Teacher Learning in Preschool to Third Grade (P-3) Alignment:

How a P-12 School District Supports Teacher Learning of a P-3 Approach

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A dissertation

submitted in partial fulfillment of the

requirement for the degree of

Doctor of Philosophy

University of Washington

2023

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College of Education

University of Washington

Abstract

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Districts across the country are using Preschool to Third Grade (P-3) approaches to address long-standing barriers to achieving positive outcomes for young children, for example by helping increase children's readiness for elementary school. P-3 approaches are promising for realizing these results because they demand investments in the systems supporting young children from birth to age eight and call for high quality, developmentally appropriate, and academically rigorous care and education. P-3 approaches also present significant challenges for the individuals and organizations responsible for their implementation, particularly the teachers working directly with young children in classrooms. Existing research has shown both the promise and challenge of P-3 but little on how to support teacher success during implementation. Using Sociocultural Learning Theory, this study involved an in-depth investigation into the efforts of one district that aimed to provide significant support to teachers in making the shifts that P-3 approaches demand. This study used a qualitative case study design to explore how one

P-12 school district supported teacher leaders' learning of P-3 through a targeted professional learning program. Findings show that coaches who were directly supporting teacher leaders did appropriate and use the kinds of teaching-and-learning moves that support teachers shifting their practice in service of a new approach to instruction. While district leaders supported early learning generally and invested in improving the quality of teaching, coaches working with teacher leaders did not yet appear to see their job as helping build or create P-3 practice. This study contributes to–and expands upon–existing empirical literature showing how Sociocultural Learning Theory informs understanding of professional learning in P-3 settings and support for coaches working directly with teachers. This study suggests districts and stakeholders who aim to create more coherence across the P-3 continuum need to demonstrate a clear, concrete vision for teachers' practice specific to alignment across grade levels and utilize joint professional learning spaces to overcome the barriers between early learning and early elementary grades.

Acknowledgments

So many people have made this work possible that I can only begin to express my appreciation and gratitude. First, the two professors who served as my advisors over the course of my time at the University of Washington: Kristie Kauerz whose work on P-3 is really the reason I am here today at all, and Meredith Honig for taking me finally over the finish line and becoming my committee chair as Kristie left for Denver and I entered the personally exciting but also exhausting second half of my dissertation journey which included data collection and writing, a move to Tacoma, the purchase of my first house, marriage, the birth of my two kids, and a transition to full time work. I want to extend my appreciation my committee as well for providing incredible support over what has now been nearly a decade of work: Sylvia Bagley, Kathleen Meeker and Heather Hill, along with past committee members: Gail Joseph and Nancy Hertzog. The College of Education as a whole has been a source of comfort, warmth, collegiality, and friendship since 2014 and I am ever grateful for the continuous support I received from Marty Howell and Paula Wetterhahn.

This entire dissertation would not have happened without the generous participation of "Vista Public Schools", and I am particularly grateful to each and every member of that community for the time spent with me in data collection and the work they do all day every day in service of young children.

The friendship and feedback I've received from those I met as a student at UW has been invaluable. I found thought partners, writing group members, editors, and cherished companions over the last nine years, in particular Alison Fox, Hannah Nieman, Emily Donaldson Walsh, Ada Onyewuenyi, Caitlin Wubbena, Saejin Kwak, Stephanie Forman, Lisa Sibbett, Jenni Conrad and Adam Bell.

My colleagues at the Washington State Department of Children Youth and Families have provided constant, unwavering support to my studies as I transitioned into full time work while also diving back into school and raising two young children.

A whole community of friends and family have supported me physically, emotionally, and spiritually through the ups and downs of the last four years in particular as life changed so much: Max Kuhl, Sophie Griscom, Cynthia Ewry, Nicole Peoples, Kyle Frankiwich, Phoebe Halsey, Kylie Manson Gettleman, Ryan Grant, Kailyn Wentz, Christina Cadenhead, Lisa Humes-Shulz.

Lastly, to my family in Tacoma. My grandmother Lois who believes everything I have ever done is perfect. My husband Jacob who has loved and supported me without fail every step of the way. My daughters, Lucia and Isabel, who will finally get to know a mom who is not a graduate student. And finally, to my mom Elizabeth who supports me and my work beyond what seems possible: for the editing, the meals, the errands, the favors, the hours and hours and hours of childcare for Izzy and Lucia, and for reading every academic sentence I have ever written – I love you.

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Chapter 1: Introduction and Review of Prior Literature

Over the past several decades, districts across the country have launched what some call "P-3 approaches" to improve the quality and alignment of learning for children from pre-school age, sometimes starting at birth, through third grade or age eight. P-3 approaches are not single policies, initiatives, or programs but a philosophy of care and education that draws on strengths from both Early Care and Education (ECE) and K-12. P-3 approaches are promising to address long-standing barriers to achieving positive outcomes for young children- such as improving school readiness for children --because they demand investments in an age range (birth to age eight) that is critical to social, emotional and academic development for young children at a time when essential, foundational skills are built (such as mathematics and literacy) that help determine success for an entire school trajectory and beyond (Bronfenbrenner, 1989; Copple & Bredekamp, 2009; Dodge, Bai, Ladd, & Mishkin, 2016; Kagan & Kauerz, 2012; National P-3 Center, 2021). P-3 approaches call for increased quality, and expansion, of care and education for young children. Increased access to consistent, play-based, developmentally appropriate, and academically rigorous care and education for young children that is scaffolded from year to year and is rooted in standards-based instruction improves the overall learning and environment for very young children (Kauerz, 2020; Institute of Medicine, 2015). In supporting high quality experiences across the whole continuum from birth through third grade, P-3 approaches also entail expanded access to early learning, therefore increasing the number of children who can access systems of support, care, and education (Kauerz, 2020).

P-3 approaches, however, also present significant challenges for the teachers ultimately charged with their implementation (Kagan & Kauerz, 2012; Reynolds, Magnuson, & Ou, 2010; Ritchie & Gutmann, 2014; Traylor, 2012). ECE and K-12 are two systems historically isolated

from each other; when aligning these systems to support cohesive learning for children, tensions are likely to surface among workforces with traditionally differing perspectives on teaching and learning who also operate in different systems of credentialing, instruction, and regulation (Brown, 2009a; Institute of Medicine, 2015; Kagan & Kauerz, 2012; McCabe & Sipple, 2011). Additionally, P-3 approaches call for fundamental shifts in teachers' practices which are inherently challenging to realize. These fundamental shifts in practice beg the question: how are teachers managing these challenges to realize the promise of P-3 approaches?

To date, extant research has shown both the promise and challenge of P-3 initiatives but little about how to support teacher success during implementation. This dissertation addresses that gap in knowledge with an in-depth investigation into the efforts of one district that aimed to provide significant support to teachers in making the shifts that P-3 approaches demand. I found my study site, the Vista School District, was building some key support for teachers in ways consistent with other research on teacher learning. Teacher leaders and coaches demonstrated teaching-and-learning moves within a community of practice approach to learning consistent with theories of sociocultural learning. Furthermore, I found there were conditions in place that supported the district in creating and maintaining a teaching-and-learning approach, along with relatively high levels of appropriation of teaching-and-learning moves among coaches. The district did not, however, focus their community of learning on P-3-specific learning; there was little intentional learning across age and grade levels, focus on instruction that carried across the P-3 continuum, or work in cross-grade teams.

For researchers, this study demonstrates the utility of sociocultural learning theories to examine teacher engagement with, and appropriation of, P-3 practices and highlights the important role of specific support staff: coaches charged with helping teachers improve their

instruction. For practitioners this study highlights a variety of considerations, including the critical role that district leadership and teacher support staff play in setting a vision for P-3 and supporting (or limiting) the execution of that vision. This study also shows how teacher coaches build learning in communities of learners and how they too can build or limit understanding of P-3. By exploring how teachers are supported to meaningfully engage in a P-3 approach, and with what results, this study will help policymakers and stakeholders to understand how to better integrate explicit P-3 characteristics into professional learning for teachers. These characteristics include, but are not limited to, engaging teachers in common teaching practices across grade levels, understanding and being able to support learning standards for children across the P-3 continuum, and building professional relationships with teachers beyond their own grade level.

In the remainder of this chapter, I use existing research to describe what a P-3 approach is and how these approaches require shifts in teachers' practices, showing how districts can support teacher learning through investments in professional learning, specifically communities of practice. In chapter two I present my conceptual framework based in sociocultural learning theory's ideas about communities of practice. Chapter three details my qualitative case study methodology and describes how I looked for a community of practice in a P-3 context. In chapters four and five, I present my findings, which show that my selected district was in fact on a trajectory to support teacher learning to change their practice, though the learning was generally disconnected from core components of P-3. Individuals within the community of practice, both coaches and the central office that supported these coaches, were impacted by both their individual characteristics and their social context, conditions that highlight high appropriation of teaching-and-learning moves and a disconnection with P-3 as a named approach. In chapter six, I share implications for research and practice.

P-3 – A New Approach to Early Learning

P-3 approaches aim to align and improve critical components of care and education for young children, including learning environments, teaching (pedagogy and curriculum), administration, learning pathways, data sharing, organizational involvement, and family engagement (Kagan & Kauerz, 2012; Kauerz & Coffman, 2019; Ritchie & Gutmann, 2014; Takanishi, 2010). Coherent alignment should be vertical (from Preschool to Kindergarten to First Grade to Second grade, etc.) and horizontal (from classroom to classroom within Preschool, Kindergarten, First Grade, Second Grade, etc.) and include intentional efforts to strengthen the quality of care and education within an entire system for children from birth to age eight (Kauerz, 2010; McCormick, Mattera & Hsue, 2019).

The National P-3 Center, based out of the University of Colorado Denver (Kauerz & Coffman, 2019) specifies:

> "P-3" is the term used to define approaches that are intentionally designed to align children's learning experiences before formal school entry (Pre-school) with those in the primary grades of elementary school (K-3). The vision for P-3 approaches is to improve the quality and coherence of children's learning opportunities, from the experiences children have before they enter the K-12 system and extending through elementary school. Ultimately, comprehensive P-3 approaches hold the potential to improve child outcomes and to prevent or close achievement gaps (p. 2).

Researchers and advocates posit that such approaches are promising for improving outcomes for children from birth to age eight, addressing persistent challenges such as skill "fade out," when the skills children gain in PreK are not sustained through early elementary school (Cohen-Vogel, Sadler & Merrill, 2018; Institute of Medicine, 2015; Kauerz, 2006; Traylor, 2012) resulting in

lower achievement for young children in the early elementary grades (Abenavoli, R. J., 2019; Burchinal, M., Foster, T., Garber, K., Cohen-Vogel, L., Bratsch-Hines, M., & Peisner-Feinberg, E., 2022). Hamre & Pianta (2007) for example found in their qualitative case study that even children who did have access to high-quality teachers (measured by their interactions with their students, instructional content, and the classroom environment) often only had those particularly high-quality teachers for one year; one year of high-quality instruction followed by subsequent years of low-quality instruction led to some erasure of skills learned. P-3 addresses fade-out with intentional, focused efforts on consistently high-quality care and education across the P-3 continuum that is consistent year after year with high-quality teachers, therefore remedying single-years of high quality followed by years of low-quality instruction. Professional learning at scale – raising the quality and skill of all teachers – is a key mechanism to improving instruction across the P-3 continuum (Burchinal et al., 2022).

P-3 approaches have philosophical and empirical roots in research on the long-term, positive impact of high-quality early care and education. Research on early care and education and family support programs from the 1960s and 70s, such as Abecedarian in North Carolina (Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002) and the Chicago Child Parent Centers (Reynolds, Temple, Robertson, & Mann, 2002), showed that high-quality early learning experiences had benefits for young children and their communities well into adulthood. In the early to mid 2000s, P-3 approaches were promoted by organizations, think tanks, and policy networks including the Foundation for Child Development as part of a commitment to, and expansion of, high quality early learning (Foundation for Child Development, 2021). The Foundation for Child Development suggested that a “PK-3 strategy” should entail practices and policies such as expanding access to high quality PreK for three- and four-year-olds, universal

full day kindergarten, and developmentally appropriate standards and curricula across PreK through third grade.

Professional Learning in P-3

While P-3 approaches ultimately aim to improve outcomes for young children, adults are essential to realizing those outcomes. As the National P-3 Center (2021) explains, P-3 approaches place an "intentional focus on the changes that need to occur in adult capabilities…before meaningful child outcomes will be realized." Teachers are critical to the success of P-3 approaches since they work daily, intimately, and consistently with young children. These teachers, however, do not work in a vacuum and their success as key stakeholders of P-3 approaches depends on the systems that support them. Traylor (2012), for example, explains "it is impossible for teachers to work toward a goal [P-3 implementation] if there are varied perspectives on what the goal is, or if the organizational structure within which they work does not facilitate their joint problem solving and practice" (p. 49). To support teachers (and teacher learning), P-3 approaches therefore demand critical infrastructure be in place to nurture and facilitate this "joint problems solving and practice."

The National P-3 Center Framework (Kauerz & Coffman, 2019) outlines some of the critical steps needed to meet the needs of teachers implementing P-3 approaches. While similar in many aspects to general efforts of teacher learning and support, there are nonetheless some distinct qualities that set P-3-specific learning apart from other professional development since it ultimately demands alignment of complex systems (Kauerz & Coffman, 2019). Per the National P-3 Center Framework, there are three overarching strategies that support P-3 teachers' effectiveness: 1) focus on instruction, 2) make practice visible, and 3) work as teams.

Focus on Instruction. P-3 teacher learning requires an explicit focus on high-quality instruction. High quality instruction includes both the interactions of teachers with young children and the environment in which they operate. Districts placing a focus on instruction provide common professional learning to teachers across the whole P-3 continuum including school-based PreK, community-based childcare (e.g., providers whose children will feed into the same school district), Head Start, Kindergarten through Third Grade, classroom paraprofessionals, after school and extended learning providers, *and* instructional coaches. Critically, these teachers and support staff come together in simultaneous, joint professional learning. They "participate in regular professional learning communities with other teachers at their age/grade level (horizontal) [and] participate in regular professional learning communities with teachers in other age/grade levels (vertical)" (Kauerz & Coffman, 2019, p. 10). Beyond time in individual grade levels (e.g., groups of only kindergarten teachers or only first grade teachers), teachers would therefore have opportunities to understand developmental trajectories, including skill development, such as how content learned in one grade informs learning in future grades, directly from peers across the entire P-3 continuum. In this structure of professional learning, teachers gain concrete familiarity, and some emerging expertise, with grade-level standards and instructional practices both before and after the grade they teach.

Visible Practice. Teachers' P-3 learning also requires teachers' openly share their practice with their peers to ensure transparent instructional practices that is accessible to visitors to the classroom. In making practice visible, teachers utilize peer classroom observations to model effective instruction and both support and create effective, developmentally, and culturally appropriate learning environments. These observations occur regularly in both vertical and horizontal grade levels (e.g., teachers observe their colleagues in their same grade level as

well as colleagues in grades both above and below their own) and are explicitly linked to teacher professional learning. For example, teachers conducting peer observations would not be looking for general practices but would be looking for specific "noticings" such as peers' use of particular instructional techniques, applications of standards, or changes in the environment. Teachers engaging in peer observations would then be able to "demonstrate knowledge of instructional practices across the full P-3 continuum, not just the age/grade-level for which they are responsible" (Kauerz & Coffman, 2019, p. 14).

Work as Teams. Teachers' P-3 learning is also enhanced when they work in teams within and across grade levels to share data, discuss instruction and practice and establish shared priorities. Through work as teams, teachers develop meaningful understanding of key components of P-3 as an approach, with ample time to authentically engage with P-3 as a "policy" that impacts their practice directly. Teachers working as teams, "engage in vertical (across age/grade levels) teams to establish shared priorities, language, instructional practices, and understanding of children's strengths and needs" (Kauerz & Coffman, 2019, p. 22) and therefore "demonstrate shared language and understanding of P-3" (Kauerz & Coffman, 2019, p. 6).

Since the National P-3 Center framework is clear that teacher learning of P-3 is critical to P-3 implementation (Kauerz & Coffman, 2019), I therefore wanted to know: What do we know from *empirical research* about how teachers learn to shift their practice in the ways that P-3 efforts demand?

Review of Prior Literature

To address that question, I conducted an extensive review of prior literature by searching for both empirical and conceptual research on the role of teachers and teacher learning in P-3

approaches. I sought to answer: 1) What does existing research say about how teachers in ECE and K-3 understand their existing roles? 2) What specific challenges do these teachers face when asked to examine or shift existing roles to meet the demands of P-3 implementation? 3) What conditions or strategies exist to address these challenges? I used search terms including: "P-3", "PreK-3," "PK3" "Preschool to Third Grade" and "Birth to Age Eight." That search yielded 23 journal articles including ten empirical studies. I also included reports that describe P-3 approaches in specific locations such as Union City, New Jersey (Kirp, 2013), North Carolina (Ritchie & Gutmann, 2014), and Montgomery County, Maryland (Marietta, 2010a). I included reports on content, policy, and programs across P-3 from the Foundation for Child Development specifically because of their history and involvement in developing P-3 approaches nationally (e.g., Jacobson, 2010; Marietta, 2010a; 2010b; Mead, 2010). I included several more recent summary reviews and white papers of P-3 approaches that were not peer reviewed but provided clear accounts of P-3 program implementation (Coburn, C., McMahon, K., Borsato, G., Stein, A., Jou, N., Chong, S., … & Stipek, D., 2018; Whyte, McMahon, Coburn, Stein & Jou, 2016). Lastly, I reviewed the P-3 framework and accompanying resources at the National P-3 Center website (National P-3 Center, 2021).

Teachers in P-3

While no studies I found looked exclusively at teachers, nor centered teachers as a main or central focus, a subset of studies on P-3 approaches did address what shifts teachers make in their practice during implementation and what conditions help them make those shifts. The practices including embedding more standards-based instruction in preschool and more developmentally appropriate practice into elementary grades. In these studies, I found two key and related challenges impacting teachers engaged in P-3 approaches. First, P-3 as a concept

suggests a merging of two systems creating a practice that is distinct from either ECE or K-12. Since teachers in these two systems historically tend to have divergent understandings of both their own systems and what alignment between their systems should entail, this attempted merging of systems impacts teachers' respective understanding of what it means to prepare children for school and how classroom learning becomes developmentally appropriate beyond just preschool. Second, teachers across P-3 have little to no instruction in alignment of any kind, which can lead to poor continuity of skill development from year to year. Both of these – the bridging of two systems and operationalizing alignment for teachers' practices – will be addressed next.

A consensus from the P-3 literature is that P-3 is not an extension of ECE or K-12 but a merging of the best of both systems, demanding a fundamental shift for teachers in how they approach their roles and their instruction from discrete age/grade ranges to becoming part of a continuum of learning (Kagan & Kauerz, 2012; Reynolds et al., 2010; Ritchie & Gutmann, 2014; Takanishi, 2010). Becoming part of a continuum requires distinct shifts for each group of teachers, for example, preschool teachers are asked to shift towards standards-based instruction while teachers in early elementary grades shift towards developmentally appropriate practice.

Teachers in Early Childhood: Shifting Toward Standards. Teachers in ECE tend to subscribe to philosophies of Developmentally Appropriate Practice (DAP) (Copple & Bredekamp, 2009) and focus their instruction on "play, choice, and collaboration" for young children (Ritchie, Phillips, & Garrett, 2016, p. 9). While DAP is neither universally accepted nor universally applied across ECE, it is nonetheless a longstanding model for many in the field of what ECE should be (Fowler, 2019; McCormick et al., 2019). For teachers in ECE, shifts initiated through a P-3 approach are often perceived as a push down of standards and

accountability from K-12 into their classrooms (Bagnato & Ho, 2006; Bassok, Latham, & Rorem, 2016; Brown, 2009a; Kagan & Scott Little, 2004; Stipek, 2006; Stipek, 2004). Preschool teachers' subsequent shifts in their practice therefore include steps such using early learning standards to guide lesson planning, curriculum selection and development, and their interactions with young children (Bagnato & Ho, 2006).

Teachers in Early Elementary: Shifting Toward Play. Teachers in K-3 tend to be guided by more formalized standards, curricula, and assessment than those in ECE and are required to go through significantly different processes for training, education, and certification than their early learning colleagues (Abry et al., 2014; Institute of Medicine, 2015). Elementary teachers therefore are more likely than preschool teachers to emphasize academic outcomes for their students. For example, Abry et al. (2014) found that K-3 teachers tend to place higher value on academic skills and competencies over interpersonal abilities. For K-3 teachers the changes of practice for a P-3 approach may be seen as a push up of DAP from ECE into elementary schools, adding to their instruction or learning environment, for example adding a dramatic play area to an early elementary classroom or using play- and project-based learning in lesson planning (Traylor, 2012; U.S. Department of Education, 2016a).

Irrespective of their philosophical backgrounds, the vast majority of teachers in both ECE and early elementary school typically have little to no instruction in how to coordinate their practice in conjunction with the grades above and below their own (Fowler, 2019; Garrity, Bridi, Kotas & Gianzero, 2021). A lack of guidance on coordination and alignment leads to both distinct and shared challenges for teachers implementing P-3 approaches in both ECE and K-3 (Institute of Medicine, 2015). For example, current scholarship shows teachers' understandings of what children need to be ready for formal schooling, and what it takes for them to be

"successful" when they get there, often depends on the specific grade level where they teach (Abry, Latham, Bassok, & LoCasale-Crouch, 2015; Lara-Cinisomo, 2008). Abry et al. (2014) highlight in their study on prekindergarten and kindergarten teachers' belief systems that teachers' different perspectives on school readiness and school success stem in part from their differing backgrounds and training, including prekindergarten focusing on nurturing social emotional well-being and elementary focusing on academic skills in preparation for eventual testing.

Regardless of the specific grade level of instruction, studies show that educators lack training, preparation, and support across the P-3 continuum, serving as major contributing factors to learning loss and stagnation for young children (Hamre & Pianta, 2007; Fowler, 2019; McCormick et al, 2019). Conversely, this scholarship shows that districts working directly to support teacher learning build critical content knowledge about P-3 (National P-3 Center, 2021; U.S. Department of Education, 2016b). The U.S. Department of Education (2016b) P-3 case studies, for example, showed how increased knowledge about students, and the context of their learning on a continuum, supported teachers to scaffold and differentiate instruction that aligned with efforts to change outcomes for children.

Strategies to Support Teachers' Implementation of P-3 Approaches

Despite significant philosophical and logistical challenges of P-3 approaches, districts are nonetheless engaged in implementation and are in fact showing some strategies to address these challenges and support teachers through the challenge of implementation. P-3 case studies, reports, and two extensive empirical studies from the U.S. Department of Education outline three broad strategies districts are using to support teachers in addressing the main challenges facing teachers implementing P-3 approaches.

Those strategies focus on teacher learning to make the fundamental practice shifts demanded in a P-3 approach include 1) administrative leadership supporting teacher learning, 2) organizing school district central offices to support teacher learning of P-3, and 3) distinct teacher learning approaches (Coburn et al., 2018; Jacobson, 2010; Kirp, 2013; Marietta, 2010a; 2010b; Mead, 2010; Ritchie & Gutmann, 2014; U.S. Department of Education, 2016a; 2016b; Whyte, McMahon, Coburn, Stein & Jou, 2016). While districts of course employ these strategies for a wide range of goals beyond P-3 approaches, in a P-3 context these strategies serve as conditions building upon each other to support full implementation of P-3. District leaders, for example, may initiate the creation of central office organizational structures that serve to streamline and enhance opportunities for teacher learning of P-3 (McCormick, Mattera & Hsue, 2019). Districts with strong administrative leadership and coherent central office organization are therefore poised to support professional learning that is distinctly P-3 in orientation, aligning with the characteristics of the National P-3 Center framework, that is unique from districts not employing these strategies but still attempting P-3 implementation.

Leadership Supporting Teacher Learning. P-3 literature suggests that particular supports from school district central office administrators and school principals have a strong impact on teachers' engagement in P-3 implementation (U.S. Department of Education, 2016b). Such supports include leaders providing a vision for P-3 that helps teachers understand the value and importance of P-3—and the connection of P-3 to their own existing practice, modeling, and valuing P-3 practices, and supporting PreK directors, elementary principals, and other school-level leaders in helping teachers engage in new instructional practices consistent with a P-3 approach. This district leadership is rooted in alignment across early learning and early

elementary grades, inclusive of a wide range of early learning programs and all elementary grades kindergarten through third grade (Kauerz & Coffman, 2019).

To elaborate, when leaders set a vision of what P-3 looks like, and what it can accomplish for a district, school, or community, they support teachers in finding a connection between new practices and their own goals (Coburn et al. 2018; Hamre & Pianta, 2007). Coburn et al., (2018) found that administrators supporting teachers through instructional changes, for example by introducing play-based curricula to early elementary teachers, helped decrease some of the barriers between ECE and K-12. Administrators further influence schools' culture and priorities by, for example, communicating the importance of student achievement benchmarks as a critical step towards assessing the results of P-3 and empirically understanding the role of aligned instructional practices across grade levels (Guernsey et al., 2014; Kauerz, 2009). This scholarship shows that administrators are more successful in changing school and community culture around changing teacher practice when they set clear and achievable goals and communicate intended outcomes across a district as opposed to just individual schools (U.S. Department of Education, 2016b). One critical way administrators clarify their goals for P-3 is by formal documentation. The U.S. Department of Education (3016b) for example, described the impact of embedding P-3 practices and goals in to district strategic plans and other planning documents as a mechanism to increase visibility and buy in for the approach across stakeholder groups.

District central office structure: Organizing to support teacher learning of P-3. Researchers also associate certain organizational arrangements with support for teachers' engagement in P-3 approaches, for example, through the creation of "P-3 units" within a district

central office with staff who have qualifications, experience, and background in *both* ECE and K-3) Kauerz & Coffman, 2019; McCormick, Mattera, & Hsue, 2019)

In their study of Boston Public Schools (BPS), for example, McCormick, Mattera and Hsue (2019) found that the district addressed some of the historical tensions between ECE and K-12 through the creation of a PreK-2 instructional unit and moving older grades (third through sixth) into a separate department. They made this shift through hiring and staffing, placing an administrator with an ECE background into the leadership role, and rooting *all* learning, regardless of grade level, in ECE principles. Critical to the BPS P-3 model, the school district's early learning department took responsibility for professional learning in the early elementary grades (as opposed to a more traditional approach of K-3 directing the professional learning of PreK). After making this shift in structure, professional learning in the district oriented more towards creating child-directed, play-based learning opportunities for young children. BPS also built on the existing success of their PreK program and worked to eliminate the introduction of skills in one grade that were already mastered in a previous grade. BPS therefore created a system to support teacher learning rooted in developmentally appropriate practice. In another example in California, Coburn et al. (2018) found that districts working towards P-3 organized their central office structure to effectively served P-3 teacher learning through several distinct mechanisms. These districts supported P-3 teacher learning when they focused particular attention to breaking down silos in the district and allowing learning to take place across sectors, for example, bringing together school leaders and support staff in joint, simultaneous professional learning and development.

Central offices that supported teacher learning of P-3 also did so by hiring principals and coaches who were knowledgeable about P-3 approaches and were able to provide direct and

explicit support for teachers navigating new instructional content (Fowler, 2019; Garrity, Bridi, Kotas & Gianzero, 2021; Institute of Medicine, 2015; McCormick et al., 2019; U.S. Department of Education, 2016a). For example, Garrity et al. (2021) showed how principals trained on specific competencies of P-3 practice nurtured learning of P-3 specific practices across their whole teaching staff.

Districts also created cabinet-level positions that had an explicit P-3 or combined ECE and K-12 focus (Institute of Medicine, 2015; McCormick et al., 2019; U.S. Department of Education, 2016a). Districts also organized their staff to serve as liaisons between ECE and K-12 to ameliorate some of the stressors of attempting P-3 alignment. In a review of multiple cases of P-3 implementation, for example, central office staff with liaison roles were particularly effective at integrating practices initiated from ECE into K-12 since these practices were often starkly different for many other stakeholders in traditional K-12 districts (U. S. Department of Education, 2016a; 2016b). This liaison role mattered to teachers specifically because the liaison staff were able to "translate" practices from one system to another.

Professional Learning as an Organizational Priority. Reports on districts attempting P-3 implementation saw more teacher buy in and engagement towards P-3 practices, such as incorporating more play-based learning into their curriculum, when they used professional development rooted in evidence-based P-3 curricula, focused on academic standards, with ample opportunities for shared, community-based learning (Childress, Doyle, & Thomas, 2009; Kauerz, 2020; Kauerz, 2006; Marietta, 2010a, 2010b; McCormick et al., 2019; Ritchie & Gutmann, 2014; Ritchie et al. 2016; U. S. Department of Education, 2016a). For example, Marietta (2010a; 2010b) showed how districts worked to include teachers from several age and grade levels in professional learning for mathematics and literacy. These sites also utilized explicit instructional

standards to guide teacher learning (Marietta, 2010a; Ritchie & Gutman, 2014; U.S. Department of Education 2016a; 2016b); standards supported staff such as coaches and administrators, in districts working to reorganize, reprioritize, and align their early learning goals.

This scholarship also shows that teachers supported the learning of their peers both within their own grade level, and across P-3, by first taking an active role in their own learning (Kauerz, 2006; Ritchie & Gutmann, 2014; U. S. Department of Education, 2016a). In districts utilizing teacher leaders as part of their P-3 professional learning, teachers were critical stakeholders supporting their peers to take meaningful ownership of practices that were new or unfamiliar such as project-based learning (U.S. Department of Education, 2016a; Ritchie & Gutmann, 2014). Across all the U.S. Department of Education case studies, teachers cited their peers as influencing their understanding and implementation of P-3 practices. Training conducted by those teacher leaders was seen as particularly effective by peers (U.S. Department of Education, 2016a). Teachers learning from their peers were able to see how novel practices, for example standards from a grade level they were not currently teaching, could impact their current work (U.S. Department of Education, 2016a).

Professional Learning Communities (PLC) have also served as critical settings for collective sensemaking of P-3 content for teachers (Ritchie & Gutman, 2014; U.S. Department of Education, 2016a). For example, across all five case studies in a U.S. Department of Education P-3 review (2016a), teachers shared that they felt PLCs to be a critical space to support them in changing instructional practices as they aligned curricula across P-3, providing opportunities to coordinate both lessons and teaching strategies. Through joint planning, teachers were able to collaborate on instructional plans and build their practice towards shared goals. While informal discussions were useful, formal PLC meetings were perceived as particularly valuable for

solving more complex challenges of teaching and learning (U. S. Department of Education, 2016a). Marietta (2010a; 2010b) also documented the impact of PLCs on positive P-3 uptake when teachers from district and non-district preschools worked together in district funded and supported professional training opportunities. Ritchie et al. (2014; 2016) studied the impacts of a P-3 approach in North Carolina and found that PLCs reinvigorated professionals in the field. These studies suggest that the format of learning in a professional community is a positive location for P-3 specific learning.

Summary of Teacher Learning in P-3 Literature

P-3 approaches call on teachers to change how they approach their roles as educators and caregivers to become part of an aligned team of adults supporting young children using play-based, developmentally appropriate, and standards-informed care and education. That call is likely to be challenging for teachers to put into practice because this approach can be significantly different than their current practice and there is likely little to no existing infrastructure to support these changes. Districts are employing promising strategies to support teachers to make these changes and ensuring teachers have access to various opportunities to learn how to engage in P-3 approaches.

However, there are still gaps in knowledge about how this learning takes place. For example, who takes on leadership for teacher learning in P-3 and does this include teachers themselves? In what ways do teachers support each other as peers of their learning process? Professional learning communities are cited as important, but how specifically do they matter in P-3? Is there a particular constitution of learning in community, or learning with and among peers, that would matter for aligning early learning and early elementary?

Supports for Teacher Learning Beyond P-3: Teacher Leadership and Communities of Practice

To further ground my exploration of those questions, I reviewed research on reform in early learning and early elementary that explicitly involved peer learning in a variety of relationships (e.g., teacher to teacher and teacher to coach) and learning in professional communities. Within these studies I searched for evidence of how teacher learning was supported to respond to demands to fundamentally shift practice. I reviewed 29 articles and two books, 11 with an explicit focus on teachers' leadership as the method for peer learning, 13 focused on policy implementation geared towards fundamentally shifting practice, and six on teachers leading learning in communities of practice.

This literature confirmed what I found in the first review: peer-oriented learning increased teacher buy in and support for new instructional approaches. I also found that peer learning was effectively facilitated and nurtured through teachers' leaderships of their peers during policy changes and implementation and that this leadership could take place within a variety of roles (e.g., formal teacher leader, informal peer support, teacher coaches). Additionally, this literature extended what I learned in my first review, showing that when teacher leaders are able to span boundaries between and among different groups (e.g., teachers from different grades, classes or schools) they gained direct experience of different forms of learning that they used to guide the learning of their peers through new, challenging instruction (Bassok et al., 2016; Coburn, 2001; Cobb, McClain, de Silva Lamberg, & Dean, 2003; Coburn & Stein, 2006; Dulude et al., 2017; Kagan & Scott-Little, 2004; Neumerski, 2013; Poekert, Alexandrou, & Shannon, 2016; Seashore Louis et al., 2005; Stipek, 2006, 2004; Swinnerton, 2007; Wenner & Campbell, 2016; York Barr & Duke, 2004). I also found that professional

learning communities that took the form of communities of practice served to create the time and space for learning-focused peer relationships to form, specifically when the communities were anchored around an explicit learning focus (Caudle et al., 2014; Cobb et al., 2003; Coburn, 2001; Crawford, Roberts, & Hickman, 2010; Kuh, 2012; Lave & Wenger, 1999; Wenger, 1998). Lastly, there was a consistent use of sociocultural learning theories across these studies.

Teacher Leadership: Teachers Supporting Their Peers to Improve Instruction

Scholarship on teacher leadership shows that regardless of specific title or role, what seems to matter for helping improve practice is the status of "peer"; "teacher leaders" include classroom teachers, teachers on special assignment, and coaches and the leadership of these teachers occurs in both formal and informal roles (Cohran-Smith & Lytle, 1999; Margolis, 2012). All of these teacher leaders relied on relationships with their peers – both existing and emerging – to facilitate their own learning of new instructional practices and to help others navigate the implementation of new, challenging, and ambitious instructional practices (Neumerski, 2013; Poekert, Alexandrou, & Shannon, 2016; Swinnerton, 2007; Wenner & Campbell, 2016; York Barr & Duke, 2004). The relationships among and between peers as opposed to supervisor and supervisee (i.e., classroom teacher to classroom teacher and not principal to teacher) played a critical role in helping teachers fundamentally shift their practice (Coburn & Stein, 2006; Dulude et al., 2017; Seashore Louis et al., 2005). Teacher leaders use both formal and informal means to work collaboratively with colleagues, building relationships and community. Supportive peer relationships therefore take place across a variety of roles (e.g., coaches, lead teachers) (Margolis, 2012; Poekert, Alexandrou, & Shannon, 2016). Margolis (2012), for example, found that with supportive peer relationship (e.g., readily available mentors,

ample collaborative time with peer leaders) teachers demonstrated agency over their learning experiences that in turn impacted the ways they engaged with their students.

Teacher leaders supported their peers' learning to shift their practice by establishing relationships that were built on existing, shared values and beliefs. Edwards (2011) for example, found that teachers effectively collaborated with others to change practice by focusing interprofessional relationships on what different individuals and groups valued as important. Goldstein (2007) and Grieshaber (2001) both identified ways communities of teachers utilized their shared belief in the importance of play-based learning to maintain the instructional practices they valued. Goldstein (2007) studied the ways that kindergarten and early elementary teachers leaned on supportive peers for encouragement to engage in strategies to both co-opt and resist demands for direct instruction and instead maintain pedagogical independence that they deemed valuable, such as play-based learning in kindergarten classrooms. When these kindergarten teachers built a robust understanding of their own value systems around play based instruction, they then brought these value systems to their peers.

Another support for helping teachers' shift their practice was opportunities for teachers to unpack their own existing understanding of their teaching so they could in turn support their peers in deep sensemaking of what they do and why (Caudle, Moran, & Hobbs, 2014; Darling-Hammond & Richardson, 2009). These teacher leaders first determine what was critical and valuable in their own instructional practice then engage in leading their peers through similar processes of reflection and questioning. In their studies on instructional leadership, Neumerski (2013) and Swinnerton (2007) for example show how teacher leaders served as key instructional leaders of their peers by providing opportunities for them to make sense of change and giving them tools to enact their own understanding of this change. Caudle, Moran, and Hobbs (2014),

Darling-Hammond and Richardson (2009) and Wenner and Campbell (2016) all found instances of teachers taking a role in leading their own leading and contributing to long term instructional change in their own classrooms and, to some extent, to those of their peers.

Teachers also span boundaries among and between their peers, classrooms, schools, and learning communities to build peer relationships in service of understanding and changing instructional practices (Caudle, Moran & Hobbs, 2014; Cobb et al., 2003). As they interact with colleagues and peers across boundaries, teacher leaders create opportunities for shared learning. As Caudle, Moran, & Hobbs (2014) detail in their study of teacher leadership within communities of learners, teacher leaders must do more than simply move, or travel, from one system to another; as teacher leaders introduce new knowledge from one space to another, they also intentionally create spaces for their peers to process this new knowledge. Cobb et al. (2003) for example found that teachers spanned boundaries between their classrooms and administrative spaces, such as leadership meetings, and these "boundary encounters" provided distinct opportunities to create new relationships and expand existing relationships while learning about new instructional practices. Swinnerton (2007) found that instructional coaches such as teachers on special assignment served as "systems travelers" (p. 208), exercising instructional leadership as they "negotiate boundaries and adjust to the changing context they faced in each community at each level of the system" (p. 208). Teacher leaders also serve as productive brokers by translating the ideas and practices of teachers from one group to another, bridging activities and practices of multiple communities (Burch & Spillane, 2004; Cobb et al., 2003; Swinnerton, 2007).

Teacher Learning and Communities of Practice

While teacher leadership for teacher learning can take place in a variety of settings, professional learning in communities of practice (CoPs) in particular seem to help teachers to fundamentally shift their practice. For example, CoPs have supported ECE teachers in leading change among their peers, specifically when faced with new or changing practices, since teachers are working directly with their colleagues, and not supervisors, on changing practice Caudle et al., 2014; Crawford, Roberts, & Hickman, 2010; Cobb et al., 2003).

When individuals within a community of practice form strong, productive relationships, they are more likely to gain the skills, abilities, and support needed to implement changes (Kuh, 2012). For example, Coburn (2001) found that elementary school teachers faced with a new reading policy co-constructed policy messages with specific peer groups, using informal alliances and formal networks in their sensemaking about policy implementation and their subsequent decisions about what to change and what to maintain with regard to their teaching practice.

Scholarship shows that these relationships within communities of practice do not necessarily form spontaneously and teacher leaders within these communities need time and opportunity to navigate their own leadership skill development along with creating an intentional focus and direction for the larger community (Caudle et al., 2014; Crawford, Roberts, & Hickman, 2010). In her study of communities of practice among teachers in ECE, Kuh (2012) for example found that building in time for collaboration, coupled with strong leadership, were key elements in the formation of successful communities of learning and practice for early childhood educators. This research suggests that the focus or content of the community is critical to influencing the direction or outcome of the community's learning efforts.

Summary and Implications

The broader research on teacher learning underscores the importance of supports for teachers learning new instructional approaches, especially those that call for fundamental shifts in their longstanding practice. This scholarship suggests that communities of practice help create and facilitate change when members have strong relationships with their peers and the focus of learning is geared towards productive change, intentionally focused on specific outcomes. My review of the literature also surfaced the potential of communities of practice as productive learning spaces for teacher leadership. Many of these studies used sociocultural learning to ground their conceptual framework (see for example Caudle et al., 2014; Coburn & Stein, 2006; Darling-Hammond & Richardson, 2009; Kuh, 2012) suggesting there could be a role for this theoretical framework in a study of teachers in P-3. The literature also suggests the importance of finding a research site where P-3 implementation was established, with practices and strategies already in place to address the key challenges facing teachers managing P-3 change, such as district-sponsored professional learning for P-3 with a community of practice focus. While it was unlikely I would be able to observe actual shifting teacher practice, it was possible to look at the quality of implementation of communities of practice that are tasked with helping teachers to learn new practices.

Chapter 2: Conceptual Framework

To explore the quality of implementation of peer learning within professional learning communities in the form of communities of practice, I used sociocultural learning theory as the conceptual framework for my investigation into teacher learning in P-3 approaches (Cobb, 1999; Holland & Lave, 2009; Lave & Wenger, 1999; Rogoff, 2003; Vygotsky, 1978; Wenger 1998). These theories also describe and locate how far along practitioners, such as teachers and coaches, are on a trajectory of adopting a new practice along with the conditions that can help explain their movement along this trajectory. The conceptual framework guided both the construction of my methodology along with data collection and analysis, giving indicators to measure how I would know if what I was describing was a true community of practice marked by distinct teaching and learning supports.

In this chapter, I first describe the five different levels of appropriation (Grossman, Smagorinsky & Valencia, 1999) that helped me place learners on a trajectory towards appropriation (learning) of a new practice. I then show how a community of practice is a key condition to support learners' progression on this trajectory. To explore this learning as a condition I therefore looked at appropriation of *teaching-and-learning moves* within a community of practice and ways that communities are, or are not, geared towards learning of P-3. Lastly, I show the conditions that support effective communities of practice along with the conditions that support and inhibit appropriation of teaching and learning by members of the community of practice.

Terminology

In this section, and throughout this chapter, I use the language of Grossman et al., (1999) to talk about individuals as "learners." While anyone can be a learner, in my study the term

learner is primarily applied to teachers, specifically the classroom teacher leaders involved in the district's P-3 approach. I also use language from Wenger (1999) to talk about individuals as "experts." An expert is a more experienced learner in a community of practice, often responsible for the instruction of new practice among a group of learners. As I describe below, these roles are fluid—everyone in a community is always a learner—however, experts have had more time and opportunities to engage in the practices in ways that deepened their understanding of them and ability to execute them within and across settings. In my study an expert is usually a coach, a former classroom teacher now serving to support current classroom teachers.

Levels of Appropriation

To understand how practitioners in a community of practice move along a trajectory of learning towards appropriation of a new practice, I used a framework developed by Grossman, Smagorinsky & Valencia's (1999): "Appropriating Tools for Teaching English: A Theoretical Framework for Research on Learning to Teach." This framework outlines phases of development (appropriation) towards the learning of a new practice in the context of professional development. Grossman et al. (1999) use the concept of "appropriation" as:

> The process through which a person adopts the pedagogical tools available for using particular social environments (e.g., schools, preservice programs) and through this process internalizes ways of thinking endemic to specific cultural practices (e.g,, using phonics to teach reading)…Appropriation is a developmental process that comes about through socially formulated, goal-directed, and tool-mediated actions (p. 15).

The "five degrees of appropriation" (Grossman et al., 1999) represent the different levels or steps towards understanding a new tool, concept, or practice, along with an individual's abilities to engage with the new practice. As mentioned in the introduction, in this study I explore

appropriation of teaching-and-learning moves (described in extensive detail later in this chapter). I used an adaptation of Grossman, Smagorinsky and Valencia's (1999) framework as laid out by Honig and Rainey (2020), Honig, Venkataswaren, and McNeil (2017), and Honig (2012) in their work on principals, principal supervisors, and school district central office. Below I describe each of these levels of appropriation.

Lack of Appropriation

In this first level, there is no actual adoption or appropriation of a novel practice by the learner (e.g., a classroom teacher). This lack of appropriation could happen for a variety of reasons but ultimately this level signifies no change or shift in practice. A teacher exposed to new instruction or learning, for example, does not subsequently change her own practice in any way.

Appropriation of a Label

A learner begins to talk about their work in ways consistent with the new practice, but their actual work does not yet reflect their talk. For example, a teacher may say they are using a "P-3 approach" but they do not engage in practices consistent with that approach.

Appropriating Surface Features

At this stage, a learner's actual practice begins to reflect the new practice. Implementation of the new practice, however, is inconsistent, and the learner does not yet demonstrate deep understanding of what the new practices are or why to engage with them. For example, a learner may start to employ key strategies of P-3 such as communicating with a teacher above or below the grade level they teach about curricula, however, the frequency of such communications remains low or sporadic and the teacher may articulate only an emerging understanding of what cross-grade alignment entails and why it matters.

Appropriation of Conceptual Underpinnings

At this phase, a learner's practice more regularly reflects the new practice, and they demonstrate a deeper understanding of what the practice involves and why to engage in it. A teacher with conceptual understanding for example may take the new practice and make it part of her routine and can explain why the routine matters to achieve a particular outcome.

Achieving mastery. Mastery entails knowing, understanding, and using the full set of skills of a new practice consistently across settings and over time.

Individuals moving through levels of appropriation can take place in a variety of settings and contexts. To further explore how appropriation is (or is not) supported in peer to peer learning I also utilized theories based on Communities of Practice (Lave & Wenger, 1991). Together, Appropriation and Communities of Practice create a framework for studying supports for learners and learning.

Communities of Practice

For this study I utilize the theoretical concept of "Communities of Practice" as conceptualized by Lave and Wenger (1991) and Wenger (1998; 2000; 2019). Communities of practice describe a group of learners working together on something of value to the community and in the process are learning by doing. Wenger (1998) describes this action as the "doing" of a community (p. 47). Communities of practice support learners moving along Grossman's trajectory by creating the time, space, and structure for performing authentic learning tasks in real time with varying levels of collaboration and assistance with and from others.

Key Features of Communities of Practice

Not all collective group settings are communities of practice. An authentic community of practice geared towards supporting learning is made up of several distinct features (Wenger,

1998) and the presence of these features can signal if a community of practice is in place, as opposed to another kind of grouping of learners simply working collaboratively. These key features are 1) joint enterprise, 2) mutual engagement and 3) shared repertoire.

Joint Enterprise. Communities of practice have a distinct "joint enterprise"—the actual practice of a community of practice that is shared and held in common among the group (Wenger, 1998). Wenger (2000) describes joint enterprise as the "collectively developed understanding of what the community is about" (p. 229). In this way, joint enterprise is the anchor and central focus that binds a community and therefore the central focus of the learning of individuals within the group.

Practitioners in a community of practice negotiate their joint enterprise, so the practice can adapt depending on shifting perspectives, beliefs, and experiences of individual members; joint enterprise is therefore fluid and dynamic to the extent that members of a community contribute their own collective experiences to the practice. Through engaging in this negotiation, the practice therefore "belongs" to the community and is not simply something that is imposed upon them (Wenger, 1998). Additionally, community members—both learners and experts —continuously engage in sensemaking around new practices, allowing them to evolve. This process of collectively engaging and sensemaking contributes to a sense of shared identity between and among individuals which further defines their community and the ability of the community to achieve their goals (Adger, Hoyle, & Dickinson, 2004; Lesser & Stork, 2001). This shared identity in turn can be instrumental in supporting learning within a community by providing learners with a meaningful connection to a new or emerging practice. Anchoring learning in a shared, joint endeavor also supports learners moving along a trajectory of mastering

a new practice by providing common goals, processes, and steps that are taken with peers, not in isolation (Grossman et al., 1999; Wenger, 1998).

A community of practice may work effectively towards a joint enterprise, but a joint enterprise does not necessarily lead to desired outcomes (Caudle et al., 2014; Coburn, 2001). For example, a community of practice of teachers may agree to focus on improving reading instruction among their students and work with a shared repertoire and through mutual engagement toward their goal; if the teachers continue to use outdated reading practices in their own learning, however, the joint enterprise is not necessarily geared towards productive learning and the teachers may continue to use a deficit approach with their students.

Shared Repertoire. The joint pursuit of an enterprise, over time, can result in the creation of a shared repertoire or the development of "communal resources: languages, routines, sensibilities, artifacts, tools, stories, etc." (Wenger, 2000, p. 229). The function of a community of practice's shared repertoire is to provide participants with the *language* to communicate about their process of learning something new. In a P-3 approach, for example, the shared repertoire of a community of early childhood and early elementary teachers would include both the language they created to describe their individual and collective teaching practices along with the products of this language use, such as protocols or guidelines for communication.

Mutual Engagement. Mutual engagement is the process of developing relationships among members who make up a community of practice while they work on their joint practice (Adger, Hoyle, & Dickinson, 2004; Wenger, 1998). Members of a community develop these relationships through their interactions with each other (i.e., their engagement) while focusing on their joint enterprise in regular, consistent interactions. Productive, meaningful relationships can only develop with consistency and adequate time so that sufficient trust and understanding forms

and meaningful learning can therefore take place (Adger, Hoyle, & Dickinson, 2004; Wenger, 1998; Wenger, 2000). During these regular interactions, members establish norms of participation, to which community members then hold themselves accountable. Created norms may be formalized and established or may be more general understandings of "this is how things are done" (Wenger, 2000). These relationships, interactions, and norms can set the guidelines and parameters for learning experiences as individuals such as teachers engage with efforts to change their practice and move forward along trajectories of learning. The importance of mutual engagement to learning is the key role that relationships play in the individual and collective experience of learners; this relationship development rooted in a shared (joint) enterprise or practice is critical to any learning and therefore to any hope or expectation of changed practice.

Teaching and Learning Moves

Within Communities of Practice, as well as other learning settings, particular supports help participants deepen their engagement in new practices. Honig and Rainey (2020), Honig, Venkataswaren, and McNeil (2017), and Honig (2012) describe these supports as "teaching moves"—the work of experts working both one on one and in community settings as they support learners in understanding specific target practices through the process of actually *doing* these practices. The following moves: joint work, modeling, challenging talk, and brokering, are key indicators useful to exploring, observing, and documenting joint enterprise, mutual engagement, and shared repertoire in communities of practice. Full implementation of these moves by experts would therefore support learners in changing their practice and appropriating new instruction. Next, I detail each of these moves and show what kinds of indicators I looked for in the data to find evidence of these moves in practice. I then show how experts within a

community of practice geared towards learning in a P-3 approach would utilize these moves in alignment with the key P-3 characteristics outlined in chapter one.

Joint Work

Joint work moves consist of practices, discrete actions, or activities, that help learners welcome and adopt a new and challenging target practice (e.g., teachers taking on a new approach to instruction). Honig and Rainey (2020) explain joint work moves as:

> moves that help learners embrace new challenging work as a defined set of practices that they and their colleagues collectively value, for example, by: using a specific shared definition of the new work as common guides for growth; and learning alongside learners and opening up their own practice. (p. 21)

The member of the community of practice making these moves (e.g., the expert) provides learners with opportunities to clearly understand what the target practice is, connect this practice to existing work in ways that help learners then shift to the new practice, and ensure that the target practice is valued collectively by the group of learners. A key function of the community member engaging in joint work moves is to ensure that learners can see how the joint work focus —a target practice—is connected to practices that they value (Brown, Collins, & Duguid, 1989). Leading practitioners through this understanding of the target practice is essential to supporting an eventual change in practice (Honig & Rainey, 2020).

Modeling

Modeling moves take place when an expert learner provides "demonstrations of new work practices using metacognitive strategies—explicit explanation of what they are modeling and why" (Honig & Rainey, 2020, p. 21). Modeling moves differ from traditional, lecture-style methods of instruction where a learner is told but not shown a new practice or strategy. When

learners observe a demonstration of a target practice, coupled with an explicit explanation of what is happening in the demonstration and why, they can start to build an image of how they themselves may take on this new approach (Honig & Rainey, 2020). For example, modeling may include an expert or experts walking through a sample lesson of a target practice, taking on the role of classroom teachers working directly with young students, while also explaining each individual step they are taking to their audience of watching learners. Modeling is a critical step to support learning since it creates a space where learners can develop "a conceptual model of the target practice" (Honig & Rainey, 2019, p. 24) and therefore they can imagine themselves executing the new practice.

Challenging Talk

Participants in a community of practice come to deepen their understanding of new practices through talk that challenges their understanding of their practice. This includes:

> Forms of talk that engage learners in making sense of what new work entails and how to engage in it, for example, by verbally challenging learners' understanding of situations; offering competing theories about underlying problems and potential solutions; and prompting learnings to question long-standing practice that have not been effective (Honig & Rainey, 2020, p. 21).

Challenging talk moves include the phrases and words used by experts to challenge learners to both accurately understand the new target practice and be able to (eventually) execute the target practice themselves. An expert, for instance, may push back on statements made by learners in the community to confront or clarify their thinking, offer differing perspectives or understandings of foundational principles of the target practice, or challenge learners to re-think or question long-held assumptions about their own practice or instruction. Evidence of

challenging talk include specific phrases or words to help learners make sense of the target practice and their ability to implement it, for example, asking "how do you know?" and "what is your evidence?" to support learners to meaningfully shift their practice. These probing questions would then trigger learners to think deeply about how a new practice applies to them and their work.

Brokering

Brokering includes both bridging and buffering (Honig & Hatch, 2004). As Honig and Rainey (2020) detail, bridging includes "moves that connect learners to new ideas, understandings, and other resources to advance their learning" (p. 21) while buffering includes, "moves that protect learners from potentially unproductive external interruptions to their learning" (p. 21). Leaders or practitioners who bridge new ideas, and buffer against unproductive ones, support their community in progressing forward along a trajectory of learning by introducing practices that can push back against stagnant, status quo methods of operating and introduce new and innovative practices (Caudle et al., 2014). The practice of bridging involves bringing new ideas from outside a community of practice into that community to support learners' progression along a trajectory of learning; buffering on the other hand involves shielding or blocking community members from unproductive external forces or ideas, for example protecting against "waste of time" activities that limit or decrease unproductive interactions (Honig & Hatch, 2004). Buffering also helps learners progress on a trajectory of learning by eliminating distractions that could keep learners from moving forward. In both cases —bridging and buffering—experts are selective and strategic in what they increase or decrease, emphasize or deemphasize, all in an effort to "enhance implementation of their goals and strategies" (Honig & Hatch, 2004). Evidence of brokering include: 1) bridging to outside

resources specifically to support working on the target practice and 2) buffering from distractions from working on the target practice (Honig & Hatch, 2004; Honig & Rainey, 2020).

Teaching and Learning Moves in a P-3 Community of Practice

As outlined in chapter one, a district supporting teacher learning of P-3 in a community of practice would be working to implement the three characteristics of teacher effectiveness from the P-3 Center Framework: 1) focus on instruction 2) visible practice and 3) work as teams. In a community of practice explicitly geared towards supporting teacher learning of P-3, experts would use the teaching-and-learning moves outlined above, joint work, modeling, challenging talk, and brokering, in service of the three characteristics of teacher effectiveness for P-3. While all the teaching-and-learning moves could address each of the three characteristics, there are some distinct connections among characteristics and moves that I demonstrate below.

Joint Work in a P-3 CoP. Experts using joint work moves in a P-3 CoP directly address both a focus on instruction (1) and work as teams (3). Experts focusing on instruction in a P-3 CoP would use joint work moves to create an authentically shared definition of a new, common practice that is of value to a whole group. In this way experts would focus the group on instruction for the whole P-3 continuum, not just a single grade level, through direct attention to instructional practices and learning standards *across* teams of teachers. When teachers and support staff are working together *in teams* in shared, joint professional development, they are meeting focusing on instruction and working as teams in ways that meet characteristics of a P-3 CoP.

Modeling in a P-3 CoP. Demonstration and metacognition, the indicators of modeling as a teaching and learning move, are also critical components to visible practice, the second key characteristic of a P-3 CoP. Through modeling, teachers directly observe how their peers are

executing P-3 instructional practices and can therefore envision how they themselves can execute the same practices. Using guided, structured observation forms, teachers make their own practice visible and learn from the visible practices of their peers.

Challenging talk in a P-3 CoP. Experts using challenging talk moves address all three characteristics of a P-3 CoP but particularly support a focus on instruction (1) and work as teams (3). Challenging talk moves help teachers make sense of the work and offer competing theories of practice during the complicated process of learning how P-3 instruction differs from their regular practices. Challenging talk is particularly useful when asking questions in teams across age and grade levels, so teachers can gain understanding of both horizontal and vertical differences in instruction. An instructional coach pushing back on an elementary school teacher in a cross-grade team, for example, asking why they do not have dramatic play in their classrooms, could pull on the expertise of a preschool teacher who can share their direct experience with play-based instruction.

Brokering in a P-3 CoP. Lastly, brokering in a P-3 CoP is particularly supportive of work as teams (3) since experts can utilize teacher expertise and experience across the whole P-3 continuum to introduce and connect new learning. In the example above, a preschool teacher could share the texts, videos, or resources they used for creating a dramatic play area in their classrooms with the elementary teachers who have never used this strategy.

Conditions that Support Learning in Communities of Practice

Effectively using these teaching-and-learning moves, and effectively facilitating and engaging in a community of practice, requires various conditions (Grossman et al., 1999; Smith, Kempster, & Wenger-Trayner 2019; Wenger, 1998; Wenger, 2000; Wenger & Snyder, 2000). Individual practitioners—both learners and experts—enter a community with their own

individual backgrounds, including a wide range of prior knowledge and experiences. Community members also work within distinct social contexts. Both individual characteristics (e.g., prior knowledge and experiences, beliefs) and social context impact the extent to which practitioners take up teaching-and-learning moves within these communities (Grossman et al., 1999; Honig & Rainey, 2020).

Individual Characteristics

While multiple individual conditions matter to learning (e.g., positionality, training, education) Grossman et al. (1999) and Honig (2012), Honig and Rainey (2020), Honig, Venkataswaren, and McNeil (2017), outline several specific characteristics that impact the level of appropriation of a new practice or work, including whether or not that practice is in fact appropriated at all. Individual characteristics that matter to appropriation include: (1) individual conceptions of roles, for example personal goals and expectations of what it means to be a coach or a teacher, (2) prior knowledge and experience, including knowledge and beliefs about a specific content area or practice, such as beliefs about mathematics or literacy for teachers engaged in instructional improvement efforts around these subjects. As Honig (2012) and Honig and Rainey (2020) outline, these conditions help explain what can help or hinder the learning of individuals in assistance relationships and these conditions can further explain the variation among levels of appropriation.

Individual Conceptions of Roles. Honig (2012) describes why an individual's conception of their role matters saying, "the importance of participants' orientations to their work—such as how they frame or understand the fundamental nature of their role—[is] consequential to how they engage in assistance relationships" (p. 760). A coach supporting a teacher might pull from whatever ideas they already had about what it means to nurture learning

in a support role. An individual's orientation to their work includes their personal goals and expectations of this work, for example the wide and varied reasons for wanting to teach, work in a classroom, or be engaged in a school setting. These goals and expectations mediate what and how teachers as learners appropriate new practices. Wenger (2000) also suggests that leaders of a community of practice (e.g., experts) are more effective at their facilitation when they maintain a "spirit of inquiry" (p.231) and conceive their roles as nurturing a sense of curiosity among the learners.

Prior Knowledge and Experience. Prior knowledge includes both the experience that an individual has (e.g., total experience in all years teaching) as well as their cumulative individual experiences that impact their approach to their work. Honig and Rainey (2020) explain prior knowledge, and its relevance to learning, as what individuals bring with them to new learning experiences. They explain, "professionals come to new situations with orienting frames—ways of seeing and understanding who they are, what circumstances they are in, and what to do day-to-day" (p. 88). An individual's prior knowledge impacts how their professional relationships play out. Their own experiences as learners can also deeply impact how they utilize teaching-and-learning moves in their own work. Individuals' prior knowledge impacts how communities of practice ultimately function since whole groups of learners (e.g., teachers) receive the instruction of experts such as coaches who are utilizing these teaching-and-learning moves.

Knowledge and beliefs about content encompass what a learner thinks about a subject or content area along with how it should and could be taught (Grossman et al., 1999). This knowledge and belief stems from experience and expertise around the content. Regardless of an individual's experience with the content - whether it is a subject they are already familiar with or one they have limited experience with a – learner's beliefs and understanding about this subject

impacts their appropriation. For example, if a teacher of language arts experiences a community of learning focused on literacy, their existing knowledge and beliefs about what and how to teach literacy will mediate their uptake of the new practice. Community leaders in turn support their community by recognizing and addressing gaps in individuals' knowledge and setting a vision for how new learning can be conducted (Wenger, 2000).

Social Context

Grossman et al. (1999) describe the social context of learners as the environment where they learn to use new tools or a new practice. What Grossman et al. (1999) refer to as social context is, in essence, the community of practice itself. Within this environment learners are introduced to the new, challenging practice (e.g., fundamental shifts in instruction such as those demanded in a P-3 approach). The specific ways this practice is introduced matters to how it is appropriated within a learner's social context and will either help or hinder learning, including whether a practice is presented in large, abstract concepts or specific individual tasks. For example, whether an expert details the specific steps needed to align curricula from grade to grade in a P-3 approach versus speaking broadly to the role of P-3 in improving curricular outcomes impacts how learners make sense of P-3 as a new concept.

The social context of learners is further impacted by the cultural conditions and practices established by the group, such as the formality (or informality) of meeting spaces, nature of relationships among staff in a school, language used to describe students and families, or expectations about attendance. For example, Wenger (2000) suggests there must be sufficient time and opportunity for individual members to know each other well enough to be able to ask for help, have trust in each other's abilities to contribute to the joint enterprise of the community and speak truthfully. Within this space, learners also develop communal resources and a

language to talk about community in a reflective way, and a system to codify and introduce new methods, standards, and routines (Wenger, 2000; Smith et al., 2019).

Summary of Conceptual Framework

In summary, sociocultural learning theories provided the following conceptual anchors for data collection and analysis: (1) a "degrees of appropriation" scale to help me understand how members of a community of practice were taking up teaching-and-learning moves in their efforts to support teachers changing their instructional practice, (2) specific teaching-and-learning moves used within a Community of Practice—joint work, modeling, challenging talk and brokering —so I could distinguish if conditions were right for setting up a learning environment geared towards supporting teachers in understanding and implementing P-3 practice and (3) conditions that support communities of practice and the functioning of their members, for example individuals with prior knowledge and conceptions of their roles that aligned with goals and objectives of professional learning programs, a social context that facilitated deep understanding of the new practice.

These ideas prompted me to choose a study site where I was likely to see a Community of Practice in action focused on supporting teachers implementing P-3 practice and to examine learning and learning support within that community, which is discussed further in the next chapter. The implications for my use of this framework are a chance to understand how districts foster a P-3 approach, how they support teacher learning of this approach, and the impact of a community space on the appropriation of a new practice. I therefore ask the research questions listed below.

Research Questions

In districts that are using communities of practice approaches to support teacher learning of P-3 practices:

1. How do district leaders put the community of practice into practice?
2. What conditions help or hinder district leaders in realizing a community of practice in practice?
3. To what extent does the community of practice support teacher growth or learning towards P-3 practice?

Chapter 3: Research Design & Methods

In this chapter, I describe the research design and generalizability of the study, followed by site selection criteria and descriptions of the study participants. Then I detail the unit of analysis that served as the focal point for data collection and the three central sources for collecting data: observations, interviews, and document review. Lastly, I share my data analysis approach and the limitations of the study.

Research Design and Generalizability

I used a qualitative case study design because it provided a framework to engage in close, in-depth, and firsthand data collection in a bounded setting (Yin, 2006; 2014). A case study approach also allowed me to redefine the case as needed during the process of data collection and data analysis (Yin, 2014). The combination of flexibility and structure within the case study design proved particularly relevant in my site as I learned about the stages of implementation of my district's P-3 approach and the various stakeholders involved. While data from case studies such as mine are not generalizable to populations outside of my study, they can inform and contribute to theory.

Site Selection

As my review of literature and conceptual framework laid out, my site selection criteria necessitated that conditions were in place to support teachers learning during P-3 implementation in a community of practice setting. From my literature I also knew I needed a site that was at least attempting to address some of the key challenges facing teaching in P-3, showing efforts in administrative leadership, central office school district organization, and a focus on professional learning.

The site I chose was the Vista School District, a district of roughly 20,000 students within a large metropolitan area in the Pacific Northwest. Vista is a linguistically, ethnically, and socio-economically diverse district with 33 schools serving children from preschool through 12th grade. The Vista School District has been recognized as a leader of P-3 in the region, state, and nationally for supporting P-3 implementation and teacher learning, which increased the likelihood I would find a community of learning to explore and investigate. In determining the alignment of Vista with my site selection criteria I found evidence of clear intentions to fully implement P-3, suggesting that key components of implementation were in place to support developmentally appropriately high-quality care and education from preschool through third grade, with instruction aligned vertically and horizontally across grade levels, and one that was part of a coherent, single, unified system (Kauerz, 2000).

Within Vista's program of P-3 support for teachers I focused specifically on a program called "Lead Learners." This program uses a train the trainers model to disseminate and share learning as part of the district's larger P-3 and instructional improvement goals. Teachers are trained in a subject or content area with the expectation that they take on the mantle of trainer themselves in future professional learning for their peers in the district. The focus of Lead Learners changes every year but is always rooted in a specific target practice. This learning rooted in a specific target practice suggested I would be able to see joint work moves in practice.

Table 1 shows the key strategies Vista used for designing, implementing, and facilitating a P-3 approach with the goal of supporting teacher learning. Column one lists the strategy that emerged from literature that details what a district does to create truly P-3 practice. The second column shows how this strategy was evidenced in practice in the Vista School District. This table helped me determine that I had made my site selection correctly.

Table 1

P-3 Strategy Implementation in Vista

P-3 Strategy (from Literature)	Strategy Implementation in Vista
P-3 as district leadership priority: Central office leadership centering P-3 as a district priority (e.g., through funding and providing strategic priorities for, and importance of, professional learning)	1) Vision setting conducted by the superintendent that P-3 prioritized 2) P-3 formally adopted in the District Strategic Plan 3) Elementary principals sent to P-3 trainings
Organizational structure: Organizational structure designed to support the implementation of the district's P-3 vision (e.g., well prepared, positioned and educated support staff such as instructional coaches in place to support the work and learning of teachers engaging in the P-3 approach)	1) Creation of new P-3 Director position 2) District reorganization shifting from traditional ECE versus K-12 separation to a K-5 unit staffed with P-3 content literate staff to span ECE and elementary
Professional learning: Professional learning opportunities created with dedicated resources for teachers to lead their own learning, rooted in evidence-based P-3 curricula that is developmentally appropriate for children from birth to age eight	Use of distinct professional learning programs including: 1) Early Learning PLC 2) Grade level Lead Teachers 3) Lead Learners

Lead Learners Program

The Lead Learners program was the central mechanism for the Vista school district to support teacher learning in P-3 content. The goal of Lead Learners was to align instruction to support the strategic plan, specifically third grade "mastery," as part of the P-3 team's efforts. From the district description of the program listed on the application form for teachers, the goal of Lead Learners was "to build standards based aligned instruction to support the master by

grade 3 goal [from the strategic plan]" and to "support and sustain professional learning… working with the P-3 team."

Vista took an existing professional development mechanism—the "train the trainers" model of professional learning where teacher leaders were trained in a content area then went on to train their peers in the same content—and applied it to the Lead Learners program. This trainer model in particular showed high alignment with my site selection criteria that I found a district attempting peer support for learning new ambitious content. The Lead Learners program served teachers from preschool through fourth grade. Begun in 2014 with kindergarten, it expanded the following year down to preschool and up to first grade, followed by subsequent expansion to 2nd, Fourth and then Fourth grade by the 2018-19 school year. Teachers are required to apply to participate in the Lead Learners program and three to five teachers are selected for each grade P through 4. Selected teachers meet once a month at the central office for training, then at least once a month (more if needed or requested) at their school sites with their coaches, along with cross site visits to each other's schools to observe lessons and instruction.

Each year Lead Learner teachers are trained intensively in a new practice that should be aligned, in theory, with the overarching goals of the P-3 approach. Training is conducted by coaches for the Lead Learner program. Along with facilitating joint trainings, each coach works directly with one or two grades and is responsible for organizing and co-facilitating one on one coaching, cross site visits and a demonstration day for the grade level they lead. For the 2018-19 school year the focus for Lead Learners was the development of "anchor tasks"—complex student discourse around mathematics. After the year of training, teachers opened their classrooms for "demonstration days" when teachers from across the district came to the Lead Learner's school and classroom to spend the day learning this new practice from the Lead

Learner and their coach. The ultimate goal for Vista (as is the goal of P-3 approaches as a whole) was changed and improved outcomes for students, based on new (changed and improved) practice of teachers across the district; this rationale motivated the creation of the Lead Learner program.

The main strategy for the district to support these Lead Learners was through grade-level coaches who facilitated the communities of practice where they learned the target practice. These coaches were therefore the key supports for teacher leadership of P-3 in the district. What I was able to observe at the time of data collection therefore focused more closely with the creation of conditions to support teacher learning and less about teacher learning itself.

Participants

I selected participants for this study who were actively involved in the district's teacher learning of the P-3 approach including both central office staff and administrators as well as classroom teachers from preschool through third grade. These participants included the coaches who supported Lead Learners teachers, Lead Learner teachers themselves, and the central office staff who supported the coaches.

Lead Learner Coaches

I included all eight coaches responsible for leading the Lead Learners in whole group and grade-level trainings focused on the shared, joint target practice. Half of the coaches worked with two grades while the other half worked with only one grade. For all Lead Learner coaches their work with the Lead Learners was only one part of their full workload. For example, some coaches also helped write curriculum, others worked with individual schools, and others worked with distinct programs, such as special education and dual language.

Teacher Leaders

I created a sample of teachers from within the Lead Learners program of a manageable size to enable myself as a sole researcher to sufficiently understand how they were supported in engaging with new and challenging instructional approaches. I sampled teachers based on their experience in both the classroom and with the Lead Learners program to help me understand how teachers' prior knowledge may have mattered to their experience in the program. To recruit teachers, I began by introducing myself and my study at the first Lead Learners meeting of the school year to ask for volunteers to participate. Several teachers and coaches approached me during breaks to express interest in involvement. I then used snowball sampling (Patton, 2015), asking individual Lead Learner teachers, coaches, and district support staff to identify other Lead Learners who they viewed as deeply engaged in the implementation and the teaching and learning process. From the volunteers and nominations, I selected teachers who had at least one year of involvement in the Lead Learner program. In two grades (second and third grade) there was only one teacher volunteer, and they became the focal teacher for that grade. Since I began my data collection activities with central office staff and coaches involved in the Lead Learner program, they were able to provide insight on those involved in appropriating the teaching-and-learning moves I anticipated observing in the communities of practice. I had one teacher from each grade and their corresponding coaches and central office staff participating in the study.

P-3 Central Office Administration

These staff included the district's P-3 Director, the primary external consultant responsible for supporting the district's P-3 professional learning efforts, and the Early Childhood Liaison in the P-3 department responsible for coordinating work with the district and non-district early learning providers (e.g., Head Start, local family child providers). These

participants provided me with guidance and context on understanding the P-3 communities of practice and the district's P-3 approach more broadly. A full list of participants can be found in the following table and all names are pseudonyms.

Table 2

Lead Learner Focal Teachers, Coaches, and P-3 Support Staff

Grade Level	Focal Lead Learner Teacher	Central Office Based Coaches		Central Office Support Staff and Administration
PreK	Laura	Mary	Jennifer	Susanna, ECE liaison
Kindergarten	Nancy	Jennifer	Madi	Elizabeth, P-3 Director Deborah, External consultant
First	Sarah	Marissa	Alison	
Second	Luisa	Madi	Simon	
Third	Vivienne	Simon	Rachel	
Fourth	n/a	Leah		

Unit of Analysis

The unit of analysis for this study was the leadership of teacher learning and the extent to which it was consistent with a community of practice. In my research site this teacher learning was conducted largely by coaches from the district who supported the Lead Learner program. I was looking specifically at these coaches' use of the teaching-and-learning moves outlined in the conceptual framework, along with any other indicators that they were creating a community of practice for the teacher leaders learning the P-3 approach. The outcome I was looking for was the level of appropriation of teaching-and-learning moves by each coach in the Lead Learners program (e.g., surface appropriation of joint work, conceptual appropriation of modeling).

Data Collection

I collected data from September 2018 through June 2019, the entirety of the academic school year. With this timespan I aimed to follow the programmatic progression of Lead Learners which was organized by academic year., starting with an introductory learning session and culminating with summary work at the end of the year following the demonstration day.

Observations

Observations were my primary form of data collection. I observed all group settings of the Lead Learners program over the school year to collect data on all peer-to-peer learning in the community that was a part of the program. I attended, observed, and collected field notes of all monthly Lead Learner meetings September through June along with all demonstration days of my focal teachers the full day when they demonstrated their target practice to their peers—which took place from January through June. I also attended and observed all "cross site visits" when Lead Leaders from each grade level spent a day visiting each other's classrooms to watch each other engage in the target practice (anchor tasks or tinkering) with their own students, followed by discussion and feedback as a grade level group. Whenever available I also observed individual coaching sessions between Lead Learners and their coaches which took place at Lead Learner's classrooms. I conducted 19 observations of these meetings and trainings over the course of the school year, totaling 79 hours of observation.

During observations I took low-inference field notes, seeking to capture events, interactions, and participants' speech and interactions (Green et al., 2006). I looked for evidence of teaching-and-learning moves in the community of practice, along with who was making these moves, teacher leader, coach, or support staff, or both. Additionally, I looked for the extent to which these teaching-and-learning moves were appropriated, along with the level of

appropriation of the target practice. My goal during observations was to describe a setting with depth and detail, noting the activities that took place, the individuals participating in the activities, and my interpretation of their meaning-making during these activities (Patton, 2015). During observations I attended specifically to coaches practice as it related to teaching-and-learning moves and the creation and maintenance of communities of practice. I documented all practice with particular attention to joint work, modeling, challenging talk and brokering, along with the conditions that supported and inhibited these moves. I focused on language use, questions asked and answered, conversations, as well as nonverbal communication between and among teachers and other stakeholders present. For example, I observed dialogue and interactions among Lead Learners, between Lead Learners and their peers and colleagues, and between Lead Learners, district administrators and the external consultant, looking for evidence of teaching-and-learning moves, along with absence of, or missed opportunities for, these moves. Whenever possible I took field notes directly in a Microsoft Word document on my laptop which enabled me to take verbatim notes from speech as often as possible. All other observations were collected by hand and later typed onto word documents. In Lead Learner meetings I was able to record language to use later as a guide in the cleaning of observation notes (Green et al., 2006).

Interviews

I supplemented observations with interviews with coaches, Lead Learner teachers and central office staff. I conducted interviews ranging from 45 to 90 minutes with 16 individuals total, 11 people from the central office and administration, including coaches, and the five focal teachers. I conducted two interviews with the central office leads for professional development, one with each coach, and two interviews with each teacher, totaling 23 interviews over the course of data collection.

Phase One Interviews: Central Office Staff and External Stakeholders. I first interviewed the P-3 director, the external consultant and the ECE liaison. These interviews focused on better understanding from central office staff responsible for P-3 design, development, implementation, and evaluation. These interviews yielded data about the history of the P-3 approach in the Vista School district, past and current involvement of teachers within the P-3 approach at various levels, the key players involved in implementing P-3, the opportunities that teacher leaders had to interact with the school district and their own individual schools regarding P-3, and the types of training, support, and professional development that teacher leaders had access to.

Phase Two Interviews: Teachers and Coaches. Over the course of the year, I conducted two, hour-long semi-structured interviews with each Lead Learner teacher and one hour-long semi-structured interview with each Lead Learner coach. I timed all Lead Learner and coach interviews to occur after observations of professional learning sessions whenever possible. Informed by the literature and my conceptual framework, my interview questions centered on the experiences with P-3 in the district and the Lead Learner program specifically, teaching-and-learning moves, the communities of practice structure of the Lead Learner programs and perceptions and understanding of teacher leadership and P-3. Interviews with teachers were focused on better understanding their experiences with the Lead Learner program, how they were or were not experiencing teaching-and-learning moves from their coaches and peers, and how they did or did not engage with the community of practice and the practices I observed during training and observations. Interviews with coaches focused on their work with the Lead Learner program broadly, their use of teaching-and-learning moves, and the instructional and leadership practices I observed during trainings. In interviews with both Lead Learners and coaches I also

asked about prior knowledge, experience and beliefs with the Lead Leader program, P-3, and teacher leadership. Through interviews I was able to triangulate data from observations, asking clarifying questions about what I observed and the significance for teachers, coaches and staff about settings and activities across the Lead Learners program. The interview protocol is detailed in Appendix A.

Document Review

I began my data collection with a document review of Vista's P-3 approach, conducting a content analysis on the district's P-3 policy (Cho & Lee, 2014). As a method to classify and interpret written materials into themes or categories which can inform meaning (Cho & Lee, 2014) this content analysis served two purposes 1) to inform my sampling strategy and interview protocols and 2) to analyze the district's P-3 and teacher learning approach. Starting with a content analysis like this helped me to describe a phenomenon of interest (Donne-Wanbold, 1992), in this case, a district's P-3 approach as a setting for exploring teacher learning. In this document collection I looked for descriptions of the P-3 policy or policies, the stated goals or outcomes of the policy, and the stated roles or expectations (if any) of teachers or teacher leaders within the policy. With this approach to documents, I was looking to establish any common patterns with the data (Cho & Lee, 2014) as it related to teacher learning with Vista's P-3 approach. I first searched for publicly accessible documents, such as board policies and announcements related to the P-3 approach. While not an exhaustive review, the goal of this document analysis was to understand the roles and expectations of teachers and teacher leaders in implementing the district's P-3 approach to better prepare myself for observations and interviews. This review, coupled with interviews and observations, allowed me to determine

what the district intended, what elements of P-3 they considered or adopted, and who were the key stakeholders and professional spaces relating to P-3 in the district.

As I engaged in other data collection strategies during the year I continued to identify and review documents relevant to the policy approach and the work of the Lead Learners, when appropriate and applicable. This ongoing document collection and analysis allowed me to fill in gaps of knowledge that I gained from teachers and central office staff and surfaced the ongoing interpretations of formal messages and intentions of policy efforts and initiatives by teachers involved in the approach. I was also able to use documents to triangulate statements from interviews about what was happening in the district and why. Documents collected and reviewed during this phase included: District P-3 action planning documents, professional development planning documents, Lead Learner application materials and announcements, meeting agendas, instructional and learning tools shared by coaches with teachers at trainings, and the school district website.

Data analysis

I used Nvivo-12 qualitative data software for organization and coding of data. In my first, initial round of coding I used low-inference codes to organize my data into categories, including 1) setting/context/condition 2) person/role and 3) action/activity. The central purpose of this first round of coding was to arrange, classify, and begin to make sense of my data in a systematic way (Miles, Huberman, & Saldaña, 2014). This organization also allowed me to create manageable sections of data for deeper review in subsequent coding. This initial, high-level coding allowed me to emerge some initial trends in the data, for example, what later showed to be high levels of appropriation of joint work moves.

In my second round of coding, I went back into the broad categories established in round one looking for instances of teaching-and-learning moves. I coded for: community of practice, joint work, modeling, challenging talk, and brokering. I also coded for conditions that supported and inhibited these communities of practice, the individual characteristics and social context of the learners, along with indicators of whether there was time or opportunity for relationship building and engagement around joint work, and the quality of the leadership and facilitation of the community of practice. For example, when coding observation notes of initial Lead Learner meetings I was able to distinguish which coaches were most involved in instruction for the whole group of teachers and the content of the instruction and which engaged primarily with their individual grade-level teacher groups. In later coding I went into these sections to determine the teaching-and-learning moves of the individual coaches and the level of appropriation of these moves. In this second round I also began to categorize individuals' understanding of P-3 approaches.

In my third and final round of coding, I coded for the level of appropriation of the teaching-and-learning moves. I broke the codes down to whether the move was taking place during the year of training for the Lead Learner teachers and their coach or whether it took place during the demonstration day, who specifically was utilizing the move, and what level of appropriation coaches and leaders were demonstrating.

To code for levels of appropriation, I used the definitions and indicators stemming from my conceptual framework (please refer to Table 4 in Appendix B). Given the current implementation of the P-3 approach I knew it was unlikely I would observe mastery of any teaching and learning move, though I nonetheless looked for indicators of mastery in the data. I used the evidence of the move to identify the level of appropriation for each move, then

collectively the levels of appropriation of the coaches, and therefore the community of practice as a whole. This third level of coding helped me to both organize and reveal trends in my data.

Analytic memos served a critical role in my own sensemaking of the data, helping me document my reflections as the sole researcher and guiding my own methodological steps (Miles, Huberman, & Saldana, 2014). As I learned about the district's approach to partnering Lead Learners with coaches, and the impacts of the substitute teacher shortage, I engaged in memoing about the data and information learned and the ways this could pair with future data collection. I also engaged in memoing after each interview with focal teachers to build my understanding of the relationships among Lead Learners and coaches, their understanding of their own leadership and their knowledge of P-3.

To guide how I categorized data into which level of appropriation it fell under, I created and used a matrix (found in appendix X) with the definition of the move and examples I created of each level of appropriation of that move. I used this matrix to guide my analysis of a piece of data, for example, when a coach was guiding a conversation about implementing a new component of the target practice I would refer to the definition and level in the matrix to determine if that talk was surface appropriation (e.g., using language to describe the importance of certain talk moves but not actually using those moves), conceptual appropriation (e.g., using specific words like "why" or "how"). For each coach I then looked at the cumulative data of all of the instances of their use of a move, coupled with the level of appropriation, to categorize them with a specific level for each move (see Table 1 in Chapter 4 for a full list of coaches and levels of appropriation).

Confidentiality

In all data collection—observations, interviews, and document review—I aimed to be as clear and transparent as possible in explaining my role and purpose for engaging with the Lead Learner community. While there was no inherently controversial or political content in this study, I was nonetheless asking teachers to share about coaches and staff who served in roles of authority and for coaches to share about supervisors. Therefore, the need for trust and confidentiality about what participants were sharing and the ability to remain anonymous in the study was vital. Participation in this study was voluntary for all participants and they were told they were able to refuse to participate or withdraw from this study at any time without penalty or loss of benefits. To contribute to trust building with participants I ensured that all information and data collected were all kept confidential, on password-protected computers, in password locked files, that only the principal investigator (myself) had access to. Interviews were recorded on recording devices where all participants were assigned a pseudonym to code the study information. Links to participant names and the pseudonym codes were kept in a separate, secured location and only pseudonyms were used.

Limitations

My study has limitations, many of which stem from my methodology. One limitation was the time period of my study. While I was able to follow the Lead Learners over the course of a full school year and learn how they both started and completed one cycle of the Lead Learners program, by investigating only one year I therefore had only one example of seeing a target practice selected and executed. Comparing the Lead Learner program over several years, for example, could have allowed me to see long term patterns of the process for selecting anchor tasks and the ways that the community of practice did, or did not, change as P-3 implementation

progressed. This study was additionally limited in that I used only one study site as opposed to a comparison of two or more sites. While using one site allowed me to explore one program deeply, using two sites may have shown how different districts managed similar levels of P-3 implementation or teacher learning. I found what appeared to be a good site at the time of my selection process that seemed likely to present opportunities for teacher learning, and this site also met the physical and geographic restrictions (e.g., I had to be somewhere I could travel to relatively close to my home by car). These geographic limitations however prevented me from selecting sites further away that may have been in more advanced stages of P-3 implementation.

As the sole researcher for this study there was also therefore a limit on where I could put my time and attention. This limitation means I may have missed opportunities for observation, for example staffing and planning meetings with just Lead Learner coaches, and therefore missed any data associated with teaching-and-learning moves or understanding of P-3 from these missed observations. Another limitation from this time constraint as the sole researcher was the inability for as extensive of an interview list as I would have hoped for. I did not interview visiting teachers attending demonstration days, for example, or review any exit slips from demonstration days and therefore did not collect data on how these days were experienced. I did not have follow up, end of the year interviews with coaches and central office administration where I could have presented some initial learning or noticing's for their comment. Lastly, I was not able to conduct "reliability checks" (Merriam, 2009) with participants which limited my ability to confirm my findings.

Chapter 4: Outcomes

In this chapter, I discuss the extent to which the Vista School District was in fact supporting teacher learning of P-3 through the Lead Learners program. I first show the extent to which coaches in the Lead Learner program were appropriating the kinds of teaching-and-learning moves that my conceptual framework suggests would help teachers change their practice. I found that most coaches demonstrated high levels of appropriation of these moves. However, what the coaches were supporting teachers with was not a distinct P-3 practice and therefore the district was not yet creating P-3 specific supports for teacher learning.

Lead Learners in Vista: Support for Teacher Learning Using Teaching and Learning Moves

The Lead Learner coaches used teaching-and-learning moves in their efforts to support teachers in improving instructional practice with a focus on ambitious student discourse of mathematics and science and specifically anchor tasks (for K-4 students) and tinkering (for PreK students). The following table lists all the coaches[1], the grade level they worked with, and the level at which they appropriated teaching-and-learning moves. This table shows how Lead Learner coaches overall appropriated teaching and learning at high levels—all moves appropriated at least at a surface level and many at a conceptual level. While there were generally high levels, there was nonetheless some variation among coaches and moves: all eight coaches appropriating joint work at a conceptual level, six appropriating modeling at conceptual level, four appropriating brokering at a conceptual level and two appropriating challenging talk at a conceptual level.

[1] All names here and throughout the findings chapters are pseudonyms

Table 3

Coaches Levels of Appropriation of Teaching-and-learning moves

Coach	Grade level focus	Joint work	Modeling	Brokering	Challenging Talk Moves
Mary	PreK	Conceptual	Surface	Conceptual	Surface
Jennifer	PreK, Kindergarten	Conceptual	Conceptual	Surface	Surface
Madi	Kindergarten, Second grade	Conceptual	Conceptual	Surface	Surface
Alison	First grade	Conceptual	Surface	Surface	Surface
Sandra	First grade	Conceptual	Conceptual	Conceptual	Conceptual
Simon	Second grade, Fourth grade	Conceptual	Conceptual	Conceptual	Conceptual
Rachel	Fourth grade	Conceptual	Conceptual	Conceptual	Surface
Leah	Fourth grade	Conceptual	Conceptual	Surface	Surface

Joint Work Moves

All coaches consistently demonstrated understanding of joint work moves as important strategies to support teacher learning and work towards changing teacher practice. My data therefore show that they appropriated joint work moves at a conceptual level, regularly and consistently providing opportunities for the Lead Learners to make sense of the target practice and connect the practice to existing work of value to learners.

Coach Simon demonstrated his conceptual understanding of joint work by explaining the importance of connecting what he was hoping teachers to learn with what his community of learners already valued. Simon explained the rationale for the Lead Learner structure, and the job of the coaches, as helping create an intrinsic sense of value first among Lead Learner teachers and then to the visiting teachers attending demonstration days. He explained:

> I think participants [visiting teachers] need to see that the thing that we're studying has value for them and for their students. They don't need to see that we [Lead Learner teachers] are perfect in our own understanding of that content, but they need to see that we're expert enough to have valuable things to bring to them. I think that's kind of a basic starting place.

In practice, Coach Simon created opportunities for the Lead Learner teachers to make sense of how the target practice connected to things they already valued by regularly soliciting feedback directly from the Lead Learners about what they were already doing in their classrooms that would support this new learning of anchor tasks. For example, at the first Lead Learner meeting of the year Simon led a conversation with the third grade Lead Learners. He asked them about the demonstration they just watched showing how to sequence specific steps in an anchor task. He asked, “Is there anything raising more questions?” Several teachers asked about supporting dual language students during mathematics in anchor tasks. Simon responded, “That’s a great question. I have ideas, but what are partnering strategies that you [other third grade teachers] use to support your students? Do you have strategies that you find helpful?” The Lead Learner teachers shared their strategies for existing practice with dual language learners around language arts instruction, citing one approach they called a “ghost coach strategy” where one student, with permission from the teacher, whispers to another student to help them understand something that

was said. Simon then prompted the teachers to consider how a "ghost coach" strategy could serve as a tool for dual language students during anchor tasks and shared how he understood the initial steps of setting up an anchor task when he himself first learned the strategy. Simon used teachers' current classroom practices as a jumping off point to make sense of anchor tasks and begin to learn together how to work in new instruction.

Third Grade Lead Learner teacher Vivienne shared how Coach Simon and Coach Rachel (Simon's third grade coaching partner) set up the process for grade-level instruction of anchor tasks. She explained how her entire cohort of third grade Lead Learner teachers learned in community, in conjunction with the coaches, to define for themselves what anchor tasks as the target practice should and could look like. With ample opportunity to understand and make sense of the practice they could then engage in sharing this practice with other teachers. She explained how this looked at the first few trainings of the year, saying "what we want anchor tasks in math in Fourth grade to look like, and once we've kind of figured out [how it looks] and you know, wrapped it up in a bow and have it ready, [we can] present it to other teachers." After Simon and Rachel shared the definition of the target practice the learners engaged with their coaches in determining how this practice fit within their existing frameworks.

Coach Leah. Coach Leah demonstrated conceptual understanding of joint work as an important teaching and learning move in her explanations of her own professional learning and training and the ways she was instructed in specific, shared definitions of content, which she then shared with the Lead Learner teachers. She explained her process of mathematical learning saying:

> First, you need to understand the content, how you can do it and how you value it, then how would that apply to your students, to young children. You then turn that value of the

> practice of your own learning and share that with students. There's this third little in-between element of you know the math [pedagogy], you can do the math yourself, you know the teaching and you also know … which kids are doing this in their [own] math, what does it mean, if they really understand, partially understand, [and then] how can you leverage that? And what teaching moves work to move them along, which is like, "I can do the math, but can I help kids with that trajectory?" [How can you move] beyond just, "I showed you how to do it, now just do it."

She described how work with young students mirrors work with adult learners—the teachers who work directly with young students—in understanding a content individually, then collectively making it a practice of value as a community and then sharing that practice.

In practice, after introducing a central tenet of anchor tasks at the September monthly training—selecting and sequencing—Coach Leah asked Lead Learners to consider how this strategy fit within their existing practice. She explained that teachers would need to be very intentional about selecting the components of the anchor task they would introduce and deciding the order in which they should be presented. She asked the Lead Learner teachers to work in pairs to connect these ideas to existing practice and to trigger conversations about ways in which this practice could differ for individual context but stay true to existing teaching philosophies they valued. She said, “in a moment I’m going to have you talk to a partner [and share] what’s something new or familiar? Then popcorn out: do we have a person at each table who is going to share something? With your partner [discuss] what is one thing, a wondering, an affirmation, that you have?” As teachers shared their ideas out loud Leah summarized and extended these comments to the whole group on how these connected to existing practices, their prior knowledge based on previous trainings, and continued to ask them to verbalize how this new

practice made sense for them, for example responding with “yes, that’s another example of a powerful [instructional] routine” and “what does this [new approach] shift for you?”

Coach Mary. Coach Mary consistently created opportunities for the teachers to make sense of their target practice—tinkering—paying particular attention to how to make it connected with their existing practice of science and mathematics. As the coach responsible for introducing the district to the practice of tinkering she provided clear and consistent definitions of the target practice along with the rationale for using this approach with preschool teachers. For example, she explained why it was important when selecting a new instructional approach, she wanted to see how she, and the district, could, “take advantage of the things that already happen in a preschool day.” Building off what teachers already knew—and already did—would be instrumental in creating a practice that could change in meaningful ways.

In practice Mary showed PreK teachers how to make these connections. Because they were teaching in only half day programs, the PreK teachers had more limited time than their K-3 peers to embed tinkering into their lessons. Mary shared that this time constraint made it critical for coaches to support teachers in making tinkering fit within existing practice in meaningful ways, building value into their existing structure and creating intrinsic motivation. For example, during the October break out session of the monthly Lead Learners training Mary repeatedly engaged the Lead Learner teachers in questions about “fit” with tinkering and their existing schedules, practices, and routines, starting by asking questions about teachers’ existing structures with their classrooms and routines, then asking how they engaged with individual children working on specific goals and expectations. Mary asked the group of teachers “what [learning] stations are set up?” and “what is your theme?” After establishing how classroom structures were currently set up Mary then followed these questions with additional questions and comments

about incorporating tinkering. When Teacher Laura shared how she was understanding a potential tinkering activity with balls and ramps Mary asked her "how could you add that [practice] in with the Fall theme?" Laura shared her strategy and Mary continued to push her thinking on embedding the practice with existing instructional requirements, such as data collecting, after Laura expressed both questions and concerns about managing data requirements. Mary asked, "would that [tinkering move] allow you to collect [assessment] data?" Since Laura was primarily focused on the requirements to collect and document data, Coach Mary focused on the connection between embedding tinkering practices and the existing needs of data in the classroom.

Coach Jennifer. Coach Jennifer appropriated joint work moves at a conceptual level and, like her PreK colleague Coach Mary, she consistently provided opportunities for Lead Learners to understand what the target practice was and how the target practice connected with their existing practice. In her conversations about tinkering, Jennifer repeatedly discussed the importance of working with teachers to share a definition and understanding of the target practice—tinkering—and shared her own classroom teaching experience and learning of tinkering as examples. At the March Lead Learner meeting, for example, Coach Jennifer talked with the PreK teachers about how they could potentially structure their time both that evening and for the rest of the school year since the PreK demonstration days were completed. In this conversation Lead Learners and coaches negotiated a new adaptation of the target practice—tinkering—to ensure the focus remained with their existing instructional goals. Jennifer began this conversation with the PreK Lead Learner teachers by sharing her own goals and agenda ideas, then asking the other teachers and coach how they thought they should all proceed:

> So, looking at the agenda [and] my goals for the rest of the year … I was thinking our time tonight could be actually working on … reviewing the [new literacy] resource and digging into the big picture [and] brainstorming, using the resource you already use, Creative Curriculum. What is necessary to build a PreK resource. Does that make sense?

Each PreK teacher and the other PreK coach, shared their own goals and how they related to the tinkering curriculum. For example, one teacher suggested "phonological awareness" as the goal which pivoted to discussion of having children "play with words." Jennifer then transitioned the conversation to the idea of "word study" where children would use math patterning ideas, such as rhyming, to embed and connect the practices from tinkering into literacy. Teachers and coaches spent 30 minutes on this conversation, exchanging and building ideas from each other on how to define and redefine the practice while still having the practice fit with the myriad existing regulations, requirements, and goals of both the district and the funders. The following is an example of one exchange between the Lead Learners and Coach Jennifer where Jennifer is soliciting feedback from the teachers in order to help set a new definition of practices for the "word study" approach and describing what her own learning will be like, how she will work alongside the Lead Learners to develop this new practice.

> Coach Jennifer: Is there anything in [the assessment program] that you keep track of with phonemic awareness?
>
> Teacher J: Counting syllables, beginning sounds.
>
> Teacher Laura: And putting together compound words.
>
> Teacher J: Rhyming, alliteration, syllabus.
>
> Teacher S: And then there's the actual phonics with the letter sound recognition.

Jennifer then suggested that the teachers use the weeks until their next meeting to play and practice with their ideas. She asked the group:

> Are you interested in playing around with some of these? I'm going to task myself with doing an "Edwards Scissorhands" version of what you're doing, and you can say maybe this works and give it a try. We may not be able to publish to the masses by May but [could] see how it works?

Jennifer and the teachers decide how they will utilize their existing assessment approaches and instructional goals (e.g., rhyming) and how they can all experiment with this learning before continuing to define what this practice could then look like, collectively, as a group.

Coach Madi. Coach Madi appropriated joint work at a level of conceptual understanding, explaining how the Lead Learner program started with sharing definitions of the target practice and the goals and programs for the year. At the first meeting of the year, for example, Madi explained that the group defines together a shared definition of what it means to be a Lead Learner, what an anchor task accomplished, and the subject matter. She said, "that first meeting, a lot was about what does it mean to be a Lead Learner, what are the expectations and [how should we] get into the math content … and each Lead Learner comes up with goals, individual goals, [then] team goals at each meeting, and that helps drive our focus."

In practice, Madi would ask Lead Learners to describe their own existing goals and standards for instruction and look for ways to connect what teachers valued collectively about that practice to make connection the anchor task. At a monthly Lead Learners training, for example, Madi introduced the idea of "selecting and sequencing." She explained:

> When selecting and sequencing [for anchor tasks] start with your standard: does that align to the anchor task? And does that align to the lesson? So, knowing that, you make

> that professional decision yourself, if I change xyz it will align better. So … look at the anchor task, it's not perfect, do you need to make adjustments to service your kids."

She then described the beginning steps of "selecting and sequencing"—choosing among goals within a standard and planning steps of the lesson in a sequential order to meet those goals. She encouraged teachers to work within the existing practices—grade-level standards—that they already needed to accomplish.

Coach Sandra. Coach Sandra demonstrated conceptual understanding of joint work, for example, when she described how a key strategy of the Lead Learner program changed during the school year when data collection took place. As a result of mixed results of target practice implementation in the past, the P-3 director and team decided to have visiting teachers "try on" the target practice during demonstration days and create and learn alongside the Lead Learner teachers. Sandra explained they added a component:

> … where teachers actually try it on that same day … Because most of the time, it's been, "we're going to watch somebody, we're going to debrief, etc." And how might you bring that back to your own classroom? … So we added this where a [Lead Learner] teacher demonstrated an entire lesson … and then she came back, we co-planned [with the visiting teachers] what's going to happen next, based on what we saw and what we've learned from what students did, and you're going to then go teach that.

This added component of the Lead Learner program set up a space for coaches to open up their own practice as experienced former classroom teachers and create lessons together with other teachers both familiar and newly exposed to anchor tasks.

In practice Coach Sandra encouraged Lead Learner teachers—and visiting teachers—to embrace new and challenging practices by connecting the new learning to their existing

instructional goals and objectives. Like Coach Madi, Sandra regularly referenced the grade-level standards and practices that her group of Lead Learners was working with, encouraging them to consider what they valued together as professionals. For example, Sandra described how the Lead Learners were working within the constraints of instructional pacing guides. She said, "that came up a lot in conversation [how to use the pacing guide and anchor tasks] … we have a pacing guide, and even though it's to help guide us, what does year-long look like? We need to use our professional judgment and what we know about our students to make that coherent with anchor tasks." The group of first grade Lead Learners worked collectively to decide, based on their judgment and experience, how to embed this new practice—anchor tasks—into a workflow and plan that would still meet their teaching goals.

Coach Alison. Coach Alison, who also worked in first grade with Coach Sandra, demonstrated her appropriation of joint work moves through her facilitation of conversations between and among Lead Learner teachers. At the May Lead Learner meeting for example, Alison guided a conversation with the first grade Lead Learners about their upcoming demonstration days and the ways that Lead Learners would be poised to show how the anchor tasks connected to visiting teachers' existing practice. In a discussion of the logistics of the day, Alison asked teachers to consider how their learning of anchor tasks could support visiting teachers in making sense of the practice within their own instructional practices. One of the Lead Learner teachers asked a question about sharing facilitation time during the demonstration day and Alison walked through the full agenda. She explained that they as coaches would spend time that day helping Lead Learners set intentions about what visiting teachers would see during the demonstration. These intentions would stem from the Lead Learner teachers themselves based on their observations and understanding of the year of training and experience with anchor tasks.

After the demonstration, debrief, and lunch, visiting teachers would then return to co-plan the next anchor task with the Lead Learner, deciding together what would come next in the instructional. Then visiting teachers had time at the end of the day to plan with the Lead Learners for their own future instruction.

During that first-grade demonstration day both Coach Alison and Lead Learner teacher Sarah provided opportunities for visiting teachers to contribute their own ideas and experience to the process of planning as they worked to connect the new practice of anchor tasks to their own existing practices of mathematics. Throughout their facilitation of the conversation both Sarah and Alison asked visiting teachers about their existing mathematics practice and approach to student discourse. After observing Sarah's instruction of the target practice Alison and Lead Learner Teacher Sarah jointly facilitated a conversation with visiting teachers on how they (the visiting teachers) would plan and then implement a mini anchor task with Sarah's students in the afternoon after watching Sarah teach an anchor task in the morning. Coach Alison began this section of the agenda and announced, "We've reached the portion of the day where we will plan to go into Sarah's classroom to teach." Sarah first asked the visiting teachers about their own math instruction and experience with portioning, soliciting their feedback on their own existing mathematics practices. She then explained potential options for extending the morning's anchor task, an activity on fractions and partitioning a square (how to divide a square into equal parts). The visiting teachers talked about the specific learning standard for first grade mathematics and Alison shared the standard: how to partition shapes. A visiting teacher then asked if they had begun practicing with circles yet and Sarah shared this was their first day and had only worked on squares, which was her way to assess students' existing level of understanding with the standard. Two other teachers then shared the specific mathematics activities they used in their

own classrooms when working on problems of fractions and the whole group of visiting first grade teachers together spent several minutes comparing their approach to these activities. The visiting teachers then agreed that circles will be their focus for the afternoon mini lesson and Sarah offered rectangles as an option as well. Alison then suggested people check in as teaching teams and decide how to divide the instructional tasks when they returned to the classroom to practice. Pairs of visiting teachers took supplies to begin their lesson preparation, asking Sarah questions about both her students and the lesson as they worked.

Modeling

Five coaches appropriated modeling at a conceptual level and three at a surface level.

Conceptual Appropriation of Modeling. The majority of Lead Learner coaches demonstrated conceptual appropriation of modeling as they regularly demonstrated anchor tasks and tinkering coupled with explanations of the elements of their demonstration.

Coach Simon. Coach Simon demonstrated his understanding of modeling as a move to help teachers shift practice in his comments about Lead Learners and in his communication with Lead Learners directly. During a central office training, for example, Simon used the anchor task observation form, a tool designed for teachers to observe their peers, as the anchor for his own demonstration of setting up an anchor task for second grade. He set up the steps of an anchor task, taking on the role of a classroom teacher, using a white board to introduce a mathematics problem that would anchor a conversation with students. Simon would then periodically pause his sample lesson and answer out loud the questions on the observation form, for example, telling the group how he was writing down steps of a specific mathematics word problem (the first step to observe on the observation form).

Lead Learner teachers across second and third grade corroborated that Simon frequently used modeling as a main teaching move. For example, Luisa explained,

> I learned a lot from the videos [that Simon shared] … even a meeting where we just watched [Lead Learner teacher] Vivienne's video, I learned so much … I just keep trying on different encouragement strategies I saw in those videos, that helped those kids feel safe to share, management strategies as well, because I mean it's easy to put up a[n anchor task math] problem, but it doesn't necessarily mean it's going to go anywhere.

Coach Madi. Coach Madi appropriated modeling at a level of conceptual understanding. In interviews and follow up conversations from trainings, Madi described the goal of Lead Learners as a professional learning strategy rooted in peer demonstrations. For example, she described the value she saw in having teachers learn a new instructional practice from their peers, watching that practice in action, and the difference she saw in their understanding.

In practice, Madi demonstrated anchor tasks with Lead Learner teachers, describing her actions during the demonstrating and then explaining how Lead Learner teachers should follow that lead, also being explicit with teachers about their moves. At the kindergarten cross site visit for example, Madi led a sample lesson taking on the role of a kindergarten teacher setting up an anchor task with students. During the demonstration she also asked the Lead Learners to reflect on how they would use these same steps in their own demonstration days and consider, "no matter what classroom they walk into, what should kindergarten teachers see when they see an anchor task? During the demo day, during debrief, we want you to be transparent and share: this is what I thought would happen, these are the decisions I made."

Kindergarten Lead Learner teacher Nancy explained how Madi's demonstrations and the peer demonstrations that Madi organized supported the development of her own instruction:

> [Coaches] come in and they help you plan your lesson … like [coach] Madi is going to come in and model a math anchor task lesson for me … Then we also, as part of Lead Learners, get to observe each other … they're the best because … there's nothing better than to go into someone's classroom and see them teach and just see how they do it. I mean you can hear about it until people are blue in the face but until you can actually see it, at least for me, you don't know it.

Coach Sandra. Coach Sandra demonstrated her conceptual understanding of modeling and its value as a teaching and learning move and through her descriptions of her intention to use this move. For example, she explained modeling in Lead Learners as distinct, and more valuable, then other forms of professional learning, explaining:

> [Lead Learners] are not giving you information or imparting information [like a traditional lecture-style PD session]. They're demonstrating instruction that they've refined. And we don't consider their lessons model lessons …. This isn't going to be perfect. You're demonstrating. You're going to see teacher moves based on their knowledge of their students. But that's what we're growing, is that pedagogy and that flexibility, so I see that teacher leadership in that capacity.

In an interview, Sandra explained, "Where I see success is in the growth of [Lead Learner teacher's] ability to be a lead learner and talk through and rationalize the moves that they made during the demo lesson." It is not only the demonstration of the target practice but the ability to describe what is happening in the target practice that makes a difference for Lead Learner teachers and their ability to in turn share this learning with others; Lead Learners "rationalization" of these moves is a critical step in their process of changing their own instructional practice in the service of, eventually, helping others change their own practice.

Coach Sandra also explained that a central purpose of the Lead Learners was for teachers to engage their peers through their conversation about what they were doing and why. She said the success of Lead Learners depended on "growth in teachers' ability to be a lead learner [of their peers] and talk through and rationalize the moves that they made during the demo lesson…. And then supporting their colleagues in extending and growing their instruction."

Coach Rachel. Coach Rachel similarly described the pivotal role of modeling as a key component of the Lead Learner's approach to teacher learning and emphasized the importance of modeling in real time in authentic settings,

> A big advantage that I see from this [type of PD] is you're seeing a peer. It's one thing if a specialist comes in and demos something with your class, but this is seeing a teacher with his or her own students so not only are you seeing how they teach math, but you're seeing those little instructional moves, those routines that are in place that foster management techniques. You're seeing a lot that you wouldn't necessarily see if it was a random group of kids with a random adult. And then there's a lot of power in seeing a teacher with her own class.

In practice Rachel frequently modeled during the monthly trainings with Lead Learner teachers. During a training in the winter, for instance, she demonstrated a component of the target practice, how to introduce model making mistakes so students can practice making and correcting mathematics decisions. She showed the Lead Learners one of common mistakes a student may make with a certain math problem, then pauses to describe how a teacher could ask that student's permission to share the steps of their mistake and solicit input from other students in the class. She then explained the importance of this step to Lead Learners saying, "It's really high level to have a kid explaining what someone else [did]. It's high student discourse." Her metacognition

of her demonstration helped teachers connect the practice to the overarching goal of Lead Learners, building ambitious student discourse around mathematics.

Coach Jennifer. Coach Jennifer also demonstrated modeling at a level of conceptual understanding, consistently demonstrating tinkering and anchor tasks and using metacognition in conjunction with the demonstrations. During one monthly Lead Leader training, Coach Jennifer introduced a mathematics tool called "wreck 'n wrecks," a type of mini abacus that can be constructed with simple classroom materials and are designed for both teacher demonstration and as tools for children's play with mathematics. In front of the whole group of PreK Lead Learners she showed how to build the wreck 'n wrecks with pre-cut cardboard, pipe cleaners, large beads, and tape, holding up her materials and describing specific problems that could be used. She showed how a teacher could move the bead from one side of the tool to the other during a frequently used classroom song about counting like "five little ducks." She then described how she used them in a sample lesson with young children and the different ways young children used the wreck 'n wrecks during play after watching her with the tool during circle time.

Coach Leah. Like the other coaches who demonstrated appropriation of modeling at a conceptual level, Coach Leah demonstrated her appropriation in both language and practice directly with the Lead Learner teachers, in both small and large groups. Coach Leah began a sample lesson during a Lead Learner training by sharing with the whole group of Lead Learners that she and Coach Madi would take the role of teacher (Leah) and student (Madi) to demonstrate how to set up the initial steps of an anchor task by writing the problem on a white board while talking about the "story" of the problem. In her framing of the sample lesson, she explained what she intended to demonstrate was a "model" lesson but not a "perfect" lesson and an opportunity to see what anchor tasks could look like in practice. She wrote a problem on the

board and paused after each step in the problem to ask Madi a question about what she had done. Several times during her demonstration Leah intentionally wrote incorrect responses to her own questions to trigger discussion among the students about how they could use past strategies to solve the problem, such as a number line. After using an incorrect response, she would tell the Lead Learners why she chose that "wrong" answer and what additional response she was hoping for from students, for example using the strategy they had practiced the previous week when working on a different standard.

Surface Appropriation of Modeling. Coaches appropriated modeling at a surface level by sharing conceptual understanding of the value of modeling while only occasionally engaging in demonstrations themselves or offering only partial explanations of their moves while they were demonstrating. Coach Mary, for example, appropriated modeling at a surface level, frequently explaining the distinct steps of a project done with tinkering, explaining to the teachers why the steps were valuable. She rarely, however, did the demonstrations herself. In a cross-site visit of PreK teachers, for example, Mary commented frequently during Teacher Laura's presentation of ramps and balls. Mary explained why the visiting teachers would need to see how Laura prepared, how she set up the activity, what she asked children to do and why. Mary herself though did not demonstrate any of the actual actions of practicing rolling balls down the ramp.

Coach Alison demonstrated surface appropriation of modeling, demonstrating some of the theoretical underpinnings of modeling a target practice as a critical teaching and learning move, however, like Mary, she rarely engaged in direct demonstrations herself. For example, Alison shared her understanding of the critical value of peer demonstration and for impacting teachers' practice. She said, "I think it's one of the more powerful structures for classroom

teachers [the Lead Learners in demonstration days] just because they feel validated in seeing a peer doing what they do day in and day out. Where it's not a demo from us or a demo from a consultant, but it's somebody who lives a very similar reality to them." During a whole group training of Lead Learners Alison commented on teachers' practice, for example, when Lead Learner teacher Sarah was showing a video of setting up an anchor task with her first graders focused on shapes. Alison described which steps Sarah was taking to set up and introduce the math problem, and what parts visiting teachers would need to hear about it. So, while she demonstrated the value of metacognition, Alison herself did not use these moves during an actual demonstration of the target practice.

Brokering

Three coaches appropriated brokering at a conceptual level and five appropriated brokering at a surface level.

Conceptual Appropriation of Brokering. Coaches' conceptual appropriation of brokering took the form of both buffering and bridging.

Coach Sandra. Coach Sandra showed conceptual appropriation of buffering as she consistently carved out time for the Lead Learner teachers to meet at their school sites for time to work on anchor tasks and ensured that they themselves did not have to engage in any work with scheduling or room arrangements at their sites so they could instead focus on the target practice. With school administration providing challenges and constraints for both individual Lead Learners and the program as a whole, for example, Sandra used her role as coach to carve out time for the teachers and buffer them from competing priorities from the district. Sandra explained, for example, her role as a coach in supporting Lead Learner teachers when their

school principals were not engaged with the Lead Learner program or providing time for them to do any additional training or work. She explained:

> We need to get principals onboard too, that we're here to support them in the growth of their teachers' instruction. We see this all the time, that contexts and sites are so different. Even their schedules are so different. Even the way that they provide support to teachers is different…. Down to para time, it's so differently used within sites. So, we're trying to negotiate, just us, we as specialists negotiating that support [for Lead Learners]"

Coach Sandra also showed her conceptual understanding of bridging by consistently introducing concepts from work outside of the Lead Learners that would nonetheless support their target practices. In the fall, for example, Coach Sandra introduced strategies from her professional development work with dual language teachers into the Lead Learners program. In a breakout group with first grade teachers, she frequently bridged new ideas to the Lead Learner teachers and buffered from unproductive uses of time. Dual Language teachers were using GLAD (Guided Language Acquisition Design) in their own professional learning and Sandra suggested several specific strategies from GLAD, including student to student partner conversations and using additional visuals throughout the classroom. Though designed for supporting English language, these strategies had applications for students across all languages.

Coaches Simon and Rachel. Coaches Simon and Rachel also showed conceptual understanding of brokering in the practice with Lead Learners as they bridged new ideas from outside of their existing classrooms and schools and bridged distinct ideas between and among teachers. In the January Lead Learner meeting, for example, Coach Simon set up a video of a recording he took with one of the Lead Learner teachers. Following the video there was confusion about what the teacher was asking of the students during the anchor task, specifically

how they were grouping blocks by different numbers. Coach Rachel then led the group to the concept of "focusing vs funneling" along with a set of resources from her previous STEM training. She explained that these resources, though designed for other projects, would readily apply as tools to use with anchor tasks as well.

Coach Mary. Coach Mary introduced one of the most significant outside resources to the Lead Learners, researching and introducing the practice of "Tinkering" to the PreK Lead Learner teachers (which I describe in detail in the second half of this chapter). She applied the full range of these practices in her work with the PreK Lead Learners in both monthly trainings and classroom visits.

Surface Appropriation of Brokering. Coaches who demonstrated surface appropriation had just one or two examples of brokering or buffering during the year that I was able to observe, and therefore did not demonstrate consistency of the move.

Coach Madi. In one example of bridging new ideas, Madi facilitated a joint session of first grade and kindergarten Lead Learners together, where she geared the conversation towards the expectations of other grades and the continuity of skills with regards to math (specifically about a dice game). When one first grade teacher told the group that kids coming into her class did not have the dice skills she was explaining, Madi began to describe what was available for kids in both district kindergarten classrooms as well as community based early learning programs. She shared details of these outside curricula to the group of first grade teachers. She did not, however, show any other intentional planning of bridging during the year.

Coach Alison. Coach Alison also demonstrated brokering at a surface level in a similar fashion as Coach Madi; she facilitated a few conversations about sharing new strategies and practices across grade levels. For example, in a monthly Lead Learner training of first grade and

kindergarten teachers together Alison led a conversation among the two groups of teachers about the "progression of skills" from grade to grade—how skills learned in one grade are and are not supported by work in other grades. To support this conversation Alison introduced a video from an outside elementary school on representation and conceptual understanding in mathematics. The video showed how this addition, subtraction, subitizing, and visualization—all early elementary mathematics skills—are designed specifically to help students prepare for work that will matter in Fourth and Fourth grade and how these skills make very specific connections from grade to grade. She shared her hope that this video would serve to draw connections among the skills relevant from one grade to another that culminated in fourth grade mathematics standards. She did not, however, have other examples of bridging.

Challenging Talk

Only two coaches engaged in challenging talk at a level consistent with conceptual understanding, with the remaining six demonstrating this practice at a surface level.

Conceptual Appropriation of Challenging Talk. Coaches Simon and Sandra demonstrated conceptual appropriation of challenging talk by continuously asking Lead Learners teachers to explain their practices.

Coach Simon. Coach Simon consistently made talk moves to challenge Lead Learner teachers' thinking and extend their conversations about what they saw and observed. Simon also demonstrated conceptual understanding of the value of challenging talk to push teachers' practice forward. At the third-grade cross site visit, for example, he set up the day for the teachers explaining how the coaches were planning to give targeted feedback that could be critical, building trust so that the whole community could be vulnerable.

> Let's talk about the type of feedback we'll give. We want to give [you] specific feedback so you can replicate it, especially because you're going to be asked by teachers who observe what you did and why. We will also give critical feedback. We're building trust among each other, and we don't always have that.

In this example Simon showed the Lead Learners how they would work to build trust in efforts to share the kinds of feedback that may challenge teachers to re-think their practice. At the debrief and feedback portion of this same cross site visit Simon guided the third grade Lead Learners by asking the group to shift to "wonderings, suggestions, and feedback" after reviewing Teacher J's lesson, guiding the teachers in the following discussion to think specifically about their instructional practice, not simply what they did or did not like:

> Teacher J: Lay it on me, come on!
>
> Lead Learner Teacher Vivienne: Reiterating what Simon said, [working on] balance between teacher talk and student work.
>
> Teacher J: Did I look flustered?
>
> All the teachers said no—then they talked about how she was engaged with her students.
>
> Coach Simon: The thing I'm still wondering about is how are we trying to develop this concept of unit fractions for our students.
>
> Teacher J: I felt like the learning target was just not powerful.

The group of teachers then shared about the process of teaching as compared to understanding the concept they are trying to teach, how much to tell students and how much time to spend on a task. During and after this conversation Coach Simon continuously pressed them to consider how they could apply increasingly complicated components of standards to their lesson plans through the use of anchor tasks. In another example at the third-grade cross visit, Coach Simon asked

Teacher Vivienne to share how she had decided to change her instruction, saying "why did you choose to make that swap?" The change was a variation from the lesson plan the teachers had received and he probed her a few times so she could share her decision making with the group.

Coach Sandra. Coach Sandra consistently used talk moves to push teachers' thinking about their practice and showed her conceptual understanding of why challenging talk was an important teaching and learning move and her intentions for using the move in her own coaching. Coach Sandra used talk moves most frequently in her targeted and probing questions of teachers to elicit their explanations of differing approaches and strategies. At one of the monthly Lead Learner trainings for example, she provided Lead Learner Teacher Sarah with guiding questions before her peers watched a video on practicing an anchor task. She said, "[Sarah] can you explain why you chose this, the way in which your lessons are going since you're not following the pacing guide? Not that it's wrong, it's just different." Sarah then shared with the group why she was not using the district-mandated pacing guide and why she felt the other Lead Learner teachers should consider doing the same. Together Sarah and Sandra then led a discussion about the ways the existing pacing guide restricted teachers' existing practice and how using individual ideas of pacing could expand instruction and the use of anchor tasks. In this example Coach Sandra used specific phrases like "why" and "can you explain" to push not only Sarah's thinking but the whole group of Lead Learner teachers participating in the training.

Surface Appropriation of Challenging Talk. The majority of coaches demonstrated challenging talk at a surface level, asking many questions about teachers' practice but rarely using questions to deeply probe their instructional practices or decisions. They often described a conceptual understanding of their desire or intention to push practice forward, demonstrating

emerging understanding of the conceptual rationale for challenging talk as an important teaching and learning move, but their coaching didn't yet reflect this rationale.

Coach Jennifer. Jennifer demonstrated her understanding of the power and value of talk broadly to encourage relationships, trust and thinking, however, this talk was not in the service of changing instructional practice. Jennifer e often asked Lead Learners to use challenging questions in their interactions with their peers while other times she encouraged them to limit their challenging talk with visiting teachers. For example, at the cross-site visit for PreK Lead Learners after observing one teacher demonstrating her tinkering lesson, she asked the group "What did you notice," before soliciting feedback from each PreK Lead Learner teacher. She then shared the list she herself had created of "noticings," for example, how Teacher Laura's strategy of charting children's comments and vocabulary could support STEM standards. She also solicited questions from the other teachers on how practices from tinkering that they observed did and did not match with their existing curricula and projects. She consistently asked teachers to explain what they were doing, asking them why they made certain instructional choices, however, she did not ask how this practice differed from what they were doing previously, or how they anticipated making any changes to practice. While initiating conversation about existing practice she did make any moves to challenge that practice. In another example, Jennifer guided Lead Learner teachers to not always push visiting teachers too far in their thinking or practice but instead to focus on creating a supportive space. She explained, "sometimes these [demonstration] days turn into support group days especially if they fall into stressful times. So [debriefs] may become off topic but it's one time teachers have to share with each other, so just to be prepared for that."

Coach Madi. Coach Madi demonstrated appropriation of challenging talk at the level of surface features, using some talk moves with the opportunity to discuss what was learned, but the talk did not always deeply challenge Lead Learners' understanding. In the January meeting of Lead learners, for example, Coach Madi explained the purpose of Lead Learners as supporting visiting teachers, however, she also cautioned against creating a sense of discord or conflict, instead encouraging Lead Learners to focus primarily on support instead of challenge. She said to the group of Lead Learner teachers, "when we think what's the purpose of [Lead Learners]? To support teachers. If it goes rough why not let it. If you're supporting teachers that ultimately supports students. Our job [as coaches] if it goes rough in a bad way, we're here to help it come back but we're here to support teachers and that's the purpose." While encouraging teachers to ask questions Madi, like Coach Jennifer, suggests the focus of conversations and talk should be on relationships, trust, and support primarily, and less on changing instructional practice.

Coach Rachel. Coach Rachel also demonstrated appropriation of challenging talk at a surface level, much like Madi and Jennifer by encouraging a loose, broad sense of "questioning" among Lead Learner teachers. Rachel encouraged discussion of what was seen and observed, however, this discussion rarely encouraged questioning of status quo practice. At the end of a cross site day for example, Rachel told Lead Learners that the demonstration they saw would be similar in teachers engaged in conversation, however, their focus could equally be on logistically classroom management. She shared:

> I want to draw a parallel between the experience we just participated in and what a debrief is like. Those of you who have been Lead Learners can talk about this. You'll probably have less people than this. There's going to be questions, compliments,

wonderings. So, I think this experience is very similar if that helps put your mind at ease.

And they're going to say: where did you get the yellow paper, those are important too! Like the other coaches appropriating talk moves as a surface feature, Coach Rachel put emphasis on logistical, managerial, and relationship-based talk and questions without an explicit connection to how this kind of talk would, eventually, help shift the practice of visiting teachers.

P-3 Characteristics in the Lead Learner Community of Practice

Within the Lead Learner community, my data also showed a mixed application and use of the three key characteristics of an explicitly P-3 focused community of practice from the literature, a focus on instruction, visible practice, and work as teams. As the literature in chapter one outlined, a truly distinct, P-3-specific professional learning community would include participation of teachers across age and grade levels in cross-grade learning, opportunities for understanding developmental trajectories, a focus on alignment of standards, and the development of conceptual understanding of P-3 as an approach (Kauerz & Coffman, 2019). A target practice within this community would also need to be developmentally appropriate, play-based, standards-based and aligned across grade levels so skills built upon each other in ways that were clear and explicit to the teachers tasked with implementation (National P-3 Center, 2021). Below I show they ways that the Lead Learner community of practice both did and did not meet the three characteristics of effective teacher learning for P-3 Communities of Practice.

Focus on Instruction in the Lead Learners

In the Lead Learner program there was a clear focus on supporting academic development of young children and some common professional learning across grades, both key components of a focus on instruction. There were key P-3 groups left out of the shared professional learning, however, and the explicit focus of instruction for the program was split

into two target practices which prevented full alignment across the P-3 continuum. Neither tinkering nor anchor tasks – the two target practices of the Lead Leaners – are inherently P-3 practices (nor are they *not* P-3) and P-3 scholarship in fact argues for improved instruction in the form of rigorous student and teacher discourse across the continuum of age and grade levels (Kauerz & Coffman, 2013) What my data showed, however, was a lack of effort to intentionally align either Lead Learner target practice from grade to grade level along with the selection of different target practices between PreK and the early elementary grades and little to no opportunities for common professional learning of either practice.

Minimal Common Professional Learning. The Lead Learner program selected teachers from district PreK classrooms through fourth grade for inclusion in the monthly, joint professional learning program. These teachers did participate in joint, shared professional learning throughout the school year. All "feeder" early learning programs were also invited to participate in a Saturday professional learning community facilitated by the district. These two groups, however, did not ever engage in joint professional learning (e.g., community ECE and district P-4) and the focus of both groups was different during my year of data collection.

Different Target Practices and Approaches for PreK and Elementary Grades. There were two distinct practices for Lead Learners during my year of data collection – tinkering for PreK and anchor tasks for K-4. PreK Lead Learner teachers spent the year learning, developing, and demonstrating lessons based on a Boston Children's Museum curriculum called "Tinkering" (Pectu, 2020) which focuses on Science Technology Engineer and Mathematics (STEM) for very young children. Tinkering was introduced to the district by Coach Mary. She described her process of selecting this focus saying:

> Tinkering came about as I researched what engineering could look like in preschool. When I first started out I [wanted something] to take advantage of the things that already happen in a preschool day, whether it's work at the center table or blocks or that kind of thing and through questions how could you STEMify that more? In doing that research I ran across tinkering for preschool and I thought it just worked so well because it integrates cognitive skills that they want to develop, as well as the social and emotional development, and then some great gross and fine motor skills, and to me looking at it, it just made sense to put it in with that focus on learning from play in preschool.

Tinkering as an approach is not limited to PreK years and can be applied throughout early learning, including through the elementary grades (Pectu, 2020). This instructional choice, however, was not made in Vista and the elementary Lead Learners worked with a different target practice than tinkering.

Kindergarten through fourth grade teachers focused their instructional efforts on "anchor tasks," an approach from "Singapore Math" ("What is Singapore Math"). In Singapore Math an anchor task is used similarly to a mathematics word problem and involves a teacher providing concrete examples of their mathematics lessons and examples, anticipating student strategies, and encouraging student dialogue about mathematics strategies.

Despite a broad focus on STEM education, there was no data from any Lead Learner coach of efforts to align these two practices, even for coaches who worked across the two practices (e.g., Coach Jennifer worked with both PreK and Kindergarten). Alignment of practices across the P-3 continuum is a key component of a focus on instruction. Without consistent, cross-grade learning from preschool through third grade, and with different target practices in preschool and

early elementary grades, the Lead Leader program was therefore not yet fully implementing a focus on instruction.

Visible Practice

Peer observations used to create high quality instructional, social, and emotional climates, coupled with modeling effective instruction and environments, is a key defining feature of visible practice as well as with a guiding goal for the Lead Learners program. I did not observe any horizontal peer observation, however, and all use of peer observations took place solely within the same grade. Like efforts to focus on instruction, Vista's efforts on visible practice with the Lead Learners program showed some intention to support teacher learning of P-3 while missing other key components.

Administrators and Lead Learner coaches consistently emphasized the value, importance, and critical role of peer observations as distinct and effective for the Lead Learner program. Coach Madi for example explained how and why the Lead Learner structure was created the way it was, to nurture and facilitate peer learning as an effective strategy for instruction change. She explained that teachers are, "not watching a consultant or someone who is not in the classroom stand up and preach to them or tell them this is how you should do it, they're watching a real teacher in real time with real students and real problems."

Coaches across all grades, PreK through Fourth grade, did use one common observation form for cross-site visits. This observation form asked all Lead Learner teachers to respond to the same questions, including documenting what they noticed, how the teacher's instruction connected to the target practice, and what lingering questions or comments they had for the teacher after watching a lesson. While all Lead Learner teachers shared the use of these forms for learning, cross site visits only took place at single grade levels and no Lead Learner teacher

formally visited a classroom of a Lead Learner teacher in another grade. First Grade Lead Learner teacher Sarah did work with Lead Learner teachers at other grade levels in her individual school, providing demonstrations of target practices, however, she did not do this with her Lead Learner coach or as part of her formal Lead Learner time.

Work as Teams

Throughout the year of data collection, I did observe teachers discussing data, sharing strategies, and engaging in some joint professional development. The majority of time teams spent learning, however, was horizontal, only within same-grade teams. Vertical team learning was minimal and often unintentional (e.g., the result of schedule conflicts) and within teams I did not observe any meaningful, facilitated opportunities for sensemaking around P-3 for coaches or for teachers that would help align learning trajectories or standards.

All Lead Learner teachers participated in some cross grade learning, however, cross grade learning across all grades was limited to half or less of time during the monthly trainings and did not include early learning teachers or providers outside of the district. For example, at the first two monthly trainings of the Lead Learners the first hour of the two-hour training involved all teachers from preschool to fourth grade. Coaches gave demonstrations to the whole group of Lead Learner teachers and Lead Learner teachers sat at tables of their choosing, some with teachers of the same grade level and others with colleagues across grade levels. In the second hour of these trainings Lead Learner teachers moved to break out rooms with just their same-grade groups (e.g., all the second grade Lead Learners in one room and all the third grade Lead Learners in another room). Beginning with the third monthly training of the year, however, whole group time, where all Lead Learners were together for joint learning, ranged from as little as 10 minutes (December, February, March meetings) and only up to 20 minutes (November,

January, May meetings) with no monthly meeting at all scheduled for the month of April to accommodate spring break. All break out time at these meetings was designed for single-grade levels with joint-grade sessions occurring only due to staffing or scheduling constraints, for example when a coach was absent. At the November and December meetings for example two grades met together, Second and Third grades in one break out and Kindergarten and First Grade in another, because coaches for those grades were unable to attend.

During all the trainings and coaching sessions, I observed no instruction on managing P-3-specific alignment of these two target practices used across the age/grade continuum, and there was no clear community norm established directly around potential conflict between ECE and K-3 instruction. For example, in the second meeting of the year, after demonstration of an anchor task lesson, one preschool teacher asked her group how they would make specific accommodations to deliver content to PreK in ways that were distinct from other grades (e.g., with nonverbal children). She said, "in the preschool part, how do you give children a voice when they aren't able to talk? We have to really plan, and then decide which kids can we ask those questions of, and what to use." Fourth grade coach Leah responded to this teacher saying, "it doesn't matter, preschool or 5th grade, you want everyone to participate, and it looks different." She did not, however, directly address the question of working with the kinds of pre-verbal children that a PreK teacher was likely to encounter, or how "different" could actually look with very young children.

Summary

In this chapter, I showed how Lead Learner coaches demonstrated that they engaged in the teaching moves in my conceptual framework including joint work moves, modeling, brokering and challenging talk. All coaches' practice reflected appropriation at either a surface or

conceptual level, with two coaches—Simon and Sandra— demonstrating conceptual understanding across all four moves. The prevalence of these moves suggests the Lead Learner program was supporting teacher learning in general, however, the learning did not focus on P-3 practice yet. There were some emerging signs of alignment with the Lead Learner program and key characteristics of a P-3 Community of Practice, for example, joint professional learning from district preschool teachers along with district elementary teachers in one, shared, monthly training. Missing throughout all the efforts of the professional learning community, however, was meaningful, intentional alignment of instructional practices, standards, and, key for this group of teachers, the target practice that was the focus on the community. I explore the conditions that likely contributed to these results in the following chapter.

Chapter 5: Conditions

In this chapter, I share the conditions at my research site that I associated with the outcomes presented in the previous chapter: overall high levels of appropriation of teaching-and-learning moves and the ways that the Lead Learner community of practice both and did and did not meet characteristics for distinctly P-3 learning. As my conceptual framework laid out, an individual's appropriation of a new practice or practices depends on both their individual characteristics and their social context (Grossman et al., 1999; Honig, 2012; Honig & Rainey, 2019). In the first half of this chapter, I show the relationship of coaches' individual characteristics to the overall high appropriation of teaching-and-learning moves due to 1) their conceptions of their roles as coaches and expectations of goals for the Lead Learner program and 2) their prior knowledge and experience as teachers and coaches of adult learners. Though there was some variation among moves observed, in this chapter, I focus on the overall teaching and learning approach. In the second half of this chapter, I show the conditions that contributed to lower appropriation of P-3 demonstrated in the previous chapter: the social context of the district and staff prior knowledge and beliefs of early learning and P-3. These conditions help explain how administration did, in fact, invest in early learning and high quality teaching but this investment did not yet translate to P-3 practice for coaches and teachers or a community of practice defined by distinct, P-3 characteristics of teaching and learning.

Conditions Supporting the Teaching-and-learning Moves

Particular individual characteristics supported by my conceptual framework seemed to support the coaches in taking a teaching-and-learning approach and relatively high levels. Those individual characteristics were individual conceptions of roles as coaches and prior knowledge of both teaching and coaching.

Individual Conceptions of Role: Coaching as Teaching and Learning

All coaches saw their roles as helping facilitate growth in learning among Lead Learner teachers–and ultimately helping improve their instructional practice–through anchor tasks and tinkering. All coaches described how they saw coaching as a form of teaching with the Lead Learner teachers. Coaches saw their role in supporting Lead Learners to grow and strengthen their practice specifically by 1) building the skill level and confidence of Lead Learner teachers and 2) providing space for supportive, trusting relationships between coach and teacher within the community of practice.

Building Lead Learner Teacher Skills and Confidence. Coaches emphasized their job as not to simply share information but to build teachers' capacity, confidence, and ability to take ownership of their learning to then share with their peers. Coach Sandra for example described how coaches worked to nurture internal leadership skills among the Lead Learners with evidence of this support emerging when they shared their own practice. She said, "that's where I see the success [of Lead Learners] is growth in their ability to be a Leader [of other teachers] and talk through and rationalize the moves that they made during the demonstration lessons." Coach Sandra described a cycle that several other coaches shared; coaches serve as teachers of Lead Learners who in turn become teachers of their peers visiting their classrooms on demonstration days. Coach Rachel further explained this cycle of teaching and learning initiated by the coaches. She said:

> The successes that I see are all with the Lead Learners themselves… Ultimately, we would want to see a change in teacher's practice, the teachers who are attending [demonstration days] ... And I think to achieve that … it would be to see a change in the practice of the teachers attending.

Coach Simon echoed both Rachel and Sandra when he described how coaching support extended to support Lead Learners in their work with visiting teachers attending demonstration days. For coaches, one consequence of the instructional growth in Lead Learners is a positive overall learning experience for teachers' peers who access their demonstration days. Simon said, "The great thing about the Lead Learner program is you see this huge growth in the Lead Learner teachers [themselves] ... [and] I think most of them would describe [the Lead Learner trainings] as very powerful for their own professional growth … we [also] hear a lot of positive things from people who attend those sessions, so the sessions themselves are great for the [visiting] teachers."

Coach Simon also explained an additional component of the coaching role for Lead Learner coaches, describing how one element of the role of coaches was to create the conditions and space for teachers to consider their own instructional practice in community with their peers. He said:

> The whole point [of the Lead Learner program] is for the teachers to build their own instruction through practice and reflection. So, it really isn't about us teaching them to do new stuff, although at the beginning of the year, we certainly do teach them to do new stuff. The real meat of it is the refinement and practice and reflection they do with each other which, you know, results in stronger instructional practice than if we were more directive.

For Coach Simon, his role as a Lead Learner coach was distinct from other forms of professional learning in the ways it built capacity for teachers to really lead their own learning and that of their peers.

Nurturing Trusting Relationships. Coach Madi similarly described a key component of her role as a coach as building trust with Lead Learners to support teacher growth and therefore changed instructional practice. She said, "The relationships and trust that we've built with the Lead Learners is huge and has helped them make so much growth because they've comfortable being vulnerable [with us]." For Coach Madi it is the creation of this trusting, safe space for learning that allows for the growth and change that all coaches emphasized. Coach Alison further explained how she understood her role as nurturing this same sense of collegiality among the Lead Learner teachers. She explained she wanted to make sure her grade level teachers,

> …feel like they can reflect and build their practice and that they have colleagues they can turn to when things aren't going the way they expect them to. So, they could ask questions like, Can you give me any pointers or tips? What did you do? Or maybe you're experiencing the same thing, can we troubleshoot it together?

Coach Jennifer saw her role in nurturing this collegiality by sharing direct connections between and among teachers. She explained her job as, "being able to share ideas with people because teaching can be really isolating in a lot of ways. And it's exciting to be able to share ideas that I have seen from other teachers, and kind of be in the network of people."

Not only did coaches work to create a safe, trusting environment for learning, they also shared an understanding that Lead Learner teachers entered the learning space with a mindset prepared to grow, change, and be challenged. Their roles as coaches, therefore, was to nurture this existing mindset among teachers. At the first Lead Learner meeting of the year, for example, Coach Rachel told the whole group of teachers, "everyone in this room was selected for this role because you're an exceptional teacher and that you're open to learning and growing together, so thank you for your flexibility." Coach Leah also emphasized the ways teachers' openness and

vulnerability impacted the learning they were all able to do together. She said, “everyone who chose to do this wants to learn and grow. And we know that we're not expecting perfection, we just want people who can be open about their learning and the process of trying things on.” In explaining the process of selecting teachers to become Lead Learners, Coach Madi explained one of the ways coaches understood their own roles in the selection of Lead Learner teachers. Individual teachers applied to the program then coaches came to their classrooms to observe a lesson before they debriefed that lesson with the applicant teacher. Madi explained:

> The [lesson] debrief also tells us a lot because in this role as a Lead Learner they get feedback and sometimes, well, I don’t want to call it negative feedback but sometimes it's constructive and there’s things we're asking them to try that they've never tried before, so in that debrief, we do, you know, point out some strengths we see, or here's something to think about, here's an idea and frankly we see how they respond to that, you know if they're willing to grow their practice.

Across all age and grade levels coaches expressed this same understanding that Lead Learners would be working towards change while coaches would work to support, facilitate, and nurture this growth.

Lead Learner teacher and coaches’ expression of clear instructional improvement–first with Lead Learner teachers and then to the district teachers as a whole—also aligned with the P-3 director’s expectation of the program goals. The director, for example, shared that the biggest success of the Lead Learner program was in “aligning and building the instructional practice of the [Lead Learner] teachers.” The collective, shared understanding of roles across all coaches demonstrated a readiness for appropriation of the kinds of teaching-and-learning moves that would support teachers to change their practice.

Prior knowledge: Experience Teaching and Training as Coaches

All the leaders and facilitators for the Lead Leader program, the eight coaches, program administrator, and external consultant, shared a social and professional context as either PreK or elementary teachers (or both) with a minimum of ten years teaching and coaching and up to several decades (e.g., P-3 Director). All coaches also had graduate degrees in education and at least five years' experience directly in the Vista school district.

All these individuals brought their own ways of knowing and doing to their professional experiences, which in turn impacted how they engaged in relationships with members of their community (Grossman et al., 1999). This shared background therefore provided common language, experience, and context for the everyday work of facilitating the Lead Learner program. This commonality provides an explanation for the relatively high levels of appropriation of teaching-and-learning moves among coaches. Coaches and district administrators had shared experience working to accomplish goals in this specific district, using their own classroom experience in past work with coaches.

Along with classroom teaching experience, all coaches had training on the target practice of anchor tasks, and their own training and background as coaches working with adult learners. Coach Leah's description of her role was typical of all coaches as she described her title along with abilities. She said, "I am a P-6 instructional specialist with a focus on mathematics, but we [Lead Learner coaches] can all support anything technically." As Coach Leah further explained, in a statement that was also typical of coaches across the program, "I [have] lots of deep content knowledge in elementary math… [and I have] lots of training and best practices around pedagogy through conferences, coworkers, book study articles." Coach Alison shared a similar sentiment, explaining, "I feel like I have a lot of coaching tools."

Coach Simon discussed specific strategies he used for working directly with adult learners that came from his own prior experiences in coaching beyond the Lead Learner program. For example, Simon described his use of a "consultancy protocol"–a conversation facilitation tool–as a method to guide group discussion among the Lead Learners and small groups of teachers. He explained how this protocol gave both him and the teachers concrete questions to trigger thinking about what they were doing, and how it could guide their work moving forward. Coaches' prior knowledge and experience in both their training and their own classroom teaching experience impacted their teaching and learning stance which served to build and sustain relationships with teachers.

Social Context Impact on Teaching and Learning Moves in a P-3 Community of Practice

While the coaches demonstrated consistently high levels of appropriation of teaching-and-learning moves, the focus of the Lead Learner program as a whole nonetheless did not yet reflect a P-3-specific approach to teaching and learning. I associated two conditions with this lack of some critical P-3 characteristics in the Lead Leaders program: 1) limited investment by district leaders in conveying a concrete, practical vision for a change in instruction and 2) coaches understanding of P-3 and the target practice.

Intention for P-3 Without Connection to Practice

Among the Vista administration there was a recognition that their district should and could support the early learning space and my data show that they did, in fact, provide extensive support for early learning. Vista did "invest in a systematic approach to teacher professional learning that is grounded in child development and focused on effective instruction" (Kauerz & Coffman, 2019, p.12). The conversation about early learning, high quality instruction, and alignment of practices from preschool through third grade, however, did not yet extend to the

level of actual classroom practice or direct instructional support. Key district administrators did not yet show they were "'partners in' instead of 'responsible for' shared professional learning for teachers from both ECE and elementary schools" (Kauerz & Coffman, 2019, p.12). As my data show, for example, program administrators conveyed a clear desire to align instruction across P-3 and to focus explicitly on expanding and increasing the prominence of early learning in their district. Administrators, however, did not describe in interviews—or directly to coaches or teachers as observed during trainings—what a P-3 practice looked like in *everyday classroom practice and instruction* that would make that practice distinctly P-3.

In interviews with the district's P-3 Director Elizabeth, and the external consultant Deborah, along with a review of the district documents about professional learning and strategic planning, district administrators shared a strong, intentional focus on creating a P-3 district. Deborah explained that Elizabeth's work focused on "the importance of [instructional] alignment and cohesion" across early learning and elementary grades–building clear content connections from preschool, through elementary school, and across age and grade levels. The district's investments in early learning specifically signaled a change in direction from how the district traditionally served students and communities, from historically only engaging after entering kindergarten to intentionally including the programs, teachers and providers serving children before they came to the district. Deborah explained:

> Elizabeth's vision and the superintendent's... leadership and vision [was] pivotal, they really put early learning as the fore…Recognizing the importance of early learning within a P-12 system [and] … really seeing early learning as not a department separate from the rest of the P-12 system.

About her own role Elizabeth explained:

> I was hired initially as a P-3 director with the charge to build a system that's P-3 as opposed to PreK and elementary systems as just separate entities. And then a year and a half ago we did a major reorganization… and this position changed to one of PreK and elementary success going up through 6th grade so that our preschool programs and our elementary programs were connected vertically and the content specialist who were previously under other directors… were put together under PreK and elementary … which was an effort toward building alignment.

The investment in systemic change were substantial and significant; Elizabeth played a critical role in reorganizing the district central office to align with P-3 goals, creating a department geared to support learning across the continuum.

Deborah and Elizabeth each explained multiple times how the professional learning program at the least *intended* to create aligned high quality experiences for children across P-3, particularly in the content focus shared across age and grade levels. In this way Vista's administration mirrored the Lead Learner program in their clear intentions to address key characteristics of P-3 implementation, while missing some of the practical, concrete steps towards alignment. Elizabeth explained:

> We worked really hard to make sure what our consultant was sharing was aligned to what the Lead Learners were doing which was aligned to what the Lead Teachers were learning about which was aligned to what our P-12 administrators were discussing which was aligned to what the administrators were seeing when they go out to learning labs.

Elizabeth consistently demonstrated both the intentions and actions towards alignment broadly without detailing how these efforts manifested in the work of coaches guiding Lead Learner teachers. Missing throughout all discussions of P-3 in Vista was any connection that either

Deborah or Elizabeth made to be in "partners" in learning with either teachers or support staff. In this way they were not yet meeting the administrative role for teacher effectiveness and therefore not yet creating the conditions to best support teacher learning – or support the staff working with teachers – aimed towards meaningful, P-3 instruction.

Coaches and P-3: Missing Key Conditions for Efficacy

Despite this rigorous foundation and construction of Lead Learners within the district's P-3 program, I did not observe any evidence of P-3 in coaches understanding of the target practice of the Lead Learners or their own instructional practice as coaches. There was mixed and conflicting understanding of how the target practice for the Lead Learners was selected. Without a clear foundation connecting the target practice to any P-3 outcomes, the coaches were unlikely to make these connections with the Lead Learner teachers themselves. The coaches therefore did not yet show evidence of building toward all of the characteristics needed for teacher learning in a P-3 Community of Practice evidenced in their understanding of P-3 as an approach to learning.

Selection of Target Practice. There was inconsistent understanding among the Lead Learner coaches about why and how anchor tasks specifically were selected as the focal approach for the Lead Learners. Coaches therefore did not provide a clear framework to Lead Learner teachers for a developmental trajectory of children's skill progression through the use of these target practices or how these practices built toward P-3. As a whole, the Lead Learner coaches shared different explanations for how anchor tasks were selected, none of which tied to specific P-3 goals or strategies or ways it could contribute to creating a P-3 practice that was distinct from other reform efforts. Lead Learner teachers also expressed both confused and conflicted understandings of anchor tasks origination in their district. While both Lead Learner

teachers and coaches shared an understanding of what an anchor task was, and coaches provided clear definitions and opportunities for practice of these practices, they did not share agreement of how the district arrived at this particular target practice as the Lead Learner focus for the year. Across all the explanations of anchor tasks—and tinkering—there was never any discussion that these target practices were designed, intended, or understood by the coaches as part of any intentional strategy to support Lead Learner teachers in becoming "P-3 teachers" or to support the district in becoming a "P-3 district."

Coach Leah, for example, described her own understanding of how this particular approach was selected as the focus for my year of data collection she said:

> I think what happened is the kindergarten focus last year was work-time [a play-based literacy strategy] and there were a lot of people talking about math workshopping. So, we started at looking, 'Well, what's going on in math in our district? If people are interested in this, how can that be something that we highlight?'… And so, we started visiting classrooms and realized that the math instruction was abstract, direct instruction, no talk, and we're like, 'Wait, we're not even doing core instruction well, how can we jump to a workshop model?'… And then anchor task like, I think that's how it came up.

Coach Simon explained the process of selecting a practice focus for Lead Learners saying, "It's just more art than science in selecting the focus, So, part of it is feedback from teachers and from schools, [it] comes from a variety of places and this year, like other years, [selection] isn't a systematic method." Simon further explained, "I'm not sure where the language of 'anchor task' comes from actually. They've certainly called it an anchor task within this department for some time." Coach Alison explained that she was unsure which grade level it began with or how it started or was selected as a focus. There was no consistent explanation of the selection of anchor

tasks and any connection to larger district goals beyond increasing general mathematics achievement for students.

Coaches' Perceived Value of P-3. Beyond the differing understandings of the selection of anchor tasks, coaches also had unclear and somewhat inconsistent understandings of early learning, P-3, and the connection of P-3 to their own work. The social context in which the coaches worked did not seem to place value on embedding P-3, and principles of early learning broadly, in the day-to-day work of facilitating Lead Leaders. This inconsistent understanding of P-3 emerged in coaches' expression of the definition and value of P-3.

Coaches did consistently express clear understanding of the important role of early childhood in supporting students, and the important role of high-quality instruction coming from teachers (and their job to support those teachers), but they did not conceptualize their roles as encompassing P-3 explicitly. Coach Leah for example expressed a clear understanding of basic principles of developmentally appropriate practice and the value of social emotional learning as a general concept – though not one she actively applied to her own practice. Coach Lead said:

> I think there's some thought that the smarter we can get about the work we do with our young children, the less gaps there will be by the time they get to third, fourth, fifth grade…. Yet I sometimes question where the emphasis [in the district] gets placed…. I think it can be very academic at kindergarten. While I think those academic skills are important, I think developing social learners at that age is also very important. And I think sometimes you'd have less issues when you get to older grades if you work on some of those less academic things at an earlier age.

As Leah expressed, many coaches did in fact share a clear understanding of the role and importance of social emotional learning, a component of developmentally appropriate practice,

though they did not use that label. Neither coaches nor administrators, however, demonstrated in observations or expressed in interviews how this vision of early learning appeared in practice or training, or how it should look specifically with the Lead Learner program.

Coaches did not appear to recognize P-3 as part of their own practice and therefore it did not emerge in their direct work with Lead Learners. Coaches' conception of the value of P-3 and its relevance to good teachers was minimal. P-3 was referred to by coaches and Lead Learners as: "an outdated term" (Coach Leah) "going away a bit" (Coach Simon) and "an expired term" (Coach Rachel). P-3 was also equated with individual staff members, specific grant-funded work or just work of PreK. When asked about her involvement with P-3, for example, Coach Leah said:

> I feel like our "P" part has … really extended. It's just that I don't work directly with a lot of it, but because [the ECE liaison] is on our team, and Elizabeth oversees it all, every weekly meeting [they will say], 'we have these changes so we don't have these Head Start schools, so we open up another one here,' So I'm aware we have a lot more preschool programs in our district now.

For Leah, like many other coaches, P-3 is a job managed by other people and is not connected to her or her job or her work in any concrete or specific way. While both Elizabeth and Deborah referred to the coaches as "P-3 specialists" none of the coaches used this term for themselves nor were they used by Lead Learner teachers.

Coach Jennifer for example explained about P-3, "I don't think we hear it as much anymore since we've reorganized. I think before people kind of thought about it as just about a team, and now because it isn't a team, I think people think of it as ... I don't know. Probably more of a set of practices that might be unique to younger learners." Jennifer does not explain, either

here or elsewhere, what constitutes this set of practices, why they matter, or how they could or should be shared by educators from preschool through third grade. Coach Rachel shared a similar idea that P-3 was a term no longer in use. She explained:

> P3 is kind of an expired term. Back several years ago … there was a lot of funding that came from a [foundation-funded] P-3 initiative. The idea was that we could make the most impact on the earliest learners … When that [funding] got phased out ... there were kind of conflicting initiatives in the district, so there was P-3 work, but then there was literacy and STEM work, and the teams weren't together and had different consultants. It was really confusing for teachers. So, P-3 went away when we became a P-6 team … And some of us that weren't part of the P-3 work, we see labels and we're sensitive. We're like, "No! It's P-6!" because it doesn't feel inclusive.

Coach Simon shared a very similar belief as Rachel, that P-3 was considered exclusionary since so many teachers–and the staff that support them–did not see themselves or their practice in that work. He said, “Basically [P-3] has been made more inclusive because a lot of people in the district kind of didn't see themselves in the third-grade goal. If you’re a seventh-grade history teacher, it's hard to see exactly how that relates to you. So, the idea is that the strategic plan should apply to everyone.”

Coach Leah echoed that idea, explaining that “P-3 is old … P-3 feels like us two years ago.” For Leah and Rachel, P-3 is also related more closely to specific funding and to early learning than to a particular approach to teaching and learning. Coach Mary meanwhile considered P-3 as a direct initiative associated with the P-3 director and the external consultant and did not connect this initiative to her personal work with Lead Learners as a concept and approach.

Summary

In this chapter, I discussed conditions that may explain the two main outcomes of my study: overall high appropriation of teaching-and-learning moves and a lack of connection to P-3 within the communities of practice. The Lead Learner coaches showed a general understanding of coaching as a form of teaching, and the Lead Learner program as building the instructional capacity of Lead Learner teachers so they could then turn around to help improve the instructional practice of their peers. Yet, despite a clear, explicit, strong emphasis on P-3 among Vista leadership, the coaches did not share a belief or understanding of the importance of P-3 as an approach or the alignment of instruction as a priority or value of their work as coaches. While there was a continuous emphasis on high quality teaching among all staff involved in Lead Learners, Vista administrators did yet demonstrate their work as "partners" in learning with coaches and teachers. Coaches in turn then did not yet demonstrate how their saw their role as building, supporting or even creating a P-3-specific community of practice within their district.

Chapter Six: Conclusion

The emerging literature on P-3 approaches suggests they are promising for improving the quality and alignment of early learning experiences for children from birth to age eight, and that school districts can establish the organizational supports that influence teachers' professional learning and, in turn, their classroom practices. As previous literature and this study have both shown, these approaches are also challenging for the educators tasked with their implementation. Findings from this study are encouraging because they show how central office staff can support teacher learning with the kinds of teaching-and-learning moves that theory suggests are important to helping learners, such as classroom teachers, fundamentally shift their practice in the ways that P-3 approaches demand. There are a variety of common pitfalls of P-3 implementation that nonetheless impacted the Vista School District, further suggesting that there is additional, intentional effort needed for districts to fully engage with a P-3 approach. Though I did not observe or measure changes in practice among teachers, or outcomes among students, I was able to document the infrastructure in place to support teacher learning, including a community of practice led by coaches appropriating teaching-and-learning moves critical to helping teachers understand new ways of teaching. As the National P-3 Center explains, focusing on changing, supporting, and nurturing these "adult capacities" is a critical step in P-3 to accomplish the long-term goal for "meaningful child outcomes [to] be realized" (National P-3 Center, 2021). Improving the skills and capacities among adult educators is therefore a necessary step in fully implementing P-3 practice and creating a truly distinct P-3 practice, and it is one step that Vista was beginning to undertake.

Summary of Findings

My study found high levels of appropriation of teaching-and-learning moves among coaches. The conditions I associate with coaches taking a teaching and learning approach at a consistently high level include individual characteristics and the social context. The focus of the learning, however, was not on a distinct P-3 practice but on ambitious student discourse around mathematics and science, a practice with the potential to align across age and grade levels but a strategy not yet used in that way by Vista. I attribute this lack of connection with the target practice and P-3 to a disconnect between program administration and coaches' practice. Program administration showed a clear commitment to P-3, an investment in early learning and quality teaching, but a lack of specificity about P-3 practice at the ground level with coaches and teachers. Therefore, while teachers were likely learning at deep levels, they were not receiving support around how to make this learning align across age and grade levels in ways that P-3 approaches demand. This study suggests that, at this point in time, the district was unlikely to shift instruction to explicitly align with P-3 practice since there was little stated alignment between P-3, anchor tasks and tinkering, and the Lead Learner goals and objectives. The appropriation of the teaching-and-learning moves at relatively high levels, however, and the alignment of coaches' beliefs about growth of teachers instructional practice, does suggest that the district had created a structure for change that could shift with a different target focus. In the next section I briefly overview the main outcomes and main conditions that emerged from this study and led me to these conclusions.

Outcomes: Teaching and Learning Moves and P-3

During my year of data collection, I observed Lead Learner teachers and their coaches learning, and then teaching, a new target practice geared towards ambitious student discourse

around mathematics and science: anchor tasks and tinkering. In the Lead Learner program, I found that the Vista School District was making important strides in aligning high quality early learning for their students by supporting the learning of the teachers across P-3. In chapter four I provided evidence that Vista was setting the foundation to shift teacher practice in the district through the creation of teacher leaders (the Lead Learners) as they received critical support in their learning from coaches. As the conceptual framework described, these teaching-and-learning moves are fundamental indicators that a high quality and well-functioning community of practice is in place, one that is geared towards supporting and improving teacher learning and changed teaching practice. This further aligns with the literature on teacher learning which suggested that teacher leadership and teacher learning in community, where teachers have a role in leading their own learning, in instrumental in creating long term instructional change (Caudle, Moran, & Hobbs, 2014; Darling-Hammond & Richardson, 2009; Wenner and Campbell, 2016;).

Despite the high appropriation of teaching-and-learning moves, the Lead Learner community of practice only partially aligned with the key characteristics of teacher effectiveness according to the National P-3 Center Framework: focus on instruction, visible practice, and work in teams. Vista had clear intentions to support high quality teaching and learning, but these efforts were not yet aligned in a meaningful way across age and grade levels, nor in bridging the distinct differences between ECE and K-12. There was some joint professional learning across age and grade levels, for example, but key demographic groups were left out of that learning, specifically non-district ECE providers; leaving behind groups in this way therefore continues to perpetuate different practices in ECE and K-3.

Conditions: High Appropriation of Teaching Learning and Low Appropriation of P-3

I documented several conditions impacting appropriation of teaching-and-learning moves and the lack of connection of the Lead Learners community to P-3 practice. Lead Learner coaches' individual characteristics contributed to relatively high levels of appropriation of teaching-and-learning moves from their shared focus on the Lead Learner program as building the instructional capacity of Lead Learner teachers so those teachers could then turn around to help improve the instructional practice of their peers. These characteristics matter to the outcomes of this study because they show the coaches "orientations to their work" (Honig, 2012, p. 760) and their engagement with their colleagues. With high alignment of what matters to them, what is of value, we see in turn this high appropriation of a stance towards coaching that echoes that of teaching.

While many individual characteristics aligned to show high appropriation of a teaching and learning approach, the social context of coaches and the district was more complex when it came to distinctly P-3 practice. Despite a clear, explicit, strong emphasis on P-3 among Vista leadership, the coaches did not share a belief of the importance of P-3 as an approach or the alignment of instruction as a priority or value of their work as coaches. Additionally, there was no intentional or visible effort to align the target practice with other P-3 approach practices, such as ensuring the practices aligned grade to grade or that teachers across the continuum were working to make their practices both developmentally appropriate and standards-based.

Contributions

A key contribution of this study is the unpacking of intention versus impact in a district implementing P-3. This research on the Vista School District and its efforts to address teacher learning in P-3 shows how intentions to improve instructional quality were realized; teachers can

in fact be supported in improving high quality instruction for young children with coaches whose individual characteristics and prior knowledge align with a teaching and learning stance. In this way this research contributes to empirical data on how teachers are supported to prepare for instructional changes in their practice, particularly when that change is complex and nuanced.

The high appropriation of teaching-and-learning moves within a community of practice, coupled with a disconnect from P-3, suggests that a helpful structure for teacher learning was in fact in place, however with a focus on the joint work that was not explicitly focused on mitigating the effects of disconnects between ECE and K-3. As chapter four demonstrated, there is nothing about anchor tasks and tinkering that is inherently contrary to P-3 practice – and in fact both could be instrumental in improving overall quality of instruction across the P-3 continuum. Without intentional effort toward alignment, however, the use of these practices to support P-3 implementation seems unlikely, which is what I found in Vista. Teachers and coaches in this community of practice showed clear "shared dispositions toward improvement" (Horn & Little, p. 212). This "shared disposition" points to the important infrastructure created by the district to support teacher learning and the uptake of a new target practice. The fact that so many coaches, and some teachers, already shared a conceptual understanding of P-3 was promising for future acceptance and implementation. From coaches' responses, however, resistance to P-3 appeared in part to be associated with a sense that this approach left out certain groups of teachers.

Implications for Research

The first implication of my study is showing the value of sociocultural learning theory to applications in P-3 settings. Within this larger framework, the use of levels of appropriation coupled with teaching-and-learning moves was particularly helpful in understanding the

placement of both learners and a school district in continuum like P-3; P-3 approaches are inherently complex, sophisticated approaches to entire systems of care and education. The use of these frameworks that provide a range of placements for key stakeholders was critical in understanding the full picture of implementation in progress.

A second implication is the need for extensive future research on the various roles that teachers and staff play in P-3 implementation and the long-term impacts of various components of the approach on young children. While this study adds to the growing base of literature of P-3 approaches by contributing an empirical analysis rooted in sociocultural learning theory of practices directly supporting P-3 teacher learning, there are numerous directions for future research. This study addressed questions of support for teacher learning, but also surfaced as many questions as it answered, for example, how are coaches themselves trained to support teacher leaders and what kinds of communities do *they* have access to. There is therefore a critical need to learn more about the support staff, like coaches, who are working directly with teachers to help improve their practice.

Another area for future research is the need for additional theoretical frameworks and methodologies. Examining coaches using teaching-and-learning moves provided some clear insights into the creation of a learning environment to support teachers eventually changing their instructional practice, but I did not explore the institutional conditions in place impacting coaches, staff, and the district as a whole. Beyond a sociocultural framework using levels of appropriation and appropriation of teaching-and-learning moves, therefore, outcomes from my data suggest additional theoretical framing is warranted. Given the importance of the organizational structure and district leadership in supporting learning, for example, a theoretical

focus on institutional or organizational theory could help gather insight into how other scholarship makes sense of what was seen and available.

Lastly, this topic could clearly benefit from a long-term study, following a group such as the visiting teachers attending demonstration days, understanding how they engage with teacher learning and are or are not supported in extending their learning or making instructional change in their practice. These longer-term studies would be important in accomplishing the long-term research goals of understanding the connection with P-3 approaches, teacher practice, and student outcomes.

Implications for Practice

Vista appeared to fall into may common pitfalls of P-3 implementation. The implications for practice from this study largely rest in suggesting that school districts adhere to the key characteristics of "teacher effectiveness" from the National P-3 Center framework. Beyond utilizing these characteristics in support for teacher learning, districts could further utilize the framework to support a wide range of factors that ultimately contribute to support for teacher learning, including cross-sector work, administrator effectiveness, and instructional tools (Kauerz & Coffman, 2019).

This study suggests that district leaders need to set an explicit tone, culture, and practical vision for P-3 that is rooted in teacher learning. District leadership in Vista committed to P-3 not only in their vision but through inclusion of P-3 in the strategic plan and supporting all district principals in attending P-3 trainings. This commitment to supporting site and district leadership in P-3 education aligns with research on the critical role of district and administrative leadership in implementing P-3 approaches (McCormick et al., 2019; U.S. Department of Education, 2016a; 2016b). Vista also shifted their organizational structure to prioritize P-3 over other district goals

and initiatives, including creating a P-5 department detached from middle school and staffed with specialists familiar with early learning. Through this reorganization process Vista dismantled a traditional central office organizational structure that is historically rigid in school districts (McCormick et al., 2019; Coburn et al 2018). My study confirms past research that this district leadership is a critical and foundational step in ultimately creating a P-3 structure for teacher learning. This study also shows how administrators in Vista did in fact align their efforts with teacher effectiveness characteristic of supporting a build-out of infrastructure for teacher learning. They did not yet, however, meaningful embrace their roles as partners *with* the teachers and support staff working towards changing instructional practice. Administrators working in districts implementing P-3 approaches could therefore shift their engagement with support staff and even teachers themselves to directly influence instructional practices and learning environments to realize their vision for P-3.

A second key implication for practice is the need for very intentional, explicit focus on the alignment of strategies and practices both vertically and horizontally across the P-3 continuum. The outcomes from this study showed how Vista made clear efforts in their intentions with support for P-3 teacher learning, addressing some of the components of teacher effectiveness in their focus on instruction, visible practice, and work in times. Missing across all of these characteristics, however, was an explicit focus on alignment. Shared professional learning like the kind developed in the Lead Learners program, facilitated by coaches with aligned goals and expectations for the teachers and program, is unique in professional development approaches for teachers broadly, and this was a key effort for joint learning. In a field where preschool teachers are rarely integrated into early elementary shared professional learning it is a substantial shift from traditional practice to incorporate both district and non-

district early learning providers in shared professional development with elementary grade teachers. Additionally, through the Saturday professional learning community, Vista involved early childhood educators, both district-employed PreK teachers and private and nonprofit providers outside the district, in novel ways that diverged from traditional K-12 district practices of supporting PreK and K-12 as separate, isolated systems (Coburn et al., 2018). These efforts suggest teachers in the same district could gain a better sense of what is being taught grade by grade and how students are progressing through their district. Increased knowledge about students, and the context of their learning on a continuum, can allow teachers to scaffold and differentiate instruction that could ultimately lead to changed outcomes for children (U.S. Department of Education, 2016b).

With such a relatively limited amount of time spent in actual cross-grade learning time, and no inclusion of non-district early learning providers, Vista was nonetheless missing key characteristics of a truly distinct, P-3 community of practice and learning. Teachers across all early learning should and could be meaningfully integrated into professional learning for district PreK and K-3 teachers. Even with the Lead Learner program the strongest emphasis of team learning time was vertical, with few intentional efforts to incorporate horizontal learning. Vista could incorporate more cross site visits horizontally across age and grade levels, showing teachers how their peers before and after their own grade levels are working to address similar learning goals.

This study shows that the community of learning itself was setting important infrastructure for teacher learning with the potential to develop a P-3 environment though the focus on alignment was inconsistent. It would be important for sites at a similar stage of P-3 implementation to look for this common pitfall of P-3, not attending to the alignment of practices

at different age and grade levels. Without this focus on alignment there was not likely going to be any change towards P-3 at this juncture within Vista. Empirical research already shows that many communities of practice exist without clear guidance or scaffolding, resulting in the reinforcement of status-quo practices, and the reinforcing counterproductive teaching practices that have a neutral or negative effect on learning (Coburn & Stein, 2006, Edwards, 2011; Kuh, 2012). While individuals may believe that expertise passed across boundaries in communities is "expert knowledge" (Edwards, 2011) and therefore of high quality, it may in fact be reinforcing unproductive knowledge that perpetuates non-useful practices. This does not at all suggest that a community of practice at Vista was wrong or bad, but it suggests that it may not have been the most effective way to create change at this particular point in time. If the focus of the joint work of the community is not sufficiently developed or conceptualized there may be more effective methods to approach these P-3 practices to support teacher learning. For example, more formalized institutional higher education through registered coursework or a training program at a local college or university may be a first step toward deeper conceptual and theoretical understanding of P-3 approaches.

Conclusion

As outlined in the first chapter, the ultimate goal of P-3 approaches is to meaningfully improve child outcomes. Meeting the goals – and promise – of P-3 would entail support both from and for systems in both early learning and K-12. When adults in these systems are fully supported with paid training, effective education, ample time, and opportunities to unpack what change is asked of them and how to make this change, we could start to see the desired improvement in child outcomes: increased social emotional development, improved measures of academic skills, safe and healthy families. This study suggests that support for teachers across P-

3—and, importantly, support from the instructional staff who help the practice of these teachers—is critical in a path towards full, true P-3 implementation.

This study can inform school and community leaders about how to better support the teachers who serve as key implementers of P-3 by creating the kinds of learning environments that could facilitate their uptake of P-3 practices. My findings can inform other districts to better understand the details and mechanics of how P-3 implementation can play out with practicing classroom teachers. Additionally, by exploring how teachers are supported to learn to implement P-3, and with what results, this study will help policymakers and stakeholders to understand the nuances and complexities of the approach by teachers, the stakeholders most closely related to changed practice. P-3 implementation is clearly hard work for all of the stakeholders involved; what this study shows, however, is that this work *can* be accomplished and is worthy of time, effort, and resources.

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Appendices

Appendix A: Level of Appropriation and Moves

	No appropriation	Appropriating a Label	Appropriating Surface Features	Conceptual Understanding	Mastery
Joint work Experts provide a clear definition of the new, challenging target practice and creates opportunities for the learners to both understand and make sense of the practice.	No changes in talk or practice	Experts use the "label" of joint work or similar terminology (e.g., joint project, enterprise, etc.) but do not share or show how joint work includes opportunities for making sense of a target practice or connecting the work to existing practices	Experts start to create some opportunities to make sense of the target practice however the opportunity may not show complete understanding of target practice. Experts engage in some shared work and learning opportunities, showing some basic connection with existing practice but may not make explicit connections with practice of value.	Experts regularly and consistently (more than half of the time) provide opportunities for learners to make sense of the target practice and connect the practice to existing work of value to learners. Experts consistently (more than half of the time) share learning opportunities and demonstrate some theoretical underpinning/rationale for using joint work moves to achieve changed practice	Across time and diverse settings experts create multiple opportunities for others to make sense of the target practice and connect the practice to what learners already values. They demonstrate full understanding of joint work moves, why and how to use them and show ability to continuously improve and advance their use of these moves.

Modeling Experts demonstrate the target practice - showing and not just telling the specific steps of the practice. Experts use metacognition - explaining what is happening during the demonstration and why	No changes in talk or practice	Experts use the "label" of modeling or similar terminology (e.g., explain that they are showing and not telling) but do not actually demonstrate or use metacognition.	Experts begin to demonstrate and use metacognition, however, uses may be infrequent or not fully explain their actions	Experts regularly and consistently (more than half of the time) demonstrate the target practice and use metacognition (explaining what they are doing and why), demonstrating some theoretical underpinning/ rationale for using modeling moves to achieve changed practice.	Across time and diverse settings experts both demonstrate and use metacognition of the target practice. They demonstrate full understanding of modeling moves, why and how to use them and show ability to continuously improve and advance their use of these moves.
Challenging Talk Experts use specific words and phrases to challenge learners to accurately understand the target practice, apply the practice in their own work. and rethink or think differently about their own practices	No changes in talk or practice	Experts use the "label" of challenging talk or similar terminology (e.g., asking clarifying questions that don't yet probe deep thinking) but does not yet actually use any specific talk moves to challenge learners' thinking	Experts begin to use some basic talk moves to challenge thinking however these moves may be infrequent and/or inconsistent. Talk moves provide some opportunities to discuss what is learned and seen but may not deeply challenges learners understanding.	Experts regularly and consistently (more than half of the time) use specific talk moves that providing opportunities to talk about what is seen, learned, and observed in ways that challenges learners to rethink or think differently about their own practices, demonstrating some theoretical underpinning/ rationale for using challenging talk moves to achieve changed practice	Across time and diverse settings experts use specific talk moves that providing opportunities to talk about what is seen, learned, and observed in ways that challenges learners to rethink or think differently about their own practices.
Brokering					

Experts bridge to outside resources specifically to support working towards the target practice. Experts buffer from distractions from working towards the target practice	No changes in talk or practice	Experts use the "label" of brokering or similar terminology (e.g., saying they will introduce new ideas or shield from time wasters) but do not engage in any actions to bring ideas or buffer time.	Experts start to bridge some outside resources and broker against unproductive practices. The bridged ideas may only start to connect with target practice and/or the buffering may only partially protect from distractions.	Experts regularly and consistently (more than half of the time) bridge and/or buffer, demonstrating some theoretical underpinning/ rationale for using brokering moves to achieve changed practice	Across time and diverse settings experts bridge outside resources and buffer from distractions. They demonstrate full understanding of brokering moves, why and how to use them and show ability to continuously improve and advance their use of these moves.

Appendix B: Interview Protocol

[Professional Trajectory]

1. What is your current professional position?
2. How did you come to be in that position?
    a. [if not answered, prompt for:] What were you doing before?
3. Thinking to when you were first hired, what is your sense of what you were hired to do in that role?
    a. [if not answered, prompt for:] what that role involved? How did you know?
    b. How close has your experience been to what your expectations were coming in?
4. When you think about your preparation, what was the role you were prepared for?

I'm interested in the Lead Leaners (LL) program and your perspective on it.

5. When and how did you first become involved with the LL program?
6. Also thinking back to when you first got involved, what was your understanding of what the LL goals were for the district?
7. I know that specialists have a whole host of other work that they are responsible for, so I want to ask about time with just the capacity builders. Thinking your role as a specialist for the LL, what were you doing specifically in your capacity for the last month, so the month of November?
    a. What were you spending most of your time on?
        i. How typical is that of what you've spent your time on at other times of the year?
            1. And how does that compare to last year?
    b. who else were you spending time with

    c. To what extent is your focus on one grade level?
        i. Is it typical that you would be focused only on teachers at your own grade level?

8. If this program was successful over the next two or three years, what would that look like for you?
    a. How would you know you've gotten there?

[Defining terms that have emerged]

There are some terms that get used in the meetings and that I hear at the district, and I don't want to assume what they mean. So, I'm just going to ask you some questions and what they mean to you.

1. The first is teacher leadership - how would you define that?
    a. What do you see as the role of teacher leadership in the district?
2. Another one is P-3. When I'm hearing it in the district, what's your sense of what people mean by that?
3. What are they referring to?
4. To what extent do you think there is a common definition of this?

[Closing]

1. Is there anything else you wanted to talk about but didn't get to?
2. Did these questions prompt any questions from you about what I am doing?
3. Is there anyone else you would recommend that I talk to?