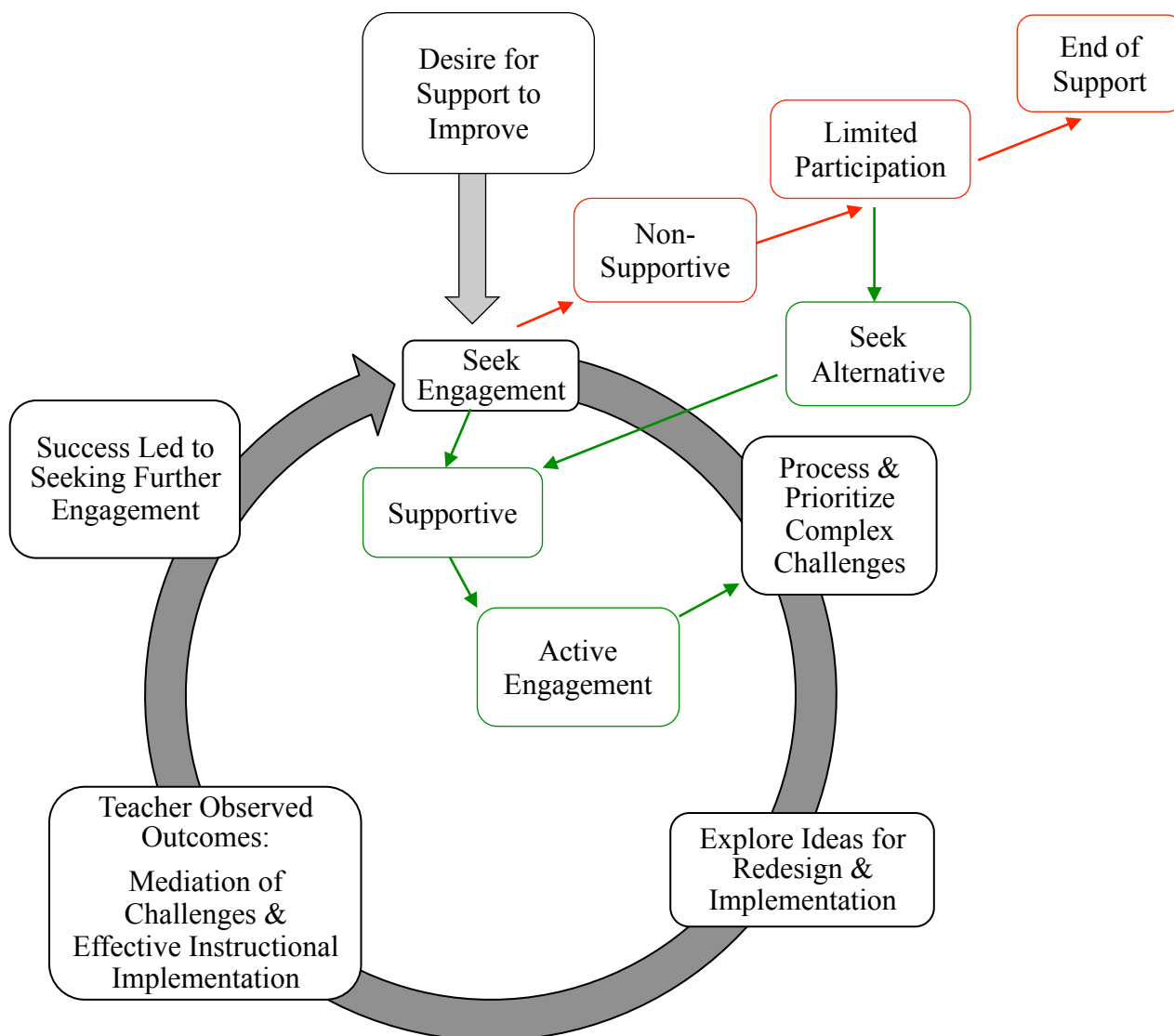


Figure 10. Active versus limited engagement in cyclical process of collaborative support.

toward active and limited engagement. Once engaged in an opportunity, teachers first needed to process the complex challenges that influenced their instruction within the context of their classrooms so they could prioritize which challenges to address through CREDE collaborations.

Teachers were then able to explore how to mediate those challenges by collaborating to apply the CREDE pedagogy to redesign their instruction and develop ideas they could implement within their classroom instruction. Once implemented, the teachers observed the outcomes related to improved classroom management, student engagement, instructional alignment across multiple, often conflicting program requirements, decreased behavior challenges or increased student achievement during instruction. Outcomes teachers perceived as improvements from positive collaboration spurred further engagement to either continue improving the work they had begun or address a new challenge.

Process and prioritize challenges. When participants engaged supportive collaboration, they first needed to process and prioritize the complex challenges that were influencing their current context of instruction. Often this included an initial need to vent particularly present frustrations about challenges from any of the four spheres of influence. Within cohort 3, after the first monthly training for the new writing program, both Ms. Breech and Ms. Janedo expressed frustration after attending the grade-leveled model lesson with the new program because they did not see how the strategy that was presented aligned with the other literacy programs they needed to implement and they did not think the strategy aligned with their students' needs. They thought it was a strong instructional strategy, but did not see how the strategy would fit with what they were already doing. Ms. Janedo's team teacher thought the strategy was best suited to an English language development block, which she noted did not take place in their classrooms, so she did not think the strategy was relevant to her typical, daily instruction (Field Records, 9/14/15), even though she did have diverse, emerging multilingual learners in her class.

On other occasions, the participants shared a variety of frustrations such as how to manage instruction when students were removed for intervention and missed essential lessons, or

the practical problems of theories that “don’t work” in classroom implementation (Ms. Grange, Field Records, 1/28/15). They also expressed struggles in a particular instructional area like Ms. Janedo and Ms. Grange who both saw improvement during literacy but pressing challenges during math. There was also the challenge of breakdown between previous success or teachers’ intentions and observed outcomes, such as Ms. Breech who needed to figure out the disconnect her students struggled with between model lessons and independent practice (Field Records, 10/5/15), or Ms. Grange who saw new struggles in her classroom during cohort 2, which she had not observe in her room the previous year (Field Records, 11/11/14).

Processing the complex challenges that were most salient for teachers served an important purpose. Venting frustrations allowed teachers to specify which challenges or classroom needs they wanted to focus on during collaboration as a priority for influence toward intentional change and improvement. This was particularly important when the teachers felt most overwhelmed or described the complex challenge of trying to “put all the pieces together” across multiple instructional requirements with too many conflicting expectations (Field Records, 3/19/15; 9/3/15; 1/28/15). Ms. Grange expressed this particularly well when she shared, “I am trying to figure out how to do theses curriculums, and it’s not working,” (Field Records, 1/28/15). She could not change the curriculums, so she vented her frustration about this challenge, which led her to prioritize her own intention to return to the CREDE implementation and collaborations she had not been attending to, noting the success she had seen in her classroom as a result of her CREDE collaborations and implementation the prior year.

The teachers struggled consistently to figure out how best to accomplish everything required in their classrooms and needed by their students, and saw conflicts among the expectations of multiple instructional programs. However, first voicing the complex contexts that

influenced the pressure teachers struggled to manage, allowed them to focus on collaborative engagement to reconcile pressing frustrations by prioritizing a challenge they could address through exploring pedagogy to apply ideas for their redesign and implementation of instruction within their own classroom such as the challenge of meeting the needs of an advanced group of students, increasing overall class engagement during rotating instructional centers or integrating a required strategy that did not fit into instruction. Notably, teachers generally prioritized a challenge they noted in their classrooms rather than a CREDE standard. The CREDE pedagogy with attention to any given standard was then taken up during the exploration of ideas in response to the prioritized challenge the teacher wanted to address. I should note, however, that processing complex challenges was an essential component of the collaborative support cycle, which emerged from the data, but did not eliminate any of the complex challenges or their influence on teachers. Instead, it helped teachers prioritize which challenges to focus on during collaboration by applying pedagogy to instructional design, which served to mediate the given challenges prioritized by the teacher.

Explore ideas for redesign and implementation. After teachers prioritized a focus for collaboration, the CREDE SEP were taken up as a pedagogical methodology to support the design of instruction for regular classroom implementation. CREDE pedagogy was then applied to address the prioritized challenges by exploring the redesign of instruction to reconcile expectations teachers perceived as conflicting, or find alignment among instructional obligations and classroom needs, and develop ideas teachers could implement within their classroom instruction.

When Ms. Breech and Ms. Janedo expressed frustration with the conflict they perceived among the new writing program, other required programs and the needs of their students,

collaboration to apply CREDE pedagogy supported their exploration of how the new strategy could be adapted to align with implementation in their own classrooms. For example, with Ms. Breech, this involved discussing how the vocabulary strategy could be presented more appropriately for her young kindergarten students. While presented as a writing strategy, the strategy did not need to fit into her time for writing instruction if it aligned more strategically within her reading instruction. After watching the PD provider's model lesson, Ms. Breech thought the strategy was "too much" for her students, but after a brief thought-partner engagement, she was excited to try the strategy in a different way that she perceived as better aligned with her classroom (Field Records, 9/14/15). The particular strategy involved a method for model lessons that supported vocabulary development. Our CREDE focused collaboration was used to explore how the strategy could support her students' language and literacy development (LLD) if she adapted the strategy to fit within her instruction.

Instead of writing, Ms. Breech found a more appropriate opportunity to implement the strategy during her model reading lessons. Then, our CREDE exploration focused on redesigning her approach to the strategy such that her implementation could engage students as joint productive learners by co-constructing model sentences (JPA) while using the new vocabulary strategy, which also increased the level of challenge within the learning activity (CA) as students became joint productive collaborators using vocabulary during the model lesson rather than silent observers. This then became an iterative process of redesign to improve implementation based on observed outcomes in the classroom (Norman, 2013). After a few iterative cycles and time to practice, Ms. Breech was excited to demonstrate the progress she made with her implementation and the results she saw among her students. She also noted a breakdown between students' success during the model lesson, which they did not demonstrate when

expected to use the language developed through the joint productive model during their subsequent independent practice. This breakdown and transfer of new skills then became a prioritized focus for further thought-partner collaborations. All collaborations were guided by the teachers, but thought-partner collaborations in particular were focused on the challenges teachers prioritized as essential in their classrooms.

Once a challenge was prioritized, as Ms. Breech asserted in her observation that student success during the guided model was not transferred into independent practice, thought-partnership focused on responding to the given challenge. In this example, I drew on previous knowledge of Ms. Breech's implementation of guided and independent practice. Since Ms. Breech was using a chart pad to capture students' joint production of ideas during the guided practice, I asked if students had access to the guided practice chart as a scaffold during their independent practice. When Ms. Breech began positioning the jointly produced chart by the independent practice center, she noticed new challenges as students began to copy words or sentences from the chart rather than using it as a guide. Then our conversation turned to new ideas for constructing the chart itself. Instead of complete sentences, which her kindergarten students then copied, or a graphic organizer, which her young students struggled to use as a guide for constructing sentences, we discussed the idea of creating a sentence frame during guided practice, when Ms. Breech could support students' joint production of an appropriate sentence along with a bank of possible word choices students could use to complete the sentence. Through multiple iterations of thought-partner collaboration Ms. Breech found instructional alignment for a new literacy strategy, redesigned instructional implementation of the strategy to engage students through a joint productive activity that supported language and

literacy development, and refined her approach to guided and independent practice to scaffold support for increased student success within her literacy instruction.

As seen in the vignettes presented in chapter 3, most explicit attention during collaboration was given to JPA, but increasing JPA as Ms. Breech did during guided practice with this literacy strategy, created more opportunities for students to engage LLD. Instead of presenting a sentence frame or word bank during guided practice, when Ms. Breech worked to engage students in the development of the sentence and word bank her students needed to engage language to discuss possible sentences and a bank of possible vocabulary word that matched the sentences. As Ms. Breech refined her implementation across guided and independent practice, this joint productive engagement scaffolded students success engaging LLD during independent practice, which ultimately led to further opportunities to engage JPA and LLD as students were later able to discussed their ideas and sentences with their peers while working at the independent practice center.

While supportive collaboration often helped teachers find alignment and reduce conflict among multiple, required, instructional programs and obligations, exploring ideas using CREDE pedagogy also allowed specific attention to the instructional needs teachers saw in their classrooms by applying CREDE SEP to redesign and adapt instructional strategies teachers could then implement effectively to address the challenges they prioritized. Although CREDE served as a method to align instructional requirements that were perceived as conflicting, the perception of conflict was eliminated, which in turn mediated but did not eliminate the challenge of managing many instructional requirement while supporting students' needs. Rather than exploring ideas related to theories, which Ms. Grange described as a practical problem when they do not work in classroom implementation (Field Records, 1/28/15), CREDE collaborations

focused applying the pedagogy to develop ideas each teacher could implement within their individual classroom to improve instruction and support their students. When supportive collaborations concluded, teachers often expressed a sense of resolve with a clear understanding of how to move forward with implementation of the ideas they thought aligned with their classrooms. This was frequently expressed by teachers with a simple affirmation of reconciliation, gratitude or a plan to move forward with implementation. Ms. Janedo expressed this clearly after a thought-partner collaboration when she shared:

This was very supportive and I feel like we are going in the right direction...I feel like crying...just like, ‘Oh Yeah!’ Like I went away, ‘YES!’ Like, so many things to try, not overwhelmed...I feel like we came up with a few very specific, actionable ideas... They feel very do-able. I feel good. (Field Records, 3/19/15)

However, when teachers were able to reconcile their perception of conflict among programs, but struggled to connect the ideas they explored with a doable approach to classroom implementation, they were eager to engage further to process the connection between the CREDE pedagogy and application in their classroom implementation. Ms. Grange reflected that she valued the opportunities she had to observe instruction in other classrooms, which she did with cohorts 1 and 2 (Interview, 11/15/16). Ms. Janedo was eager to have me model a particular idea for her small group instruction to bridge the gap between the abstract idea and a possible approach to implementation (Field Records, 2/25/15). Ms. Breech, as an early career teacher, was eager to have me demonstrate a few ideas we discussed early in the year to give her a “visual model of possible ideas” for her own implementation. After watching me model during her five-minute demo lesson, she was brimming with ideas she was excited to try on her own (Field Records, 9/10/15).

At the end of a thought-partner collaboration, Ms. Janedo described the session processing and exploring new ideas for her instruction as, “very useful...VERY. It’s like next steps,” as she gently laughed at the simplicity of her plan to move forward before she scheduled another collaboration session (Field Records, 3/4/15). Among the participants, when ideas generated through CREDE collaborations were relevant, both aligned with the needs teachers saw in their classrooms and aligning among conflicting instructional obligations, and teachers specifically saw opportunities for application within instructional implementation in ways the teachers thought were “doable,” they were excited to move forward and try their new and redesigned ideas within their classroom practices.

Implement and observe outcomes. Teachers implemented their ideas within their instruction and observed both their own implementation and classroom outcomes. An example of this was evident early during the year when Ms. Janedo stopped me in the building to tell me that that her groups were working well. She noted that the challenges in her classroom were “a thousand times better” than they had been at the beginning of the year, since she had been working to implement the CREDE ideas we had discussed for her instruction during reading and writing. However, she also noted that she still saw unmet needs in her classroom, particularly during math instruction (Field Records, 11/11/14).

Similarly, when training began for the new writing program, Ms. Breech, then a member of cohort 3, had just spent two thought-partner coaching cycles working to improve her own implementation of a CREDE idea that she saw supporting the students in her classroom and wanted to continue improving what she had been working to implement instead of trying a new strategy she did not think suited her classroom because she was already seeing benefits for her students (Field Records, 9/14/15). On another occasion, she stopped me when she saw me in the

building to tell me she that she had been practicing her implementation and was pleased with the results she was seeing in her classroom, including increased student engagement and focus on instructional tasks, and increased levels of writing being produced by all of her diverse students (Field Records, 10/1/15).

Ms. Grange noted the challenges she observed in her classroom as a member of cohort 2. She reflected that she had not been implementing the CREDE instruction she had redesigned and implemented the previous year. She had seen her CREDE work as successful supporting her students, and wanted to return to CREDE focused collaborations to support the new challenges she saw in her classroom that year (Field Records, 11/11/15). During reflective interviews, the participants noted that they had observed significant benefits for students in their classrooms, including classroom management over all, support for emerging multilingual students, students with diverse cultural backgrounds and socio-economic statuses, students with identified learning needs above and below their classroom peers and students with behavior needs (Interviews, 9/13/16; 9/21/16; 10/13/16; 11/15/16; 11/16/16; 12/11/16). Ms. Janedo shared that her students test scores during her participation within cohort 3 had been noted as the highest in reading and writing among all third grade classes in the district, including her emerging multilingual students. Although she was disappointed that the students in her co-teacher's classroom did not show the same growth, she also recognized that those students had not receive the same support across the school year since they had not received sufficient literacy instruction early in the year, when her co-teach was still responsible for literacy instruction for her own students (Interview, 11/16/16). When Ms. Grange reflected on her instruction she noted:

I would say my practice is definitely more culturally reflective, more inclusive. I would say that I have found ways to get better engagement out of my bilingual learners, or not

even my bilingual learners, my-- definitely my overall classroom, definitely my bilingual learners, but also my language exposed to learners. I am not even quite sure how to say that because within our population, because it's so diverse, we have a lot of students who are maybe not bilingual. However, they have members in their family that are monolingual in another language or bilingual. They have been exposed and that impacts how they learn or what their previous experiences have been. I think I feel stronger in my understanding that content can be delivered in multiple ways. That you're-- the content doesn't change, but the delivery of it can look different. I think that's important because so often prior to this experience I would feel judged if I delivered my content in a different way than the traditional 'sit in your desk and listen to the teacher talk' way.

(Interview, 9/13/16)

Across their time on the project, and especially during reflective interviews, teachers noted that one of the important outcomes of collaborative engagement with CREDE was that it supported their implementation of instruction and classroom outcomes for students. Although not an intervention, which may be needed to support students with specific, more significant needs, teachers noted their instruction was more effective for all diverse students within their classrooms. Ms. Grange's quote demonstrates a good example as she named her instruction as both more inclusive and reflective of relevant cultures in her classroom. However, she also noted that implementing her instructional design supported by CREDE focused collaborations resulted in improved classroom management over all as students' collaboration and engagement increased. She also reflected:

CREDE was a game changer and honestly, I can very honestly say, I mean CREDE standards themselves. They were so good. They were the game changer in my classroom.

They truly were. They were focused on the population...They were focused on our population that is often kicked around because 'we don't have the scores that everybody else does' or 'we don't have the money that everybody else does'... the reality of the situation, the majority of the best teachers that I've ever seen in my life are teaching at lower socioeconomic schools and the reason they are the best is because they, you know, their kids aren't cookie cutter. They're having to know every strategy out there because they're dealing with kids that are outside the norm. CREDE was a game changer because it focused on the population that is so often kicked and wasn't, you know, 'these students are bad so this is the way we need to be doing it', it was a, 'these students honestly have different needs and so it is okay for you to break from the norm to do something different because these students have different needs than say, you know, white suburban middle class, you know, parents sit down with their homework every night population.'

Not to say our parents don't sit down with their families every night-- it's that our families just have different, you know, needs... I mean we have families that have multiple working parents and that are working swing shifts, or are working trade jobs or very physically demanding jobs that make them tired when they're home. We have families that don't have the money to have the technology available to support their student when they don't know the answer to a question. We have families who themselves aren't always incredibly educated or they ARE educated however they don't have the language to address what's going on and they're working with schools that don't have the money to provide extra support to families, you know, be it homework clubs or whatever else it might be because of transportation issues. It's just a different population and it's not bad, it's not good, it's just different and it's going to have different needs.

And what CREDE gave name to was 'it's okay' and with that PD the way that it was structured, allowed for the people involved to understand 'it's okay, these are different students so we're going to go towards your needs' not because we're a band aid but because we're going to say, 'we all understand that this is different population so we're going to approach it in a different way and we're going to guide you through that because it's different than anything you've ever been introduced to before even though you're probably already doing that because you've already figured this out about the population you teach.' That was good and then it was nice to have someone, to have people say, you know, 'I'm not going to tell you this is the right way to do it, I'm not going to tell you this is the wrong way to do it, I'm going to come in and I'm going to give you a quick, what do you think? and yes, okay I can see that or have you thought about this?' ... that's that coaching piece, like what's going to be timely in the ongoing process. (Interview, 9/13/16)

Ms. Grange's reflection attends to her ability, through CREDE collaborations, to increase the inclusive equity in her classroom by making changes that increase her students' collaboration and engagement in classroom learning opportunities, which supported the students she knew were from historically marginalized identity groups (Howe, 1993). Upon reflection, the teachers noted specific support for all students including those with identified needs related to emerging multilingual learning, high or low academic performance, special education and behavior needs. Although not an intervention for specific needs, teachers knew the needs of each student in their classrooms and applied CREDE to increase student engagement across their classroom instruction, and noted subsequent benefits for all students including needs that had been formally identified or observed but not labeled (Howe, 1993; Skrtic, 2013). While teachers observed

classroom outcomes they noted as improvements, they also noted benefits for their students looking across categorical identity labels (Skrtic, 2013). This suggests improved equity through instructional engagement for all students, as a result of collaborations applying CREDE pedagogy to instructional design, which addresses the analytic component of research question 4 in regards to the equitable outcomes for students.

Seek further collaboration. After teachers observed the classroom outcomes when implementing ideas they explored during collaborative support, they often explicitly sought further engagement in the collaborative support cycle. Ms. Grange demonstrated this when struggling in her classroom during cohort 2; she reflected that she wanted to make time to engage thought-partner collaborations and get back to the CREDE work she had successfully implemented to support her class the previous year (Field Records, 11/11/14). When teachers sought further engagement, they did so in a variety of ways and for a variety of reasons. During cohort 3, there was often an assumption that there would be an opportunity to collaborate the following week because the school administrator expected cohort members to collaborate during CREDE team meetings. However, all teachers were given the power to determine their own needs and next steps. Members of cohorts 1 and 2 did not have a predetermined weekly structure, but knew that I was available each week if they sought me out and specifically scheduled a time that worked for them. During cohort 1, Ms. Grange and her cohort colleagues had asked me to support them and arrange ALSD team meeting so they could collaborate, since the rest of the cohort included middle and high school teachers from two other districts. During her struggle to figure out the new co-teaching structure she had to navigate, Ms. Grange reflected that she had not been implementing what she knew to be successful the previous year, but that her attempt to mirror her co-teacher's style and figure out new curriculums were not working. As a result, she

described the breakdown in her classroom as a “Madhouse” and explicitly asked to find time to collaborate to help her refocus on CREDE implementation (Field Records, 11/11/14).

On one occasion, Ms. Janedo stopped me in the teachers’ lounge when she saw me taking notes between appointments. Ms. Janedo was happy to tell me that she been practicing some of the ideas we had discussed and thought they were “incredibly successful” and wanted to figure out how to bridge the success in literacy into her math instruction, where she saw more needs. She was not sure how to accomplish that, but asked if I could come in the following week to support her exploration of this new focus on math. She was excited to have me model a few of the ideas we had discussed to give her a better understanding of possible implementation, focused on a new area of instruction since CREDE was supporting her ability to engage students in collaborative learning, rather than any specific curricula or program (Field Records, 2/25/15). In this case, not only did Ms. Janedo explicitly seek an opportunity to further engage, she noted the success she saw and a new area of need on which she was ready to focus with support during the collaborative sessions she was then requesting.

Later, after I modeled a few ideas during the brief demo lesson she requested in her class, we debriefed about the ideas she had observed me demonstrate and next steps she wanted to explore for her own implementation. She reflected about the “foundation” she had been building in her class, with rich student engagement during reading and writing, since she had not been able to build a strong classroom community at the beginning of the year when she was absent due to her broken wrist. She had been excited about the progress she had seen wanted me to come in to help her “see where to go next,” but it had been a tough day, when I arrived in the classroom. Ms. Janedo noticed a backslide in behavior she thought she had previously managed, but an interruption from her student teacher who wanted to change the style of class without

understanding the students or the contexts that influenced that year in a particularly difficult classroom community, had temporarily disrupted the progressive improvements Ms. Janedo had been excited to build on. She thought “it was a really good experience to say, one, does changing help, and two, if I try something different, will I get different ideas because I’ve tried everything and I’m running out of ideas” (Field Records, 3/19/25). At the end of our collaboration time, I asked if she felt confident and supported with ideas to move forward and she replied, “I feel like we came up with some ideas that sound like they might be helpful. That alone, I think, is an A+,” but she also looked forward to some time over spring break saying she would, “have to wrap [her] head around it,” and looked forward to a chance to practice and reconnect during another session, which she would schedule after the break (Field Records, 3/19/15).

In contrast, cohort 3 had both a predetermined weekly structure and strong resistance to the administrator’s requirement of ongoing engagement. However, Ms. Breech was often eager to show me the progress she saw in her classroom, and resisted any interruption to her continual progression through collaborative support cycles. Ms. Breech had first approached me early in the year, when she was sitting in the office with a crying student from her team teacher’s classroom. She saw me as I arrived at the school and asked if I had time to meet with her (Field Records, 9/10/15). Also early in the year, when presented with a new expectation that she thought conflicted with the progress she was seeing, she resisted the new strategies in favor of continuing to improve the strategies that she already observed as supporting her students after working through iterative cycles of redesign (Field Records, 9/14/15; 10/26/15). She was proud to show me the work she had accomplished practicing ideas we discussed during collaborations and wanted to build on that success to figure out what she should explore next to continue her improvement (Field Records, 10/1/15). Her resistance to disruption of this cycle came up again

with the introduction of my new collaborative thought-partner, who asked what Ms. Breech wanted to focus on during collaborations, to which Ms. Breech replied that she had already started with a focus on improving engagement and student talk during writing instruction and that she wanted to continue that progress without changing her focus (Field Records, 11/12/15).

While the weekly expectation of collaboration during cohort 3 implied ongoing engagement, in addition to broad resistance to cohort collaborations there were breaks in the expectation of weekly engagement, such as during school-wide testing season, which took place in the spring. During that time, I was in the building a bit more sporadically as cohort and team collaborations diminished, but I still observed classrooms and was available as requested. Ms. Breech, whose kindergarten students did not have to do mandated high-stakes tests, continued to seek thought-partner collaborations even though her team teacher was happy to see an end to the administrator's expectation of weekly CREDE team times. Throughout the year, she continued to stop me in the hallway, or teachers' lounge to ask when I was available, and even interjected thought-partner questions when I was in her classroom for observations, (Field Records, 5/5/16).

Finally, when structures within the CREDE-PP changed, Ms. Grange, Ms. Janedo and Ms. Breech had each sought to continue their ongoing engagement during another year. Ms. Grange left cohort 1 and requested an opportunity to recruit her own colleagues for cohort 2 and the chance to support them through summer training and a mentorship role. When the cohort structure changed for cohort 3, Ms. Grange was disappointed that the school administrator excluded her from collaborative planning and cohort engagement since she no longer held a classroom teaching position. In contrast, Ms. Janedo changed grade-levels after cohort 2 because the school administrator had determined cohort 3 would only include K-3 teachers and Ms. Janedo was more interested in continuing her engagement in CREDE focused collaborations than

she was remaining in a fourth-grade classroom. Ms. Breech, while not a formal member of cohort 2, had eagerly engaged peripheral CREDE collaborations with her colleagues. When Ms. Breech reflected on the changes between cohort 2 and cohort 3, she described the module she had been invited to engage with her cohort 2 colleagues as her “favorite” because she felt welcomed, but she spoke negatively about the CREDE module and collaborations within cohort 3 because the cohort was so mean. Ms. Breech described her participation with cohort collaborations as doing “little of the littlest” because the cohort had been “forced” to participate, which bred widespread resistance. She also raved about her cyclical collaborations with her thought-partner coach. She resisted collaborations with her negative and non-collaborative cohort members, and noted that her cohort 2 colleagues had not shared such a negative experience. Although she resisted working with her negative colleagues, Ms. Breech continued to seek engagement, explicitly through the thought-partner collaborations, as she perceived them to be positive and believed them to be supportive of her continual improvement.

This consistent agency of teachers seeking further engagement is a significant and key feature of this study. Long-term participation was an inclusion criterion for study participants, but I also found that the participants continually asserted a desire to pursue ongoing opportunities to engage across continual cycles of collaborative support, which demonstrated delta synchronicity. Not only does this suggest the process of collaborative support is cyclical and continuous in nature, it also suggests that the three teachers actively sought continual change toward professional improvement and effective outcomes for their students, even though affinity with their cohort units varied based on intersubjective perspectives. Engagement that led to positive support led to affinity for further engagement with the unit engaged in the given activity structure. On the other hand, negative interactions that were not perceived as supportive did not

produce affinity and instead led to limited engagement with the unit and activity related to the negative perception. This pattern corresponds with the intersubjective cycle of social sorting (Tharp, 2012). Proximity to seek influence through support led participants to engage activities to process, prioritize and explore pedagogical application of ideas to redesign and implement instruction, to better address challenges in their classrooms. Intersubjective perceptions of support through mediating complex challenges and improved classroom outcomes led participants to feel a sense of affinity with supportive collaborators, which led participants to seek further engagement. This produced a process of cyclical collaboration to engage iterative redesign by applying pedagogy to the construction process of instructional design and implementation (Norman, 2013; Tharp, 2012)

The vignettes presented in chapter four portray how dynamic change among complex contexts influenced each teacher's engaged participation, regardless of the alpha, beta or delta state within the classroom, teaching team or cohort. The three participants demonstrated a desire for delta synergy as they engaged ongoing cycles of collaborative support in their pursuit of continual improvement. Finding evidence of this cyclical process through coded analysis further strengthens the observation that the participants sought delta synchronicity in their own professional practice, even if their classrooms functioned in alpha or beta states rather than within a delta state of synchronous change. While the cycle of collaborative support became ongoing when teachers sought further engagement, a number of other themes emerged as relevant to teachers CREDE collaborative engagement throughout the study.

Additional Relevant Themes

Although it is not clear if teachers' desire for delta synchronous change influenced their cyclical participation or if cyclical success through participation influenced their desire for delta

synchronous change, three additional themes emerged as important to the teachers' continual progress through the substantive process of ongoing engagement in collaborative support cycles. The three key themes that influenced teachers through this cyclical process included teachers' descriptions of support as responsive, relevant and sustainable.

Responsive support. Throughout the project, teachers reflected on their limited time for instruction, changing schedules and loss of functional planning time, which increased the pressure of managing the four spheres of complex challenges that influenced each teacher. When schedules changed, such as Ms. Grange switching to a half-time position or Ms. Janedo navigating an emerging co-teaching structure, the beta stability of each teacher's classroom instruction was disrupted. Similarly, classroom instruction was disrupted temporarily by seasonal school-wide testing. These changes, in addition to limited planning time, sometimes given to required meetings, meant pressures were high but time was in short supply.

During cohorts 1 and 2, teachers had been able to schedule thought-partner and small group collaborations as they requested, with few structured, whole-cohort or required collaborations. Although, the structure was more explicit during cohort 3, it was evident that all cohort members could choose to limit their engagement, but the teachers within this study sought active participation and valued the flexibility to determine when they were ready to collaborate, including the ability to assert a need for time to practice ideas (Field Records, 9/24/15) or request collaboration when it was convenient for their schedule (Field Records, 2/25/15).

Relevant Support. Teachers within this study also reflected on the relevance of CREDE collaborations for their individual classroom contexts and the complex challenges that influenced each teacher and their most pressing needs in the classroom. Ms. Grange described this well when she described how CREDE collaborations helped her develop more inclusive instructional

practices that responded to the diverse backgrounds of her students (Interview, 9/13/16).

However, CREDE, as an effective pedagogical perspective instead of a curricular program aligned with both the needs of diverse students in inclusive classrooms and with the various curricular programs that each teacher was obligated to implement in the classroom. As such, rather than conflicting with any specific program or testing requirement, CREDE focused collaboration gave teachers the opportunity to determine the most pressing challenges in their classroom to support and improve equitable engagement for the diverse learners within the context of classroom instruction. It was this alignment, central to the focus of each collaboration that enabled teachers to explore ideas to improve the pedagogical design and implementation of instruction. Teachers greatly valued the ideas they thought were do-able next step, immediately implementable within their instruction.

CREDE focused collaborations were not presented or perceived as a definitive “fix” to challenges that influenced the teachers. Instead, supportive CREDE collaborations were opportunities to mediate complex, ongoing challenges by engaging different ideas and implementing instructional change as part of a continual process in their pursuit to improve instruction in their classroom. Significant attention was given to the CREDE standard of joint productive activity (JPA), based on each teacher’s focus to increase student engagement during whole class and small group instruction. However, incorporating JPA into instruction also created opportunities to integrate language and literacy development (LLD) and contextualization (CTX) and enabled teachers to increase the level of challenge in activities (CA) when student engagement and student-to-student support both increased. Once teachers saw increased engagement they looked to improve the instructional conversations (IC) within their teacher-led small groups. Although teachers found critical stance (CS) to be the most abstract

standard, when teachers noted some beta state stability in their classroom, CS emerged as a way to enrich student engagement. Notably, this progression, while guided by participants' focus during engagement, is also consistent with the suggested progression for developing a CREDE classroom (Hilberg, Chang, & Epaloose, 2003; Tharp et al., 2000).

The overarching results of positive, ongoing engagement through the cycle of collaborative support are best described as mediation of the complex challenges to support continual improvement. Across the data, teachers consistently needed to support to process the complex challenges, particularly related to instructional obligations and students' needs, which influenced instruction for their classroom. Teachers' desires to address those challenges then guided thought-partner collaborations that explored CREDE ideas, which aligned with both instructional programs and the diverse needs of students in their classrooms. Teachers then worked to implement "doable" ideas within their classrooms and observed the outcomes. Outcomes, often noted as mediation of instructional challenges and effective improvement for students in the classroom, energized teachers to seek further engagement, across the cycle of collaborative support. Finally, the outcomes teachers observed, served to guide further engagement to continue improving by either refining ideas previously discussed or refocusing on new challenges the teachers saw as relevant, pressing or emergent as an un-met need within their classroom contexts.

However, while evident that teachers engaged cyclical support to apply CREDE pedagogy through an iterative process of redesign for instruction, the structure of collaborative engagement also went through iterative cycles of redesign to remain responsive and relevant to the teacher participants (Norman, 2013; Tharp, 2012), as shown below in figure 11.

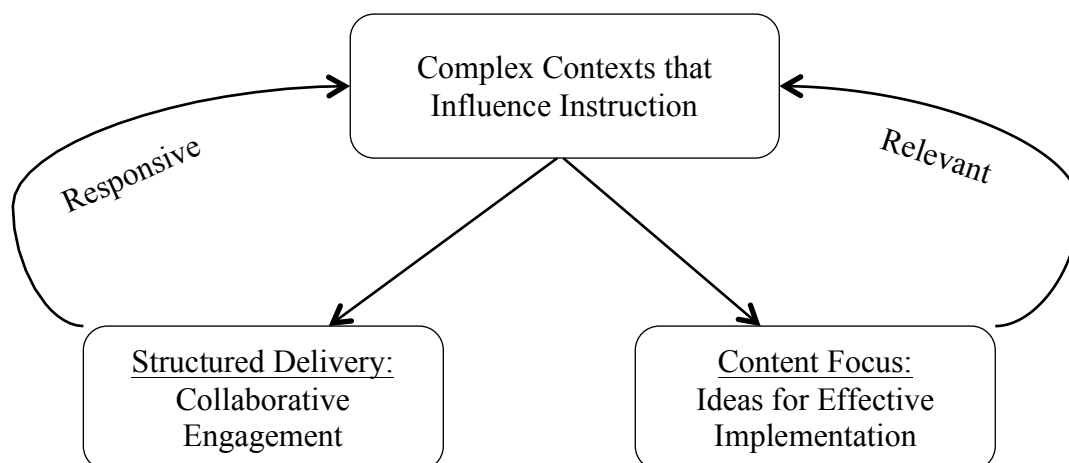


Figure 11. Conditions of iterative redesign for engagement that sustained delta synchronous change

It is essential to recognize that the structured delivery of collaborative engagement and the content focus during engagement were responsive and relevant to the complex contexts and pressing challenges that influenced each teacher. It is also evident that each teacher, as a member of an elementary team within a single K-8 school had different experiences among these complex contexts across multiple years, as both early career and veteran teachers. This means that these synchronous conditions were important supports for teachers' ongoing interactions.

Sustainable engagement. Participants described their sustained, active engagement as supported by the long-term opportunity for ongoing collaborations. As described above, CREDE collaborations were not perceived as a definitive fix to the challenges that influenced teachers, nor were they presented judgmentally as a way to fix anything teacher were doing wrong, which Ms. Grange noted was a particular stressor for well-intended teachers doing their best without sufficient support (Interview, 9/13/16). Instead, CREDE collaborations and attention to specific standards were presented and engaged as pedagogical tools to support teachers as they saw fit to develop their own vision of improvement within their classrooms. As an open-ended invitation to

explore ongoing ideas from continual improvement, progress through the cyclical process of collaborative support was not time-bound or driven by a set expectation of fidelity to ridged implementation. Although the PD was initially designed to present CREDE as content that would be relevant to teacher participants as learners, and structured engagement was designed to allow some response to teachers' availability, this design process for the PD itself became iterative. Rather than focusing on all CREDE SEP, once teachers had foundational knowledge of the broader pedagogy collaboration focused on applying CREDE with a more narrow focus on the needs most relevant to the teachers, which changed as their implementation progressed across each school year. Likewise, while structures varied across the project, sustained, active engagement was enabled by flexible responsiveness within those structures so teachers could continue their ongoing participation while responding to the variable time constraints and obligations within the school. Instead of pushing for full, immediate implementation of the CREDE SEP, iterative redesign of supports to be relevant and responsive to the teachers across each year allowed the teacher participants to engage the PD and CREDE itself with sustained focus.

Ms. Grange and Ms. Janedo both described this as a benefit of a long-term perspective, that they did not feel pressured to achieve full or perfect implementation in a short period of time, but felt invited and supported to explore how best to pursue their continual improvement with more than a single school year to accomplish the goals they envisioned for their classrooms and students (Interviews, 9/13/16; 9/21/16; 11/15/16; 11/16/16). Ms. Breech, as both an early career teacher and a formal member only of cohort 3, described her perspective slightly differently. She didn't think of CREDE with a long-term perspective of support. Instead she thought of CREDE as small changes she could use quickly, short-term, to improve her

instruction by making pedagogical tweaks within her implementation, without being overwhelmed by too much information or the need to change too much within her emerging, early career practices (Interview, 12/11/16). For Ms. Breech, a short-term perspective as an approach to making small changes she could implement immediately made collaboration for ongoing support sustainable without being overwhelmed with too much to do. For Ms. Janedo and Ms. Grange, a long-term perspective of small changes they could implement immediately made collaborations and ongoing support sustainable without being overwhelmed by the lack of time to accomplish full implementation of new, complex expectations of pedagogical instruction that would have been unreasonable within a single school year. However, regardless of the short or long-term descriptions, all participants thought it was essential to have time to explore ideas they could implement within instruction as an ongoing process of continual improvement, rather than an overwhelming race toward a predetermined finish line.

Participants also noted the importance of positive collegial interactions with non-evaluative collaborators who respected them as professionals. Ms. Janedo noted that she thought the project had been overwhelming for the first-year and early career teachers within cohort 3 and did not think they should have been included, as had been the goal with cohorts 1 and 2 (Interview, 9/21/16). In contrast, Ms. Breech reflected that she loved her collaborative thought-partner engagement and thought every teacher, or at least every early career teacher should get to work with a thought-partner (Field Records, 9/14/15). The distance between these perspectives is best informed by the negative collegial interactions among non-collaborative cohort members who resisted participation. Ms. Janedo recognized that the first-year and most early-career teachers within cohort 3 had been forced to participate and were extremely resistant to collaborative engagement, which created negative collegial interactions across the cohort

throughout the year. She also noted that the newer teachers were guided by a veteran teacher who was resistant, and thought the newer teachers were too overwhelmed during their early career years to fully engage the requirements placed on the cohort 3 teachers. Ms. Breech, who engaged as a first and second year teacher, saw her collaborative engagement as a huge and valuable support, but also saw thought-partner collaborations as a supportive alternative to required engagement with negative, resistant colleagues. She thought the collaborative engagement process was incredibly helpful as she attempted to figure out how best to manage all the complex instructional obligations while supporting all of her students' needs. The unstated, underlying difference between their perspectives is the need for positive, respectful and professional collegial relationships. When collegial interactions were negative, perceptions of engagement were negative and engagement itself was limited, which was particularly common during cohort 3 when the participants noted being forced to engage cohort members who were not interested in participating even though required to attend. However, when collegial interactions were positive, with thought-partners or cohort members, as noted during cohorts 1 and 2, the perception of positive, respectful, non-judgmental collegial relationships were seen as inviting and as resulting in ideas for effective improvement.

Finally, participant asserted the important role CREDE collaborations played in helping them align multiple instructional programs effectively within their instructional design and implementation to best support classroom and student specific needs, even when teachers initially perceived those obligations as conflicting with each other or with needs within the classroom. Looking across the data, during CREDE collaborations, in addition to general needs related to overall classroom management, teachers acknowledged students' formally identified observed needs that were not formally labeled related to many forms of diversity including:

Emerging multilingual, Bilingual or English language learners, racially and culturally diverse or minority learners and families, students with working families or low socio-economic resources, students with high and low academic performance, students receiving pullout support for response to intervention (RTI), special education (SPED), or English language development (ELD), and disruptive or even violent behavior concerns. In addition to regular assessments related to district curricula, teachers acknowledged regular testing for reading and language plans, as well as state testing including: DRA, PALS, MAPS, ACCESS, CMAS and PARCC, some of which were conducting multiple times throughout the year. Related to instructional obligations and specific curricula or required sets of strategies as instructional approaches, teachers acknowledged three requirements for classroom and behavior support, eight requirements for literacy instruction and three requirements related to instruction in other content areas including: positive behavior interventions and support (PBIS), restorative justice (RJ) and a character development program, a district curriculum for read alouds, rotations among instructional centers, writers workshop, daily 5, Write Up A Storm™, Handwriting Without Tears®, Every Child A Reader® (ECAR) and Every Child A Writer® (ECAW), Bridges and Everyday Math® and Explorations in Science.

Collaborations to apply CREDE pedagogy thereby reduced teachers' perceptions of conflict, which in turn mediated the influence complex challenges, particularly across the spheres of obligations and needs, had on teachers. As a result, not only did teacher characterize outcomes from collaborations as doable next steps they could take action to implement immediately within their instruction, they also reflected that the pedagogical focus on CREDE during collaborations helped them put all the pieces from different instructional programs together effectively. Ms. Janedo expressed this after a collaborative session when she stated, "Thank you so much! I

couldn't figure it all out until just now. What would I do without you?! NOW it all makes sense. This changes everything!" (Field Records, 9/15/15). Ms. Grange expressed her frustration reconciling the complex challenges of multiple instructional obligations as a, "trying to figure out how to do these curriculums, and it's not working. Need to go back," describing the need to return to the CREDE collaborations that she found supportive the previous year (Field Records, 11/11/14).

Although each of the participants facilitated very different classrooms and were at different grade levels and stages of teaching, all three sought the influence of PD collaborations as opportunities engage support and explore changes to improve instruction. Each of the participants felt a sense of responsibility to their students and had a genuine desire to best support their learning needs in the classroom, while attending to multiple instructional obligations. The feeling of being overwhelmed led to teachers' experience of cognitive overload trying to attend to many different students' needs, hectic and unpredictable school schedules, multiple sometimes conflicting instructional programs and getting through curricula sufficiently for various achievement tests.

By using CREDE pedagogy to guide teachers to explore improvement for their implementation, as relevant to their students and instructional obligations, CREDE collaborations served to reduce the influence of complex challenges by reducing teachers' experience of cognitive overload related to curriculum, instructional programs, strategies and classroom needs. It is evident that applying the CREDE standards to redesign and implement classroom instruction supported teachers' sense of instructional alignment among multiple obligations that were otherwise perceived to be conflicting. Reviewing the body of data generated across the three years of participation, JPA was often a place to begin by improving

classroom management and student engagement among diverse learners within each classroom community, but also aligned with positive behavior supports, character development and restorative justice models used within the school. CTX was generally discussed as a way to support deeper understanding for all students drawing across diverse background experiences. LLD, while connected to both JPA and CTX also allowed teachers to find alignment among a vast array of cross-curricular, instructional programs, and a variety of standardized or mandated assessments. As teachers explored ideas through CREDE collaborations and found alignment among instructional programs they were able to continually improve their own instruction and found further capacity to increase the learning level of CA particularly within small group instructional centers and focus on their own style of facilitation using IC within small-group and whole-class instruction. Although CS was the least engaged and most abstract standard, which participants struggled to integrate, when each teacher saw improvement in their classroom, increase capacity to engage among their students and felt the most pressing complex challenges that influenced their classrooms were being mediated through their CREDE collaborations, attention to increasing engagement through critical stance also emerged as a doable next step for teachers.

While JPA was the standard most engaged across the project, this standard alone created opportunities to enrich LLD, CTX and CA for all students across instructional content areas. As students engaged instruction more actively, they used language to discuss and contextualize content in ways that increased the challenge and interest of instruction far beyond the level of traditional instruction where students sit silently as recipients of knowledge given by their teacher. In effect, JPA specifically to engage LLD across instruction served to support students by facilitating higher levels of engagement, language use, challenge and interest in opportunities

to learn. However, while collaborative engagement to apply CREDE for the redesign and implementation of instruction supported both teachers and learners, the SEP mediated the complex challenges of teaching all diverse learners within inclusive classrooms, but did not remove any of the complex challenges themselves. In fact, rather than Tharp's suggestion that effective influence through intentional development can be evaluated by sustained practices after influence is removed (2012), findings from this study suggest that teachers needed the support of both effective pedagogy and ongoing help to apply the pedagogy in order to continually refine their practices. Although the participants worked to sustain and improve the instructional designs focal during CREDE collaborations, teachers as learners encountered a variety of obstacles that interrupted their successful implementation of practices previously guided by the SEP, which led teachers to seek further collaborative support to enable their ongoing progress and success applying the pedagogy within classroom instructional implementation. Teacher learners demonstrated a need for continual support through their *instructional ZPDs*, just as they provided instruction to support learning within students' ZPDs.

Administrator buy-in: Not always a support! Administrator support varied across the three years. During cohort 1 there was no involvement from any school administrator. During cohort 2 the newly hired Community School administrator was interested in the CREDE work being engaged by the teachers voluntarily participating with cohort 2 and negotiated further involvement with the grant administrator for cohort 3. The school administrator met the project with great enthusiasm and provided administrative buy-in, coordinating efforts for the project with her expectation of weekly participation and alignment with other school trainings. Teachers in cohorts 1 and 2 reflected that they were pulled in many different directions with demands on their instructional and collaborative time so support from a school administrator provided an

opportunity to further align CREDE collaborative support with in-school structures.

The school administrator expressed a desire to support cohort 3 and planned for school-wide roll out over the following years, without further grant support. Without buy-in from current teachers or first-year and newly hired teachers, the school administrator structured time into the school schedule and communicated her expectations of the teachers she determined would constitute cohort 3. Albeit with the best of intentions, the school administrator required changes to CREDE project structures, which inadvertently derailed some of the success seen with the first two cohorts. Although administrator support for time to engage the project seemed to be a good idea, the administrator required weekly team meetings for structured CREDE collaborations when previous engagement had been primarily structured by participants' voluntary requests.

The school administrator eliminated the collaborative summer training in favor of an online book study, which was not available to all of the newly hired cohort 3 teachers, and left cohort 3 without consistent background knowledge of CREDE or any chance to develop collaborative rapport or positive collegial relationships through an initial collaborative training. While the school administrator's buy-in afforded approval to use in-school time needed to engage rich collaborations, it also eliminated space for teachers to voice their needs, build positive collegial relationships with collaborators, or choose to engage participation as it best suited them. As a result, negative collegial interactions and resistance were widely noted among cohort 3 and explicitly stated by study participants both during cohort 3 and during follow-up interviews. Ms. Grange and Ms. Janedo both reflected during follow-up interviews that the cohorts they had collaborated with during summer trainings continued to engage positive collaborations throughout the year, which they noted was distinctively absent during cohort 3

(Interviews, 9/21/16; 11/15/16). Although Ms. Breech had not engaged the summer training with cohort 2, she also noted how positive and inviting her collaborations had been with her cohort 2 collaborators and how disappointed she was in the distinctively negative resistance she saw among non-collaborative colleagues forced to participate during cohort 3 (Interview, 10/13/16). This suggests that ongoing engagement is related to intersubjective affinity and psychosocial propinquity, but it also suggests that teachers need support for the capacity to engage within a school with limited time, and that supporting this capacity without coercion may be more influential as support than a defined structure for engagement from an administrator or even differing stages of the teaching career (Eros, 2011; Tharp, 2012)

Conclusion

The findings from this study show that teachers are subject to complex contexts while situated within their psychosocial school contexts. Within those contexts, teachers are subject to ongoing challenges from four significant fields of influence. Just as individual teachers and classroom communities vary, so do teachers' instructional needs vary when influenced by these dynamic and complex challenges.

However, participants in this study sought active, ongoing engagement in collaborative PD that focused on improving equitable inclusive instruction through the use of effective pedagogy. Negative collegial relationships and increased influence across the four spheres of complex challenges caused teachers to limit or completely avoid engagement in some structured opportunities to for collaboration within the PD. However, when teachers felt welcomed into engagement that felt positive and respectful, relevant to their needs and responsive to their obligations and constraints, teachers felt supported by collaborations.

As a result, teachers actively sought continual engagement in a substantive process of cyclical collaborative support that served to mediate the influence of complex challenges through pedagogical exploration of ideas to improve instructional implementation that were both aligning among conflicting instructional obligations and aligned with needs in the teachers' classrooms. When the teachers felt the ideas generated during collaboration were immediately applicable within their instruction and addressed challenges the teachers saw as pressing in their classrooms, the participants were eager to both implement their ideas and observe the classroom outcomes. Whether teachers perceived the outcomes of their instructional changes as incremental or significant improvements, they demonstrated delta synchronicity by embracing change as continual improvement when they sought ongoing and long-term engagement in the collaborative PD process across multiple years. Although it is not yet clear if the structured supports and pedagogical content of this PD influenced these teachers to seek delta synchronicity with change or if these teachers' delta synchronicity influenced their active, ongoing participation, it is evident that all three teachers actively engaged the substantive process of cyclical collaborative support. It is also evident that all three teachers felt their collaborative engagement through the PD was continually sustainable over multiple years because structured engagement responded flexibly to their time constraints, pedagogical content focused on obligations and needs relevant to their instruction and provided ongoing, positive opportunities to engage PD through collaboration they found to be supportive.

An important feature of these findings is that collaborative support through this PD enabled teachers to engage an ongoing process for continual improvement, which they found to be effective and motivating. However, the collaborative support process did not eliminate or remove any of the complex challenges that changed dynamically and influenced teachers

continually. Instead, ongoing engagement through collaborative support cycles served to support teachers by applying effective pedagogy to instructional design mediate challenges across multiple spheres of influence within their complex classroom and school contexts, which, in turn enabled teachers to embrace change and transform their classroom instruction through effective and continual improvement.

Chapter 6: Discussion, Implications and Recommendations

“Every engineer who has designed a bridge did so by applying the principles of physical science to the infinitely variable local conditions of soil and stream.” (Tharp, 2012, p.85)

Teachers are the engineers of learning, responsible for designing instruction, but also for the daily construction of bridges to reach every child in their classroom, by implementing effective instruction. The complex tasks of applying their knowledge of theories, pedagogies, strategies and curricula, through their design of effective instruction, and implementing that instruction to build strong bridges that support learning for every student are infinitely variable daily responsibilities for every classroom teacher. Delta theory presupposes the infinitely variable complexities present within the local context of a school psychosocial system, so the challenges teachers experienced across four spheres of influence found within this study represent some of the contextual complexity situated within a psychosocial school system, as describe by Delta theory (Tharp, 2012).

While influence across these four spheres represent complexity within the school and PD project that were central to this study, Delta theory’s attention to infinite variability among complex contexts also suggests that these four spheres of influence may be expanded or added to in the conditional contexts of future studies. Although the findings of this study are limited by the small number of participants and cannot be broadly generalized to other contexts, the long-term, in-depth emersion within the contexts of the school while working with the participants suggests strength in the validity of these findings, which are consistent with the broad foundations of Delta theory (Butler-Kisber, 2010; Creswell, 2013; Maxwell, 2005; Richards, 2011; Tharp, 2012; Yin, 2014). In addition to the spheres of influence that proved challenging for teachers while working to design and implement effective instruction within their complex

school and classroom contexts, influence across the collaborative support cycle, which was both responsive and relevant to the needs of teacher participants, is also consistent with Delta theory (Tharp, 2012).

Collaborative Support and Social Sorting Cycles

The collaborative support cycle, which emerged from this study, including seeking engagement, processing challenges, exploring ideas and observing outcomes from implementation, which enabled teachers to seek further engagement, is an important finding from this study. However, it is also consistent with the social sorting cycle of propinquity, activity, intersubjectivity and affinity, which is an essential dynamic of relational formation within psychosocial systems (Tharp, 2012).

Propinquity and initial engagement. Propinquity, as proximal access, was essential to participants' initial engagement. For cohorts 1 and 2, participants were explicitly invited to engage, meaning they had close proximity to an agent of influence within the CREDE-PD who personally extended an invitation to engage collaborative PD activities. However, propinquity in this context equated not just to physical closeness, but also psychosocial closeness. During cohort 1, participants were invited across spatial locations based on their proximity to student teachers, closeness of their current practices with the intended CREDE SEP, and personal alignment with an interest in instructional improvement. When extended to cohort 2, physical proximity became more central to participant involvement as two members of cohort 1 specifically invited receptive colleagues with psychosocial proximity within their situated school settings to increase capacity to engage rich collaborations, which proved challenging during cohort 1 working across five schools from three districts with teachers in elementary, middle and high school contexts. During cohort 3, propinquity at the stage of seeking initial engagement

shifted dramatically and focused primarily on physical closeness among an early-elementary team. However, no attention was given to psychosocial propinquity among cohort 3 members, who were forced to participate even without aligned practices, an interest to improve or a desire to engage, when the school administrator used proximal propinquity among a team to define cohort membership. As Tharp (2012) predicted, the resulting resistance proved difficult to overcome.

Capacity to Engage Collaborative activities. Across all three cohorts, participants engaged research-based PD activities intended to facilitate collaboration and discussion among participants and PD agents (i.e., thought-partners) across the structured means of influence within the PD activities (i.e., collaboration within classrooms, cohorts, structured modules, book studies and summer trainings) to explore how the CREDE SEP could be applied to help teachers design and implement improved instruction. Within the collaborative support cycle, continual engagement included collaborative discussions to process the complex challenges that influenced teachers, and explore CREDE focused ideas to improve instructional design and implementation, which teachers then implemented and observed in their classrooms. Summer trainings, during cohorts 1 and 2 were designed to support teachers' acquisition of essential CREDE background knowledge needed to connect future learning and deepen understanding during on-going engagement across the following school year. They also served as an initial introduction to cohort and PD collaborators, with whom each participant would engage during future PD activities.

In effect, summer collaborative trainings and peripheral collaborations through online modules served to build psychosocial propinquity and subsequent capacity to engage. However, in the absence of initial activities to build capacity and psychosocial propinquity, when the book

studies were non-collaborative and did not engage all future members of the cohort unit, they failed to build the capacity and propinquity needed. In conjunction with coercion to participate, only the teachers with previous affinity and psychosocial propinquity continued to engage ongoing cycles of support through collaboration. However, active engagement among those participants remained consistent only among activities in which teachers maintained some influence over the activity structure, form or support and collaborators within their engagement. This suggests both a need to maintain structures that are responsive and relevant to the teacher participants and a need to build participants' capacity to engage by providing initial activities that support psychosocial propinquity with pedagogical content and collaborative engagement.

Intersubjectivity and perceptions of support. Intersubjectivity accounts for the social process of learning and the influence of relational development on the formation of new knowledge and repertoires of practice (Tharp, 2012). Intersubjectivity plays an essential role in the social sorting process as the development of social and relational capital influences engagement in activities, perceptions of those activities and subsequent affinity to engage further. In this study, the influence of intersubjectivity is important across three key factors, collegial peer relationships, perceptions of support from the school administrator, and perceptions of activities as supporting improved classroom outcomes.

Collegial relationships. Collegial relationships were found to have significant influence on the participants in both supportive and non-supportive ways. As members of a psychosocial unit, each of the participants valued the support they perceived through positive collegial collaborations. While each of the participants described a positive intersubjective perception of their work with their thought-partner, they had differing perceptions of colleagues and cohort members based on their positive or negative inter-collegial interactions while engaging PD

activities. When participants were invited to participate and perceived colleagues as engaging support within the PD cohort, as a cohesive unit or community participants perceived their colleagues and the activities through which they engaged to be positive and supportive, they were more likely to want to continue with the professional development opportunity. On the other hand, negative interactions and perceptions of colleagues as non-supportive or resistant to collaborative engagement influenced the participants to have similar, negative perceptions and resist interactions with those colleagues, which in turn led them to limit their engagement with their colleagues and any activity perceived to be non-supportive due to negative collegial interactions.

This supports the suggestion that initial activities are needed to build psychosocial propinquity with pedagogy and collaborators to build capacity for further engagement. Rather than forced participation, teachers need an invitation to engage in ways they perceive as supportive and scaffold further capacity to engage more actively when they develop affinity to seek further, subsequent engagement.

Administrative mandate. Although administrator buy-in can play an important role in supporting engagement among teachers, mandated participation created resistance rather than support for members of the cohort unit who felt coerced rather than invited into an opportunity.

In effect, the administrator's mandate to participate, when there had been no administrator involvement during previous years, became an additional challenge with significant negative influence on the participants who were forced to give time and attention to attend required meetings, but could not be required to engage meaningful collaborations. Coercion through force or mandate can influence membership and even attendance, but such imposed influence can result in strong resistance, which is not conducive to intersubjective

perceptions of support, affinity or psychosocial propinquity, which are needed to support participants' capacity to engage in meaningful ways through collaboration (Tharp, 2012). Engagement in activities intended to influence desired change is a minimum condition, but attendance as minimal participation does not equate to meaningful engagement, and engagement alone does not guarantee change. When engagement was coerced, participants were resentful and disengaged from collaborative activities, which precluded any opportunity for support or resulting change (Tharp, 2012).

Support and improved classroom outcomes. Whether participants perceived their cohort as a cohesive unit or not, they each shared positive intersubjective perceptions of the project as a whole. This was particularly evident reflecting on collaborative engagement they perceived to be positive and supportive of their individual improvement with resulting classroom outcomes. When participants struggled to manage the instructional obligations and needs present in their classrooms, their intersubjective perception of thought-partner collaborations were described as supportive in putting all the pieces together in their complex classroom contexts. Positive, supportive collaborations served to mediate the complex influence of multiple challenges in the classroom, which enabled teachers to reconcile perceptions of conflict between required instructional programs and allowed them to explore new ideas to improve their design and implementation of classroom instruction in an effort to be more effective for their students. Using effective pedagogy to collaboratively explore supports that were situationally relevant to each teacher's classroom context influenced a positive perception of support, and a sense of relief from the overwhelming influence of complex challenges. Participants' intersubjective perceptions of support particularly through thought-partnerships were also perceived as supporting classroom outcomes the participants saw as effective improvements.

However, the perception of classroom change, toward teachers' desired outcomes, was connected to an intersubjective perception of improvement, which was distinctively different from teachers' perception of feeling judged or needing to fix something wrong in their classroom. Instead, this suggests that intersubjective perceptions of support and improvement through desired classroom outcomes further influenced teachers' affinity to engage continual improvement through collaborative support cycles.

Affinity to seek further engagement. Affinity is a sense of liking and feeling alike with a social network. Although common, intersubjective perceptions should lead to affinity (Tharp, 2012), in this study, a common negative intersubjective perception led to a lack of affinity within cohort 3 as a psychosocial unit when resistance lead participants and other cohort members to disengage from intersubjectively negative interactions and activities. The intersubjective perception of the CREDE-PP project was not consistently negative. Particularly during cohort 3, disparate intersubjective perceptions of CREDE collaborations through thought-partnership led to a lack of cohesion among the cohort as a social unit, but participants with positive intersubjective perceptions developed further affinity with thought-partners and CREDE collaborations. While the disparate intersubjective perceptions among cohort 3 suggest an alpha state within the cohort, the study participants, who had positive intersubjective perceptions of their CREDE collaborations across the three years of the project developed a strong sense of affinity with their supportive collaborators suggesting a beta state. This strong and positive affinity, which was supported through collaborative interactions and perceptions of classroom improvement, led participants to seek further engagement. This engagement included participation in cycles of collaborative support, seeking further propinquity and activity. This is consistent with the social sorting cycle and demonstrates a delta state of synchronous change for

the participants who sought continual, active engagement, with or without the rest of their cohort. Notably, during cohort 3, the psychosocial unit with which participants felt cohesion and affinity was dyadic between the participant and their thought-partner, when the larger unit of the cohort did not produce a common intersubjective perception of support or social affinity.

Participants' intersubjective perceptions of their collaborations with members of cohorts 1 and 2, led them to feel an affinity for further engagement toward ongoing improvement with those cohort members. However, when those collaborators were no longer members of the cohort unit, participants sought engagement through similar collaborative structures and developed affinity with new collaborative units. This suggests that teachers, like schools, tend toward a beta state of operation even while serving a delta purpose (Tharp, 2012). This also suggests that affinity can be developed with a cohort of PD participants, in this case groups of three to 12 teachers, or within a dyad between a single teacher participant and a supportive collaborator such as a thought-partner, but that affinity and a sense of collective engagement in a common endeavor was important in fostering the conditions for voluntary long-term engagement in professional development.

Overall, negative intersubjective interactions and perceptions of collaborative activities led to a lack of affinity and disengagement, while positive intersubjective interactions within collaborative activities led to strong affinity and active engagement through further collaborations. It is also important to note that affinity for further engagement was ongoing which suggests not only a sense of engagement as continually sustainable, but also that participants' goals to improve was ongoing, which is consistent with the finding that collaboration did not remove or eliminate the challenging contexts that influenced teachers, but helped the teachers mediate the influence of those challenges. As those challenges varied across

years, however, affinity to engage was reinvigorated even if coordinating further engagement was a temporary challenge due to participants' lack of available time. As such, the process of accounting for the contextual complexity, which influenced participants within the school, was not limited to initial design of PD activities, but in fact required the designers of the PD to continually respond to the infinitely variable and changing complexities that influenced teachers throughout their engagement in the project. This suggests a continual process of responsive redesign may have been essential to support teachers' ongoing engagement, as they explored the continual process of instructional redesign using CREDE to support their students' engagement.

The substantive process of cyclical collaborative support proved to be effective for study participants who actively engaged, even when their collegial unit of collaborators varied. While a substantive process, which emerged from data across multiple years and multiple participants, the cycle of collaborative support aligns with cycle of social sorting within Delta theory. This supports the strength of this cycle as an important finding, which suggests a need to further investigate the cycle of collaborative support, and the significance it may hold for structured influence through collaborative PD activities and the teachers who engage PD with a desire for transformation and improvement in their classrooms.

Agents, Intentions and Goals of Influence

Alignment between the cycle of collaborative support and the cycle of social sorting strengthens the validity of the collaborative support cycle, although still a substantive theory of process, which is an important finding of this study. However, across the years of the project and cohorts of teachers there were multiple agents of influence with varied intentions and goals, which are important to understanding the complexity of effective PD within schools.

Teachers. Teachers are traditionally the subjects of influence within PD, but also hold an

essential role as the primary agents of influence within their classrooms. Throughout their engagement, participants' attention to the challenges and needs most pressing and relevant to their classrooms, served to guide collegial collaborations, particularly during thought-partnership collaborations. This means that teachers are both subjects of influence within collaborative support, but are also agents of influence who drive the collaborative unit and focus of engagement as they assert the prioritized classroom needs and obligations they want to address through iterative cycles of redesign for instructional implementation. Design theory suggests that this iterative process is ideal because it enables instructional design to be grounded in the needs of the students served by instruction, which in turn enables continual and ongoing improvement to best serve the students within each teacher's classroom. (Norman, 2013; Tharp, 2012)

While the iterative process of relevant and responsive engagement enabled teachers to influence the collaborative interactions, which were designed to influence the teachers themselves, the intentions teachers asserted focused on their desire to create improvement in their classrooms as a whole unit.

Even when participants struggled to support individual students, attention was given to improving engagement with instruction across the learning community as a whole. Although teachers drew on knowledge of each student and attended to all of their diverse needs, participants did not use deficit labels to define their students or drive the iterative cycles of collaborative support and instructional redesign. Instead, teachers attended to the specific needs they observed in their classrooms to focus the application of effective pedagogy to continually improve their instruction in response to their students' needs, whether those needs were formally labeled or not. This suggests that the overall attention within the PD, to use effective CREDE pedagogy to support teachers' improvement within their classrooms was supportive for both

teachers and their diverse students, and enabled teachers to attend to observed challenges and needs rather than defined labels of deficit assigned to any student.

In the context of this project, deficit labels had little influence, while teachers prioritized students' observed needs to drive collaboration based on the teachers' desire to support learning for all of their students. In effect, teachers were able to move beyond deficit labels and saw student segregation as a challenge when students were removed from the classroom for needed support through interventions but then missed classroom instruction. While this suggests teachers can attend to the needs of their students and work to provide effective instruction without the need to categorize or dehumanize students with deficit labels within daily classroom instruction (Bartolome, 1994; McCall & Skrtic, 2010; Skrtic, 1995, 2013; Tharp et al., 2000), collaborative interaction within the CREDE-PP were not exclusively dyadic between a participating teacher and a thought-partner.

Teachers were also both agents and subjects of influence among their collaborative unit of colleagues, which is evident among teachers who invited colleagues to collaborate or engage the PD, as well as by the intersubjective perceptions of other colleagues, which influenced teachers to actively seek or limit further engagement. However, teachers also demonstrated agency directly through their engagement by rejecting or resisting conditions that either lead to increased the complexity of challenging contexts or did not respond to the already complex and challenging contexts, which would further influence an alpha state of chaos. Conversely, teachers used their agency to seek conditions that supported a stable beta state of operation within their classrooms, while also supporting a delta state of change as improvement for their instruction and student learning.

Colleagues and peripheral participation. An absence of power imbalance can lead

colleagues to have significant influence among others within the school network or sub-unit (Tharp, 2012). In my study, it was clear that cohort colleagues played a significant role as agents of influence across the project and among their colleagues. This was most evident as the influence of intersubjective perceptions while engaging collaborative activities. While an invitation to engage collaboration led to positive interactions and intersubjective perceptions, which led to affinity within a unit of collaborators, coerced participation led to great resistance, negative interactions and perceptions and disengagement due to a lack of affinity. This means that teachers, as collegial coworkers, are both agents and subjects of influence among each other within the psychosocial school network and unit of collaborative engagement, but it also means that peripheral participation can be a significant and influential form of engagement.

This suggests that it may be important to avoid conditions that lead to strong resistance or negative intersubjective perceptions among collaborators. However, since all interactions influence intersubjective perceptions, it also suggests that an initial invitation to engage and opportunities for peripheral participation may be essential components that serve to build capacity and psychosocial alignment through supportive collegial engagement with relevant content. Although peripheral participation was incidental, it allowed voluntary participation with limited time for engagement and led to affinity for further subsequent engagement. Furthermore, when negative interactions arose, all participants limited their engagement in activities not perceived to be supportive but participants who had previously developed an affinity to engage continued to actively seeking alternative activities for collaborative engagement they perceived to be supportive. This suggests that initial engagement should extended as an invitation into an opportunity for support but should also start with limited demands on time for collaborative

engagement and serve to build essential background knowledge and affinity for collaboration as a means to build capacity for more focused and active engagement in subsequent activities.

Administrators. The school administrator was a powerful agent of influence when buy-in was given with the intention to support the final cohort and build capacity toward future school-wide roll-out of the CREDE-PP. However, the influence of the school administrator was not a single direction vector as Delta theory suggests. Instead of influencing the PD agents to influence the teacher subjects, the administrator exerted influence directly on both PD agent and the participant teachers. The administrator saw alignment among the CREDE-PP and in-school instructional programs as important and enabled the CREDE PD agent to attend in-school PD for the writing program to build psychosocial capacity to support further alignment. However, the school administrator also held a personal goal to move toward school-wide implementation of CREDE without attending to the psychosocial capacity, intersubjective perception or affinity for engagement among the teacher subjects. Although the administrator attempted to support capacity to engage by protecting teacher participants' time for collaboration, this influence was coercive and teachers' intersubjective perception was that the administrator inhibited the limited time available to them by forcing them to participate in activities for an additional programmatic requirement. While administrator support is an important component of success through PD, coercion by the administrator produced significant resistance to engagement by the subjected teachers. This proved more influential than a lack of administrator support as members of cohorts 1 and 2 generally disengaged collaborative activities after completing a year with their cohort, while members of cohort 3 limited their engagement early in the year. This resistance proved significant and was not surmounted with cohort members who lacked an intersubjective perception of alternative engagement for positive support.

In effect, the coercion of forced participation interrupted the PD structures that previously supported active engagement and intersubjective affinity, and the resistance that resulted had a significant influence on all members of the cohort including those who established intersubjective affinity through previous engagement. However, those who had developed previous affinity, were able to disengage from activities they perceived as negative and forced, while they continued to actively engage activities they perceived a positive and responsive. This is consistent with Delta theory's proposal that resistance is challenging to overcome, particularly when exhibited among coworkers (Tharp, 2012). However, this is also consistent with the idea that the most effective form of influence is self-influence as participants engaged most actively when invited into collaborative activities within which they maintained the power to influence their engagement and focus to be relevant and responsive to their classroom needs and intentions.

Intentional professional development and support providers. The PD providers were both influential agents and subjects within this project. While Delta theory posits that agents should be influenced by the subjects they engage through collaborative negotiations of the activities and forms of assistance desired by the subject teachers, PD providers are subject to influence from both the teachers and the agency of administrator influence. While the PD providers who supported cohorts 1 and 2 with collaborative activities were continually responsive and relevant to the engaged participants, the school administrator limited the agency of PD providers during cohort 3 by altering the iterative process of responsive, relevant engagement with mandated, structured expectations of participation.

When subject to mandate by the school administrator, agents of influence who provided support within the PD were limited, and the ability to appropriately respond to teachers' most

relevant needs was circumvented by required participation. During cohorts 1 and 2, collaborative activities, when and how teachers chose to engage those activities and with whom they engaged during those activities were primarily driven by the participants. During cohort 3, the PD providers offered more limited support in the thought-partner role, but no longer had the flexibility to respond as requested by teachers or to coordinate collaborative activities most relevant to the teachers, outside of the mandated participation structures. As some teachers disengaged from required activities, space was created to respond more flexibly to teachers who remained actively engaged, but this left most members of cohort 3 unsupported.

In the end, it was essential to maintain cyclical collaborative support that remained continually responsive and relevant to the challenges and needs teachers saw as most pressing in their classrooms. Active engagement through collaborative activities among study participants successfully produced positive perceptions of intersubjectivity, which furthered participants' affinity with the collaborators they engaged whether within a cohort, team or thought-partner unit, particularly as an alternative to engaging non-collaborative activities where intersubjectivity was distinctly negative and non-supportive or total disengagement. Delta theory suggests this is an example of successful influence toward Delta synchronous change with these participants and explains the lack of success with disengaged participants (Tharp, 2012).

Teachers' goals and intentions. Throughout their engagement teachers remained attentive to the challenges and needs they saw in their classrooms. Across collaborative support cycles, which were continually responsive and relevant to the participants, teachers chose to focus their attention during CREDE collaboration to support their intention to improve their classrooms for their students. Although their focus shifted as the contexts in their classrooms shifted, teachers maintained an attention to continual improvement. As teachers saw improved

classroom outcomes as a result of their collaborative engagement and implementation, teachers sought further collaboration to refine their instructional design through further iterations or refocus on a new area of need within their classrooms. However, intentions for improvement focused on the cross-categorical need to improve equitable engagement in learning opportunities for students without the need for attention to specific labels of deficit (Bartolome, 1994; McCall & Skrtic, 2010; Skrtic, 1995, 2013; Tharp et al., 2000).

The PD structures for collaborative activities that focused on the content of effective CREDE pedagogy, supported teachers with influence and assistance through their ZPD as they applied CREDE pedagogy within their instructional design and subsequent implementation. By structuring PD activities to connect new learning of CREDE to teachers' prior knowledge of instructional programs and experiences within their classrooms, collaborative activities influenced their ability to apply and implement CREDE pedagogy within instructional design. Participants who remained in classrooms after the end of the CREDE project reported continual implementation of the skills they developed during the PD, however, they did not continue collaborative support cycles or ongoing improvement, which means teachers' intentions toward improvement were supported and rewarded with intersubjective affinity, but the absence of continual influence through support and assistance, also suggests that the variable contexts of recurring challenges could interrupt teachers' previously established implementation.

Sustaining long-term goals. Supporting teachers' capacity to apply CREDE through collaborative PD activities helped teachers implement CREDE pedagogy and influenced their classrooms toward higher levels of CREDE engagement among students. The long-term ideal of a Delta Classroom, a classroom in which students form a strong psychosocial unit, engage instructional activities by collaborating and providing mutual assistance with all classroom peers,

with the support of a teacher who nurtures and guides both the students and instruction as a member of the classroom unit, remained an ideal. While features of the Delta Classroom ideal emerged among participants' classrooms, full enactment of the Delta Classroom ideal was not accomplished within the limits of this project. The project did sustain successful long-term, multi-year engagement among study participants, who continued to remain interested in CREDE with a feeling of affinity with their supportive collaborators after the influence of the PD activities ended. Teachers' affinity with their psychosocial unit of collaborators is not sufficient to sustain continual support if the psychosocial unit itself is not sustained. For example, if teachers feel affinity with a PD thought-partner, support and influence toward change will end when the PD ends and the thought-partner is no longer available to engage as part of the psychosocial unit. Similarly, if teachers feel affinity with a psychosocial unit that includes colleagues and a PD thought-partner, intentional influence may not continue among the unit after the end of the PD if the foundational knowledge needed to assist the teachers is no longer present. Finally, if teachers' affinity is felt with a psychosocial unit of collaborators among other teachers, the affinity itself may not be sustained if teachers within that unit leave the school and no longer have proximal propinquity to engage and support each other. In this sense, long-term success was sustained through ongoing, intentional influence, and successfully supported the development of new units within the school network, but membership itself was variable as teachers left classrooms or changed schools. As a result, the new units of support developed through the PD were insufficient to sustain long-term influence once the CREDE PD thought-partners, as agents of influence were no longer present to collaborate and provide support.

This suggests three important factors. First, teachers need to develop affinity among a strong psychosocial network or sub-unit of support that is broad enough to remain stable and

sustaining over time even when membership and participation fluctuate. Second, teachers need collaborative members within that network or sub-unit who can serve as influential experts with both knowledge of effective pedagogy, and skills to apply pedagogy through instructional design and implementation across the invariably complex school and classroom contexts. Third, even with affinity among a unit in which an influential agent can provide influential support, sustainable change involves an iterative and cyclical process of continual improvement, which takes time, and teachers need support across more than two or even three school years. Teachers may develop affinity within a cohesive and supportive unit, but they continue to need or desire intentional support, which may not be present within that unit when membership varies as PD ends and PD providers or other collegial collaborators leave.

The findings of this study are consistent with Delta theory. The outcomes of influence as change relied on more than the roster of participants. Successful influence required collaborative activity settings, intersubjectivity and affinity to continue engaging within participants' collaborative unit. While Delta synchronicity with change as continual improvement was evident among study participants, successful outcomes were influenced by not only by the CREDE content they explored, but also by when and how they engaged, with whom and what needs and intentions they were able to influence as the focus of their CREDE collaborative engagement in order to best serve their classrooms and students. Although the findings from this study are limited due to the small number of participants within a highly contextualize and complex school setting, the findings do give insight into the complexity of intentional influence through PD with teachers responsible for effective instruction for all students in the complex dynamic contexts of inclusive classrooms.

Implications for Collaborative Professional Development

The findings from this study have significant implications for effective, *intentional teacher development* in schools. PD activities and structures need to be teacher-driven. This means that collaborative engagement must be flexible and responsive to the complex school challenges that limit teachers' available time within school and classroom settings, which can also make it difficult for teachers to leave their classroom in the care of a student teacher or substitute. In addition to the structures of collaborative engagement PD content must be relevant, aligned and effective for the complex challenges teachers see in their classrooms, and the focus during collaborative engagement must also must teacher-driven. This enables teachers to utilize collaborative engagement within PD activity structures as a functional support to mediate the influence of overwhelming challenges by processing alignment among programs and students' needs, exploring pedagogical ideas to support their redesign of instruction and apply their improved designs within classroom implementation. However, relevant PD content and collaborative focus must support teachers with the processes of both aligning conflicting instructional requirements to support student and classroom needs, and exploring effective pedagogical redesign for instruction by producing ideas that help teachers put all the pieces together effectively in ways that are immediately doable within their instructional implementation.

The most significant implication of the findings from this study is that collaborative PD must be sustainable for teachers to engage ongoing support toward continual improvement. To influence the most significant and sustainable change, teachers must view collaborative engagement as a positive support that helps them produce improved outcomes in their classrooms, which builds affinity toward ongoing engagement and continual improvement.

However, improvement, like learning is an ongoing process, which takes both time and support. Just as teachers must support their students' learning through each individual's ZPD, if teachers are expected to design and implement new, increasingly effective teaching practices in the classroom, they, too, must be assisted through their instructional ZPD to support effective learning and subsequent implementation. But improvement, like learning, remains an ongoing and open-ended process. When learners reach a level of mastery, their learning does not end, but their ZPD moves as they become ready to further their learning in a given area or with a new focus.

Effective teachers also draw on social capital, engaging colleagues and learning from each other, as well as drawing on decisional capital as life-long learners who take pride in their work, are unafraid of making mistakes and seeking feedback, and intentionally create, rather than react to, change. As such, effective, ongoing, collaborative PD requires not just a length of duration with structured support, but also positive, intersubjective perspectives of administrator support to engage activities and collaborate collegially, while reflecting on the complex challenges and contexts that influence instructional design and implementation (Abadiano & Turner, 2004; Corcoran, 1995; Penuel et al., 2007; Tharp, 2012). This means that both school administrators and PD agents must attend to supporting the development of a strong, collaborative and sustaining psychosocial unit among participants.

While support through dyadic structures such as a teacher collaborating with a thought-partner, can be effective and influential, affinity within a dyad does not build capacity within a complex, psychosocial school without engaging other colleagues to expand the social unit engaged in learning. Findings from this study also show that support from an administrator can be well intended without resulting in effective support. In addition, while administrators are

significant agents of influence within schools, colleagues can be more influential working collaboratively in the absence of a power imbalance (Tharp, 2012). Although, colleagues can influence negative intersubjective perceptions, positive and inviting collaborations with colleagues produce affinity among collaborators to seek further engagement and continue the learning process and improve instruction. This means sustainable engagement can be supported in two significant ways. First, administrator support should not create a new challenge for teachers within the already complex school contexts, as was created by administrator mandate which forced teacher membership within a non-supportive unit, in which teachers limited their engagement due to intersubjective negative perceptions with precluded affinity or effective improvement. Instead, administrator support must increase positive intersubjective perceptions of each collaborators' capacity to engage (Tharp, 2012).

This vectored triad of influence can be understood as the administrator's ability to get a mediating agent of collaborative influence to support an engaged teacher subject, which can be understood with the simple statement, "I will make sure to have the school thought-partner coordinate time to collaborate with you," (Tharp, 2012). As such, the administrator, while primary agent of influence across a school, must also be open to influence from the teachers and mediating agents of support by seeking and responding to feedback. Administrator support, in this sense, can build positive intersubjective perceptions of affinity by ensuring teachers get relevant responsive support through collaboration. However, the administrator's support must extend to protecting teacher's time and capacity to collaborate, not through structured requirements or additional mandated meetings, but through validation that collaborative support is important and an effective use of time. Administrators can accomplish this by asking the simple question, "how can I support your capacity to engage support for continual

improvement?” and then providing the support requested by the teachers and mediating agents such as PD thought-partner, (Tharp, 2012), as shown below in figure 12.

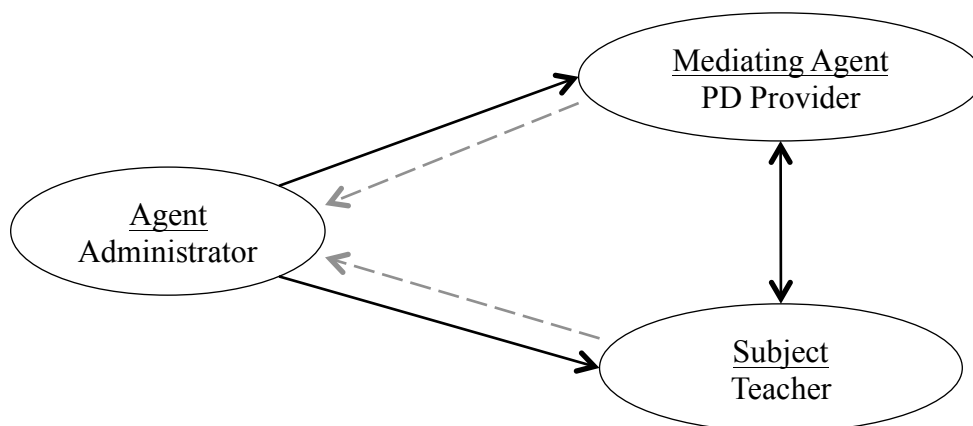


Figure 12. Administrator, PD provider and teacher with essential vectors of influence and feedback.

To be most effective, primary and mediating agents of influence (i.e., school administrators and PD collaborators) should negotiate with the teachers they intend to influence by discussing and offering the activities and forms of assistance the teachers’ value as effective supports toward desired goals for change. This also means that it may be essential for administrator and PD agents to engage teachers to co-construct a common vision of a desired goal for change and influential support. Effective influence can only be sustained when teachers engage activities that also build affinity among a psychosocial unit or network of collaborators with positive intersubjective perceptions, and produce further affinity to sustain ongoing engagement with influential support, that produces change teachers observe as classroom improvement.

There is no need to force or require engagement since a school psychosocial network can produce school-wide spread and dissemination of practices teachers perceive to be effective (Klingner, Arguelles, Hughes, & Vaughn, 2001; Penuel et al., 2012; Sun et al., 2013; Tharp,

2012). While initial training can support learning of essential knowledge needed as a foundation for continual improvement, an open invitation to attend an initial training or engage initial learning with limited time needed to engage, such as the CREDE overview module, would be effective to both increase individual capacity among teachers with common understanding of needed background knowledge, and increase intersubjective perceptions of positive support, which are the essential components of psychosocial propinquity. However, this also means that opportunities for intentional development, with a goal for sustainable change should be designed as multi-year projects that scale-up engagement. When initial opportunities are inviting and require only limited engagement they building psychosocial capacity among the unit of engaged collaborators and support more active engagement in subsequent opportunities. Then a new unit of teachers can be invited to engage initial opportunities, which builds capacity and creates opportunity for peripheral participation, which served to expand the psychosocial unit of engaged teachers within a school who can then provide mutual assistance even when some teachers leave the classroom or school.

This multi-year design creates an opportunity for invitation into initial activities as well as peripheral participation, which mutually supports both proximal propinquity with colleagues who are already engaged, and psychosocial propinquity with pedagogical content and collaborative structure. However, as teachers continue to engage more direct collaborations that are relevant and responsive, and support instructional design and implementation in ways that are appropriately contextualized to challenges and classroom needs of each teacher, it is also important to sustain intentional influence as a form of support, just as a classroom of students will learn across the school year but continues to need the support of their teacher.

While this has the potential to support teachers' ability to design and implement effective instruction, and increase equitable opportunities to engage learning for all students in diverse, inclusive classrooms (Howe, 1993; Norman, 2013; Skrtic, Sailor, & Gee, 1996; Tharp, 2012), the findings of this study also emphasize the importance of long-term, ongoing support. Although Tharp suggests that successful influence builds new psychosocial networks that are capable of sustaining new practices after intentional influence is removed, within the context of infinitely variable school contexts, psychosocial networks and units may not be stable themselves. This means that effective support needs to be provided over extended time, either through long-term PD that is sustained across multiple years, or through support internal to the school such as a thought-partner for pedagogical design, who can both build and continue to support the network of engaged teachers even as the teachers and programs within the school vary across years. Since improvement is a continual process, support for improvement must be continually provided.

Recommendations for Future Research

Although schools have a Delta purpose to continually deepen learning and understanding across time, schools tend toward a beta state of operation limited by the cycle of a single school year (Tharp, 2012). The findings of this study have significant implications for future PD and instructional support within schools. However, the findings are also limited and cannot yet be generalized broadly across varied contexts. Future research should continue to investigate and strengthen these findings across new contexts.

It is important to further investigate the potential for school-wide professional development to increase effective practices with support across multiple years. It is also important to investigate the locus of agency for support in two ways. First, we need better understandings of how school administrators can support teachers' capacity to engage intentional

influence through collaborative support without requiring rigid participation structures. Second, further investigation is needed to better understand how intentional teacher development, as supportive influence, is responsive and relevant to the contexts that influence teacher participants, can be integrated within schools over long-periods of multiple years. Since teachers sought participation and support to continue improvement after two and three years, future research should investigate, beyond three school years, how long teachers need and desire support to determine the optimal length of intentional teacher development before the exit or end of support, or if teachers continue to seek support across their instructional ZPDs, as professional lifelong learners.

If teachers continue to need and desire collaborative support with a colleague who contributes pedagogical expertise for continual redesign, effective pedagogical practices that are responsive, relevant and inclusive, may not be sustainable when intentional development providers or thought-partners exits the system or end support structures. Instead providers of long-term, effective, intentional teacher development may need to move from external, embedded to internal support structures. However, since it is important for supportive influence through collaborative thought-partners with pedagogical expertise to remain disconnected from administrative evaluation structures, it will also be important to investigate whether an effective thought-partner should be an internal staff colleague who is a member of the school psychosocial system versus an external colleague from an out-of-school provider who is embedded within the school. Since the implications suggest the need to build teachers' capacity for extended, long-term engagement over multiple years, it is also essential to investigate the process of building, growing and sustaining a unit or network of collaborative support within a school, and whether a collaborative community of teacher learners can sustain effective, inclusive instruction through

implementation of effective pedagogy when the mediating agent of pedagogical expertise is removed or if the intentional influence itself must be sustained by moving into schools' psychosocial network structures, such as hiring a previous PD provider to become an in-school thought-partner who can facilitate collaboration across the social network of teacher learners.

Future research should also examine the potential to use effective pedagogy to support instructional alignment among multiple instructional programs, while also aligned with the needs of teachers and students, which vary widely across schools and classrooms. Since this study did not have access to student-level data, it will be important to examine systematic assessment data to better understand how the process of instructional redesign and implementation using effective pedagogy that supports alignment of instructional obligations and classroom learning needs, impacts students' learning outcomes and achievement.

Finally, future research should investigate how the CREDE SEP support multilingual development. In addition to LLD and IC as standards for instruction that support development in English, it is important to investigate how multilingual learners who engage equitable instruction guided by the CREDE SEP develop and sustain multiple languages, including their native languages and English, as well as, how effective pedagogy can be implemented to support learning through multilingual instruction.

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Appendix A: Informed Consent Form

Investigating the Experience of Teachers Seeking Professional Development Opportunities.

Principle Investigator (PI): Anne O. Davidson

Why am I being invited to take part in this study?

You are invited to participate because you are one of few teachers who actively sought an opportunity to participate in a professional development project that provided ongoing collaboration and thought-partnership with Anne O. Davidson (PI) as an instructional coach.

Why is this research being done?

This opportunity to explore the perceptions and motivations of teachers who seek professional development will shed light on the experiences of in-service teachers. The goal of this investigation is to better understand the contexts in which teachers not only attend professional development, but seek opportunities they are motivated to engage over the extended period of time of one school year, or more, within diverse schools and classrooms.

How much time and how many people will be involved in this study?

Up to twelve teachers may be invited to participate during this one year investigation to gather perspectives from teachers across a variety of contexts. Each teacher who agrees to participate will be asked to coordinate with the PI to complete two interviews (up to 90 minutes each) and a member check (up to 60 minutes) to review and confirm that any analysis is consistent with your perspective.

What happens if I agree to participate?

If you agree to participate you will be asked to schedule two interviews, as they are most convenient for you. The first interview will be guided by a set of reflective questions, which will be asked of all participants. The second interview will focus on follow-up questions that emerge from the first interview in conjunction with field records collected by the PI during your participation in the PD project (CSR-CO or eCALLMS/CREDE). You will then have the opportunity to review the findings from your interviews during a member check, to ensure your perspectives are accurately portrayed in the final analysis.

Each interview will be audio recorded and analyzed in conjunction with notes taken during the interview, in order to preserve the integrity of your perspective. Although this study will focus on the experiences and perceptions that motivated your participation, the scope of the study does not include evaluating the effectiveness of the original, grant funded PD in which you participated (CSR-CS or eCALLMS/CREDE). The intention is to collect valuable perspectives on teachers' motivation to engage ongoing opportunities. To ensure each participant is comfortable contributing perspectives from your personal experience, all interviews will be conducted with the PI, whom you previously collaborated with as a thought-partner coach during the original PD. In addition, scheduling and locations of interviews will be determined by each participant's preference and availability. Final member checks can be conducted in-person or digitally, as you prefer.

What else do I need to know?

If you agree to take part in this research study, the PI will pay any costs associated with your chosen location of participation, such as coffee at a convenient coffee shop. After completing both reflective and follow-up interviews, you will be asked to verify the PI's findings during a member check to assure your perspectives have been accurately interpreted and portrayed. This

is expected to take no more than 60 minutes and can be completed at the location of your choosing or on-line. At that time, if you are interested in any subsequent manuscripts, you will have the opportunity to request a copy to be shared with you when prepared for publication.

Will being in this study help me any way?

Potential benefits from this study may include improvements in the field of teacher education and professional development. Insight from this study will be relevant for teacher educators, professional development providers and administrators who plan, design and facilitate opportunities for in-service teachers' professional development.

What happens to information collected for this research?

All information collected through this study will be kept secure and de-identified. All of your personal information will be kept confidential and your identity will be protected. All audio recordings and text transcripts of interviews will remain password protected, and notes will be locked in a secure location. Sole access to secure records will be maintained by the PI for future analysis. In the event a participant elects to withdraw from the study, the participant will be given the opportunity request their prior contributions be included, excluded or destroyed.

What should I know about deciding to participate in this research study?

Whether you participate or not is up to you. If you choose not to participate, your decision will not be held against you. If you agree to participate and later change your mind, you can withdraw from the study at any time. If you choose to withdraw at any time, you may be asked if you are willing to share any context influencing your withdrawal, if the PI can offer support, or if you are comfortable with previously collected data being used for the study. If you have any questions, Anne O. Davidson will explain this research study further and answer any questions.

Who can I talk to?

This research has been reviewed and approved by an Institutional Review Board ("IRB"). If you have questions, concerns, or complaints, please contact the researcher, Anne O. Davidson at (303) 588-9906 or anne.davidson@colorado.edu. If you have any questions, concerns or input that Anne cannot address for you, you may contact the IRB at (303) 735-3702 or irbadmin@colorado.edu

Documentation of Informed Consent: I have been informed about this research project and document my permission to participate by signing below.

Signature of subject

Date

Printed name of subject

Appendix B: Initial Reflective Interview Protocol
(IRB# 16-0368 v.1 Approved 6/14/2016)

General Experience: How long have you been teaching?

- 1) How did you hear about the opportunity to participate in ongoing professional development using the CREDE model and why did you choose to participate?

Possible probing question: Did you have any previous training or background knowledge in CREDE before starting this project?

- 2) Can you briefly describe how you engaged the opportunities for summer training, thought-partner collaboration with a coach and collaboration with your peers, during your 2 years of participation?
- 3) What motivated your ongoing participation across the school year and beyond?
- 4) What had the most impact or provided the most support for your classroom?
- 5) What, if anything, did you learn through your participation, that you have continued to implement or utilize in your practice?
- 6) What changes have you noticed in your practice, engagement, classroom culture or beyond?

Possible probing question: In what ways, during or since your participation, have you engaged colleagues around the principles and practices you learned?

- 7) In your experience, what challenges limit your participation with professional development opportunities?

Possible probing question: Where there any other PD opportunities have you chose or were asked to implement during that time or since?

- 8) How did participating in the collaborative PD influence your ability to implement new practices or build connections among CREDE principles and other structures, approaches or initiatives relevant to your classroom?

Possible probing question: Did you utilize Writer's Workshop, Expeditionary Learning, Write Up A Storm®, Restorative Justice, Daily 5...?

Closing: Is there anything else you would like to share?

Appendix C: Follow Up Interview Semi-Structured Protocol

Follow Up Interview Questions: For these questions, please focusing solely on your participation and the impacts on your classroom instruction and your students.

While looking at the work we've done to support your classroom, you've mentioned _____ as challenges you wanted to address through our PD collaborations. What structures supported you with these challenges? How did it help you with these challenges?

eCALLMS Structures to Support CREDE Instruction:

Summer: CREDE Background Training

- Institute- whole cohort, in person
- Book Study- online

Instructional Thought Partner (Coaching):

- Pre-Observation Briefing/Instructional Goal
- Observation Documentation or Video
- Teaching Collaborations during Instruction
- Post-Observation Debriefing/Idea Discussions

Peer Collaborations:

- At Will or As Desired (Teams or Modules)
- Pre-Set Saturdays
- Classroom Lab Visits
- Video Sharing
- Weekly Leveled Teams (Meetings or Modules)
- Peer Mentors

You previously described CREDE as a _____ that was effective for _____.
How has CREDE supported you in these areas?

CREDE Standards:

JPA- Joint Productive Activity

LLD- Language and Literacy Development

CTX- Contextualizing for Students

CT- Challenging Higher Thinking

IC- Instructional Conversations & Questions

CS- Critical Stance to Challenge Norms

Other PD or Instructional Structures:

- Writers Workshop
- Daily 5
- ECAR/ECAW
- Math
- Centers or Small Group Work
- Kaagan Cooperative Learning
- Restorative Justice
- Expeditionary Learning
- Write Up A Storm

What do you think about the following perspectives that have been emerging from the records of our work?

- _____
- _____

You have mentioned how your teaching has been more responsive to students who are _____. What has supported your ability to better respond to these needs? How have you seen these students benefit? Have you been able to support or see benefits for any other students?

Student & Family Groups:

- Culturally Diverse
- Bilingual or Linguistically Diverse
- Low Socio-Economic Status
- "At-Risk"
- Challenging Behaviors
- Special Education or Diverse Abilities
- High Performing or Gifted

Have you engaged any colleagues around CREDE beyond your formal participation in the CREDE-PP cohort? If so, who, why and how?

Appendix D: Deductive Coding Frames and Inductive Coded Themes

CREDE Deductive Codes

Standards

- Joint Productive Activity (JPA)
- Language and Literacy Development (LLD)
- Contextualization (CTX)
- Challenging Activities (CA)
- Instructional Conversations (IC)
- Critical Stance (CS)

Structures

- Summer Trainings (In-Person or Book Study)
- Out-of-School Sessions- Saturday/Virtual/Module (Cohort or Teams)
- In-School with Peers
- Thought-Partnering
- Coaching V Thought-Partnering

Connections (CREDE to support other structures)

Extended Time

Breakdown

Delta Theory Deductive Codes

Phase of Dynamic State

- Alpha- Responding to Chaos
- Beta- Maintaining Stability
- Delta- Seeking Change

Influence

- Agency-Source of Influence within T Network
- Means of Influence- Content/Structure/Interaction
- Subjective Result- Attitudes, Perceptions, Engagement & Implementation

Inductive Codes

Teaching Contexts

- Struggle (Difficult/Hard/Problematic/Burden)
- Ease (Helps/Easy/Makes it work/Responsive)
- Desire (Want/Request/Aspire)
- Student Needs
 - Class
 - Groups
 - Students
 - Specific Needs (Learning Levels, Behaviors, Languages)
- Required Constraints
 - Tests
 - Programs
 - Curricula
 - Trainings (Non-CREDE)
 - Schedules (School, Team or Classroom)

- Lack of Time (Plan Instruction, Collaborate)
 - Crazy Changes (Tests, Drills, Events, School/Teaching Structures)
- Implementation (Plan & Do)
- Professionalism
 - Positive- Respect/Gratitude/Appreciation/Praise
 - Negative- Disrespect/Frustration/Anger
 - Collaborators-
 - Peers (Team/Cohort),
 - Thought-Partners,
 - Others
 - Administration (School, Grant, District/State/Beyond)
- Personal
 - Self
 - Money
 - Family/Others