# The Effect of Change Facilitation Coaching Using the Concerns-Based Adoption Model With an Urban Elementary School Teacher-leadership Team

by

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ABSTRACT

Public demands for accountability and educational change are at an all-time high. No Child Left Behind set the stage for public accountability of educators and the recently created Race to the Top grant raised the stakes of public school accountability even more with the creation of national standards and assessments as well as public accountability of individual teacher performance based on student test scores. This high-stakes context has placed pressure on local schools to change their instructional practices rapidly to ensure students are learning what they need to in order to perform well on looming Partnership for Assessment of Readiness for College and Careers (PARCC) exams.

The purpose of this mixed methods action research study was to explore a shared leadership model and discover the impact of a change facilitation team using the Concerns Based Adoption Model tools on the speed and quality of innovation diffusion at a Title One elementary school. The nine-member change facilitation team received support for 20 weeks in the form of professional development and ongoing team coaching as a means to empower teacher-leaders to more effectively take on the challenges of change. Eight of those members participated in this research. This approach draws on the research on change, learning organizations, and coaching.

Quantitative results from the Change Facilitator Stages of Concern Questionnaire were triangulated with qualitative data from interviews, field notes, and Innovation Configuration Maps. Results show the impact on instructional innovation when teacher-leadership is leveraged to support change. Further, there is an important role for change coaches when leading change initiatives. Implications from this study can be used to

support other site leaders grappling with instructional innovation and calls for additional research.

# DEDICATION

As it turns out, it takes a village to earn a doctoral degree. I would not have completed this were it not for the love, support, patience, and occasional lecture. This work then, is dedicated to the members of the village that took up my cause.

First, to my parents…you saw a better future for yourselves and in that vision was a better future for the whole family. Thank you for being visionary. I will forever be grateful for the life you built. To my sister Lisa, who shows me how to be grateful for what you have, and do your best every day.

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To my Maddie, who sacrificed time and attention while I worked through this program. During the course of this journey, I missed performances, conferences, and other important moments. You never complained and always encouraged me to keep going. What an amazing woman you are becoming! I am truly a lucky person to have such an amazing daughter.

Finally, this work is dedicated to educators who see hope where others see failure. To those of you that don't give up, set high standards, and make kind demands--thank you. You are purveyors of hope. You make dreams come true; you helped make this one come true.

# ACKNOWLEDGMENTS

> All men dream: but not equally. Those who dream by night in the dusty recesses of their minds wake in the day to find that it was vanity: but the dreamers of the day are dangerous men, for they may act their dream with open eyes, to make it possible… (T.E. Lawrence)

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It is also important to acknowledge the family, friends, and colleagues that supported my need to prioritize graduate school. I am now scheduling coffee, concerts, and trips. Let's go!

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## Chapter 1 - Introduction

Since *A Nation at Risk* was published in 1983, the American media has shone a spotlight on public education and within that spotlight has been the lagging performance of American students in mathematics and science. International measures like the Trends in International Mathematics and Science Study (TIMMS), the Programme for International Student Assessment (PISA), and our own national measures such as the National Assessment of Educational Progress (NAEP) indicate our students have fallen behind (Glass, 2008; Ravitch, 2010; Zhao, 2012). Given these results, Congress came together in 2001 and provided bi-partisan support to reauthorize and extend the Elementary and Secondary Education Act as the No Child Left Behind Act (NCLB; Ravitch, 2010; U.S. Department of Education, 2007). This reauthorization included a public accountability deadline mandating all students, including those with disabilities and second language learners, pass rigorous standardized tests by 2020. Legislation also included strict sanctions for schools receiving federal funds that failed to meet their achievement targets. Schools whose students did not measure up faced loss of federal grant funding or firing of staff with replacement by "turn around" employees. The threat of corrective action established by NCLB prompted educators to seek strategies to rapidly improve student performance and close achievement gaps. Public accountability and sanctions based on student performance, especially those focused on the proficiency deadline, caused rancor among many educators (Glass, 2008; Ravitch, 2010). The trend has continued with current accountability mandates.

## Race to the Top and the Common Core State Standards

When Arne Duncan became the Secretary of Education in 2009, under President Barack Obama, the testing and accountability movement by NCLB was well underway (Glass, 2008; Ravitch, 2010; Slack, 2012). In response to ongoing lobbying to eliminate the 2020 proficiency deadline, a desire to motivate states to be more responsive to federal requests for reform, and an inability to move the reauthorization of NCLB through Congress, the Department of Education created the Race to the Top grant. This initiative gave winning states as much as $119 million in additional funding for education (U.S. Department of Education, 2011). However, to apply for these awards, states must commit to a variety of reforms, including adoption of rigorous national curriculum standards and teacher evaluation tools that include student test scores as a significant evaluative component. States that comply with Race to the Top are eligible for NCLB flexibility waivers that remove federal requirements to meet Adequate Yearly Progress (AYP) targets in exchange for creating self-imposed sanctions if students fail to perform at certain levels (Stillwell-Parvensky, 2011). These sanctions range from budgetary to complete school restructuring.

## The Common Core State Standards and Student Testing

As a result of the monetary incentives and NCLB's flexibility waivers, 46 states, including Arizona, adopted the new Common Core State Standards (CCSS) that were created in 2010 by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO; Common Core Standards Initiative, 2012). Arizona adopted the CCSS in 2010, but instead of adopting them as titled by the CCSSO, Governor Brewer issued an executive order renaming them

Arizona's College and Career Readiness Standards (AZCCRS; Associated Press, 2013). These new standards incorporate college and career readiness skills and require students to have a greater depth of content knowledge and the ability to problem-solve. They will also require a different type of testing. Instead of being assessed on basic skills, students will now need to demonstrate that they understand content deeply, can solve open-ended problems, and can justify their responses. Two new tests that have national proficiency levels will be administered throughout the school year rather than once a year. One of these new tests, developed by the Partnership for Assessment of Readiness for College and Career (PARCC), will be piloted nation-wide, including in Arizona, starting in the spring of 2014, and will be fully implemented during the 2014-2015 school year. Increasing concerns about approaching public performance deadlines have prompted some districts to implement the new Common Core Standards and their associated instructional practices now.

**Race to the Top, Common Core State Standards, and Teacher Evaluation**

Race to the Top is a multi-faceted accountability grant program that requires teachers to teach differently and students to learn in new and different ways. In addition to adoption of national standards, Race to the Top also impacted teacher evaluation processes. In addition to individual district measures such as performance rubrics, teachers will be evaluated by having as much as 50% of their performance measured by their students' scores on the new rigorous, national standardized assessment (Council of Chief State School Officers, 2008; U.S. Department of Education, 2009). However, even though Race to the Top sets rigorous performance expectations, it does not provide support for educators to improve their instruction. Educators' concerns regarding student

performance on these new, rigorous assessments are rising and creating a sense of urgency for pedagogical change (Mehta, 2013).

## Quick Transition and Public Accountability

Previous mandates issued through NCLB and the federal Title One grant program required teachers to use scientifically research-based materials with fidelity (U.S. Department of Education, 2007). This materials-based fidelity approach had consequences because, despite its good intentions, it placed educational decisions in the hands of instructional designers working for textbook companies. Teachers were given highly structured instructional material and asked to teach with scripts; however, there was a tradeoff. Teachers lost their instructional autonomy and creativity and students learned lower-level skills (McClain, Bowen, Schmitt, & Zhao, 2006; Troman & Woods, 2000).

After years of requiring teachers to teach to the text, new mandates from Race to the Top and the Common Core are requiring them to shift from a direct script-driven approach to an approach focused on developing students' ability to think deeply and critically and apply their learning. Unfortunately, as it stands, this new approach does not align with the current scripted materials (Wagner, 2012; Zhao, 2012). Without any training or support, teachers are being called upon to craft instructional experiences and materials that align to Common Core objectives (McClain et al., 2006; Council of Chief State Officers, 2011; Shaughnessy, 2011). This instructional shift will be a challenge and teachers will be publicly held accountable.

Public demands for accountability and educational change are at an all-time high. A recent Gallup poll found the public's confidence in public schools is at an all-time low,

with only 29% of those polled stating they have “a great deal” or “quite a lot” of confidence in our schools (Jones, 2012). No Child Left Behind set the stage for public accountability of educators, and the recent Race to the Top grant raised the stakes of public school accountability even more with the creation of national standards and assessments as well as public accountability of individual teacher performance based on student test scores. With new standards that include college and career readiness and higher instructional rigor, teachers who previously taught from scripts will need to make a significant instructional shift and show their effectiveness on a public stage. Arizona educators are faced with the challenge to change their instructional practices rapidly to align to the new standards or face poor student performance on the new PARCC assessments. Although educators have a compelling reason to change, shifting long-time practices is a difficult process and these changes must occur, in most cases, without the specific support of materials or textbooks (Deutschman, 2007; Troman & Woods, 2000).

## Quick Expectations and the Reality of Change

There are demands for quick changes, yet literature on educational change notes that it typically takes three to five years to fully integrate new practices into regular classroom instruction (Hall & Hord, 2011). Unfortunately educators in Arizona do not have three to five years to adapt their practice because of the looming 2014 accountability deadlines. Teachers do not have the luxury to implement new standards and practices gradually over time; quick change is needed (Hall & Hord, 2011; Marzano, Waters, & McNulty, 2005). The timeframe for the new PARCC assessment date is quickly approaching, so instructional change must occur at a rapid rate. This quick implementation timeline has created a need for teachers to shift their instruction to align

with the new standards and ensure their students meet the rigorous assessment criteria. Meeting these demands will require a great deal of professional development in new instructional methods along with ongoing support. Implementing an instructional shift of this magnitude will require skillful administrators and teacher-leaders engaged in shared change (Coleman, 2011; Hall & Hord, 2011; Dooner, Mandzuk, & Clifton, 2008).

## The Local Context

This action research study took place in the Cactus Unified School District (CUSD), a public, K-12 district comprised of 38 school sites spread across 300 square miles in the Northwest Metro Phoenix area (Arizona Department of Education, 2012). The district serves more than 34,000 students and employs approximately 2,000 teachers. Being in a large metropolitan area, CUSD has significant student diversity, particularly economic diversity. Thirteen schools in the district receive federal Title One funds due to large populations of students living in poverty. Free and reduced lunch percentages across CUSD's 38 school sites ranges from 98% at the poorest school to 11% at the most affluent school site. As one of only eleven school districts in the State of Arizona with an "A" rating from the Arizona Department of Education (ADE), CUSD has a culture of competitive high achievement and continuous, systematic school improvement. This competitive culture is evident by the ranked lists of schools based on student achievement on standardized assessments presented to school and district administrators throughout the school year. The culture of continuous improvement in the Cactus Unified School District extends to all schools, regardless of student demographics.

I have worked in CUSD for nine years as a principal and central office staffer. During this research, I worked at one of CUSD's schools as a Change Facilitation Team

coach, supporting the team as they brought instructional change to a high-achieving K-6 elementary school that receives federal Title One funds.

However, in order to achieve continuous improvement in a high stakes environment, research indicates teaching practices must change (Marzano et.al, 2005). Six years ago the Cactus School District began a significant professional development initiative to teach principals and district level administrators how to manage change based upon the change leadership framework designed by McREL (Marzano et al., 2005). The school system continues to require this training for all incoming school site leaders. The eight-day training includes transition and change management theory as well as information about leadership responsibilities such as affirmation, acting as a change agent, communication, input, and culture. Although this training is robust, principals are not given specific interventions to implement with staff experiencing change or means to measure effectiveness beyond yearly, standardized test results. The McREL training includes few data collection tools administrators can use to monitor levels of use of newly tried strategies or faculty perceptions of the requested instructional change; thus hard evidence is missing. From my experience, a lack of change facilitation data tools and strategies leaves principals and leadership teams searching for strategies to facilitate rapid instructional change to increase student learning at their school sites. I say this because few principals know how to lead rapid change efforts and few, if any, teachers ever received training about change facilitation or the role of teacher-leaders to improve schools. This current lack of leadership training for teachers is a problem because it leaves a gap in the knowledge and skills of school-based leadership teams. Without these tools, change efforts at schools can be expected to remain at the typical three to five year

cycles (Fullan, 2011; Hall & Hord, 2011; Marzano, Pickering, & Pollock, 2004). To meet the demands of the current context of accountability, schools must leverage current knowledge of change facilitation tools such as the Concerns Based Adoption Model to abbreviate the stages of concern teachers experience and increase the levels of use of an instructional innovation (Hall & Hord, 2011; Hord, 1994). Research on adult learning demonstrates the importance of job-embedded support when trying new practices (Joyce & Showers, 1980). The McREL leadership training does not include administrative coaching or support for site-based change facilitation teams as they navigate change facilitation. The lack of coaching for change facilitation teams presents yet another problem for staff in the CUSD that are expected to innovate.

Every school in the Cactus District engages in a yearly school improvement process that includes data analysis, goal setting, improvement strategy identification, and strategy implementation. Based on the expected implementation of the CCSS and upcoming implementation of the PARCC assessment, the school district mandated a number of improvement foci for the 2012-2013 year. Implementation of a variety of new initiatives such as Common Core State Standards, use of a newly adopted text in reading, Response to Intervention-Behavior, anti-bullying curricula, and a regimented continuous classroom improvement practice based on the Baldrige criteria. These initiatives are expected to continue into the 2013-2014 school year. In addition to district issued mandates, school-based teams are required to implement a site-identified instructional innovation forward to address a local challenge. All of these initiatives are to be implemented regardless of change facilitation team training or school context.

## Previous Research Cycles

This study is informed by results from previous action research cycles. I served as the principal at a K-6 school in the district for eight years. In the last two years, I engaged in action research cycles at my school in an effort to leverage teacher collaboration and leadership to improve outcomes for students. In cycle 1, I was the Principal at Desert Elementary. The problem I took action on was how to support a team of teachers to become more collaborative in their instructional practice and as a result, improve student performance on formative benchmark assessments. The participants were a team of teachers with inconsistent student results on district benchmark assessments who typically planned instruction and reviewed student results in isolation. Research on Professional Learning Communities shows that collaborative planning and data analysis is a critical practice to consistently improve student achievement (DuFour, 2008). Previous to this cycle of research, I had not required the team to meet and collaboratively construct lessons and review student learning data. During this research, the team met weekly to discuss instruction and planning. They also reviewed student performance relative to the jointly planned lessons. As the practitioner-researcher, my role was to provide structure and time for the team to meet. I collected data from qualitative open-ended surveys and interview data and then analyzed it using open and axial coding to discover three themes: feeling overwhelmed, communication challenges, and lack of clarity of purpose surrounding collaborative lesson planning and common assessment data analysis. These themes led me to understand that the team needed additional support and coaching in order to effectively collaborate and adapt their practice to gain more consistent outcomes for student learning.

In cycle 2, I was principal at the same elementary school and worked to redefine my role from solely an evaluator to that of an instructional coach in order to meet the needs of teachers that emerged out of cycle 1. My goal was to facilitate instructional shifts rather than mandate changes. After training teachers in a new instructional practice, I provided in-time instructional coaching with participants and brief conversations surrounding the instructional innovation they were asked to implement. To measure progress, I conducted walk-throughs, semi-structured interviews, and administered an open-ended qualitative survey. I analyzed the data using a similar process as in cycle 1. Themes from this work included lack of time, feeling overwhelmed, and feeling inadequate in the implementation of this new instructional practice. Although there were some measurable changes in instructional practices, these changes were not fully embraced by all participants or consistently embedded in classrooms. Survey and observation data showed teachers did not make as significant a change in their practice as I expected. The interview data showed teachers were more apt to collaborate with each other to work on changes needed than to accept instructional coaching from myself as a supervisor-coach. For me, it was difficult to take on two roles simultaneously, that of a coach and evaluator. I realized that in situations where teachers are accountable to me, I needed to find a different way to facilitate instructional change.

My findings from this cycle are grounded in the literature. Research demonstrates that this is not a unique phenomenon (Dooner et al., 2008; Thomas & Willcoxson, 1998). Although many schools and districts have directed staff to work collaboratively in structures such as professional learning communities, there is relatively little research about how these groups form into collaborative teams and what structures support

genuine change in practice (Dooner et al., 2008; Dufour, 2011). Some reform efforts have failed because they were mandated by policy-makers or supervisors as opposed to seeking local solutions (Bruce, Esmonde, Ross, Dookie, & Beatty, 2010; Hunt, 2005). Creating conditions that support peer collaboration to implement instructional change may be a necessity moving forward--in part because of the dual role a lone school site leader faces as evaluator-coach and in part due to the need to innovate rapidly (Coleman, 2011; Kennedy, Deuel, Nelson, & Slavit, 2011). Despite a reluctance to change practice, the forces of accountability are still at work, putting pressure on schools to innovate instruction as a means to maximize student learning (Troman & Woods, 2000).

## Dissertation Study/Cycle

### Peace School

The elementary school in which this study took place has a shared leadership and problem-solving structure based in part on district expectation and need. With only one school administrator at the K-6 school, the staff is called upon to be actively involved in organizational development and learning. For many years, the school site leader has cultivated teacher-leaders to take on additional responsibilities to support innovation; however, they have not received training in change facilitation and this is problematic.

Peace Elementary was purposefully selected to be the site for my action research study for several reasons. The school, located in the southern portion of the district, has diverse demographics and a stable instructional staff. Despite being one of thirteen schools in the district that receive federal Title One funding, Peace Elementary led the district in 2012 in value-added student growth scores based on the AIMS test, Arizona's state mandated standardized assessment. In spite of this growth score success, the school

has yet to break through the barriers of consistent student performance at above average level at all grades on all state-mandated assessments. For example, as Table 1 shows, achievement scores have been inconsistent in math.

Table 1

*Peace Elementary School AIMS Meets and Exceeds Proficiency Math 2010 - 2012*

| Grade & Subject | 2009 - 2010 | 2010 - 2011 | 2011 - 2012 | 2012 - 2013 |
|---|---|---|---|---|
| 3rd Grade Math | 57% | 79% | 74% | 84% |
| 4th Grade Math | 87% | 81% | 86% | 82% |
| 5th Grade Math | 75% | 82% | 73% | 83% |
| 6th Grade Math | 81% | 78% | 80% | 91% |

This is inconsistency is also evident in Table 2, which shows student cohort performance over time. This inconsistent performance on a test aligned to previous Arizona Academic standards demonstrates the need for instructional innovation that will support the more rigorous learning students will need to demonstrate on the PARCC assessment.

Table 2

*Peace Elementary School AIMS Meets and Exceeds Proficiency in Math by Cohort*

| Graduating Class | 2009 - 2010 | 2010 - 2011 | 2011 - 2012 | 2012 - 2013 |
|---|---|---|---|---|
| Class of 2022 | N/A | 79% | 86% | 83% |
| Class of 2021 | 57% | 81% | 73% | 91% |
| Class of 2020 | 87% | 82% | 80% | 81% |

Peace Elementary School has approximately six hundred students and one administrator. The principal navigates instructional change at her school on her own. She has expressed desire to help her teachers change their instructional practices to ultimately improve mathematic achievement outcomes, or at least maintain them when Arizona's College and Career Readiness Standards are assessed. Although she hopes to improve student performance through instructional change, she has not used a specific set of change tools systematically. The Associate Superintendent that supervises Peace Elementary and the school principal are both anxious to see Peace achieve consistent above-average performance on the looming PARCC assessment and to do this they want systematic improvement processes and purposeful shared leadership structures implemented at Peace. The Mathematics Change Team at Peace lacked change management training and the ongoing leadership coaching needed to meet the challenge of supporting rapid instructional change. Teachers at the school will be expected to create lessons that include the new AZCCRS, which includes building new instructional materials and changing methods. The veteran instructional staff at the school will need skillful support from their peers to manage the demands of instructional change.

**My Role at Peace School**

In December 2012, I transitioned out of the principalship to a role at the central office level. My new role is that of district-level consultant and coach. I sought to establish a relationship with the school as a change facilitation coach. In this role I provided ongoing support to teacher-leaders charged with facilitating instructional innovation. Although this research focused on the challenges of accountability and change at Peace Elementary, I hoped to build the leadership and transition management

skills of the change facilitation team with the hope that I will learn more about myself as a change facilitation coach and may be able replicate coaching practices at other school sites I support. Additionally, in the context of an ever-changing landscape in public education, creating a leadership structure at a school that is sustainable despite changes in leadership should prove valuable into the future.

**Concerns-Based Adoption Model**

There are many change theories one can consider when implementing instructional innovation at a school. Some change frameworks name constructs and stages of change (Bridges, 2003; Hord, 1994; Marzano et al., 2005; Reeves, 2009; Rogers, 1971). Many researchers discuss intellectual considerations for school site leaders attempting to implement change at their schools (Hord, 2008; Marzano et al., 2005). Few offer concrete surveys, tools, and interventions to use to support colleagues as they navigate change. The Concerns Based Adoption Model (CBAM) is different because it provides a change management framework, data collection tools, and interventions that a Change Facilitation Team (CFT) can use to support colleagues across the implementation bridge (Hall & Hord, 2001, 2011). The CBAM framework begins by offering the idea that those experiencing change go through various stages of concern and levels of use of an innovation. One way to measure how and if users are implementing a new instructional strategy is to use a rubric called an Innovation Configuration Map. By gathering survey and walk-through data, a team can analyze results and determine the next course of action to support colleagues and increase their level of use (Hall & Hord, 2011). Using specific tools, models, and interventions that surround this understandable change theory and my own coaching may be an effective way to promote colleague-to-

colleague managed instructional change and accelerate the use of a new instructional strategy at a Title One school. However, there was no evidence for my hypothesis; hence the need to conduct this study.

**A Change Facilitation Team as a Potential Solution**

As a change facilitation coach, I trained a change facilitation team in the concerns-based adoption model, and worked with them to support the quality, frequency, and fidelity of math talks as an instructional practice and collaborative teams as a means of support. The team selected math talks, which are a way for teachers to have students work their way through mental math problems. These talks are approximately ten minutes long, have associated hand motions, and are typically done three to five days per week. Although the team selected math talks as their implementation focus, this research is concerned with the tools and strategies a Change Facilitation Team uses to make change happen. These tools can be used with any initiative. I focused on tools for teacher leadership because through my work with Title One principals I saw positive differences in instructional change when teacher-leadership was leveraged as opposed to schools where principals mandated instructional change. School sites that choose instructional goals and use genuine shared leadership practices appeared to have a greater adoption of innovations and less teacher dissatisfaction. However, I needed data to confirm this tacit belief. Creating a culture of teacher empowerment and collaborative change is at the root of some school structure models such as Professional Learning Communities (PLC's) yet in my role I am acutely aware that a collaborative teacher-leadership environment is not present in all the schools I am charged to improve (Dufour, 2011; Nelson, Slavitt, Perkins, & Hathorn, 2008). Providing training in the Concerns Based Adoption Model,

change tools, and ongoing change facilitation coaching may fill a significant professional learning gap for me in my new role as a district-level consultant and coach. However, I had not had the opportunity to formally support a leadership team despite the fact that leadership development and support is an integral part of my new job.

I also have another reason to try this innovation. In my role at the central office level, I had come to know the principal at Peace Elementary, a K-6 school and understood how difficult it can be to implement change at a school with little systematic support. Even though I was an outsider to the school, I was part of the district and had the desire to work with this school to improve instructional practice. Given my experience, new role, and the relationship I have with the principal at Peace School, I wanted to work collaboratively to support her team as they implemented an innovation aimed at the district's goals to have all our students perform well on the new PARCC assessment. This study afforded me a unique learning opportunity to intimately learn how teachers adopt, resist, and manage change, understand the value change tools have or do not have on lowering concerns about rapid instructional change, and understand myself as a leader and facilitator.

**The Innovation**

Previous action research cycles, as well as the current issues facing public educators in Arizona, inform this action research study. I supported a Change Facilitation Team as they led instructional change at their school site using the Concerns Based Adoption Model change tools. The principal selected the CFT to ensure there was representation from one teacher at each grade level in first grade through sixth grade,

special education, and intervention. They faced the unique challenge to select an instructional innovation for the faculty to implement that will maximize student learning in mathematics. The team was charged with shepherding the innovation through the many challenges of change. Based on the current context, there was a need to create this team to ensure that innovation implementation occurred with a high level of fidelity, frequency, and quality as well as at a fast enough rate to meet the challenge of high-stakes accountability. I provided change facilitation support to the team in the form of professional development and ongoing team coaching as a means to empower teacher-leaders to more effectively take on the challenges of change. This approach draws on the research on change, learning organizations, and coaching (e.g., Bruce & Ross, 2008; Charalambous & Philippou, 2010; Marzano et al., 2005). To do this, I acted as a change leadership coach by building a relationship with the team, introducing them to the Concerns Based Adoption Model, establishing norms and action steps, supported their use of the CBAM tools and interpretation, and facilitated structured protocols to support their ability to solve challenges that arose during the implementation process. It is of note that I did not provide math content expertise; my role was to support change leadership which can occur with any instructional innovation (Hall & Hord, 2011). My own learning was an important aspect of this study and will inform future coaching support as I work in other schools. This research study specifically addresses the following research questions:

1. How, and to what extent, do teacher-leaders trained in change facilitation learn and use concerns based adoption tools to manage transition and with what result?

2. How, and to what extent, does a change facilitation team of teachers trained in CBAM improve the quality, frequency, and fidelity of an instructional innovation?
3. What change facilitation coach behaviors empower teachers to improve the quality, frequency, and fidelity of an instructional innovation?
4. What impact does a change facilitation coach have on a CFT's Levels of Use of CBAM tools, their Stages of Concern about being a change facilitator, their instruction, and their interactions/leadership with their peers?

As a leader charged to support schools during this time of accountability and change, it is imperative to shorten the change cycle. Attempting to impact change through existing practices will not meet the need of this dynamic context (Goddard, Hoy, & Hoy, 2004; Levine, 2011; Marzano et al., 2005; Rogers, 1971). This is apparent not simply through documented research, but also through results from previous action research cycles. This research seeks to explore a new model and discover the impact of a Change Facilitation Team using CBAM tools on the speed and quality of innovation diffusion at a Title One elementary school.

## Chapter 2 – Literature Review

In Chapter 1, the national context was introduced and how national pressures impact local schools, causing an impetus to innovate instructional practices rapidly. I claimed that as a result of these pressures, school site leaders were in search of strategies that could support teachers in a more rapid adoption of new instructional practices. I also explained previous action research cycles, my current context, and findings that inform this cycle of research. In Chapter 2, I provide literature to substantiate my claims and establish how my innovation and ideas are grounded in theory and research.

### Reform Efforts

The call for education reform has happened for almost as long as there have been public schools (Hunt, 2005). Although a variety of educational reforms have been attempted, little if any significant reform has occurred since the industrial age (Clemmit, 2011; Hargreaves, 2006; Ravitch, 2010). As a result of the resilience of the traditional industrial educational model and mediocre rankings on international assessments, the American public education system is still under the media's microscope highlighting poor outcomes and crying out for reform (Berliner & Biddle, 1995; Glass, 2008; Hunt, 2005; Wagner, 2008). Newspaper articles from the 1970s through today have called for the implementation of business practices in public education (Jones, 1997). Specifically, there has been a call for school systems to focus on efficiency and effectiveness (Broad, 2011; Business Chiefs to Run Schools, 2007; Hargreaves, 2006, Walters, 1992). School leaders have begun to draw upon the business community's body of knowledge as to implementing innovation (Austin & Harkins, 2008; Schechter & Qadach, 2011). The modern age of school reform has brought about new ideas but it has also lead to a search

for scapegoats. Pundits occasionally blame students and administrators for poor achievement; however, because teachers have a direct impact on instruction, they are typically the ones blamed for mediocre results on international assessments (Clemmit, 2011; Hargreaves, 2006; Sztajn, 2003).

Much of the research on school reform has focused on teacher learning and skill development as well as the impact of the specific instructional methods they use (Bruce & Ross, 2008; Hattie, 2009; Joyce & Showers, 1980; Kuijpers, Houtveen, & Wubbels, 2010; Marzano et al., 2004). In the days of NCLB, these methods focused on scripted ways of teaching from basal textbooks or discrete research-based isolated instructional strategies such as Marzano et al.'s (2004) high-yield strategies that include comparing similarities and differences, summarizing and note taking, generating and testing hypothesis, and non-linguistic representation. These practices are proven effective and show short-term gains in achievement; however even with them, student growth tends to plateau over time (Hargreaves, 2001; Kotter, 1995; Sledge & Morehead, 2006; Sztajn, 2003). This spike and plateau effect demonstrates the need to institute processes that will support ongoing instructional reform efforts that best meet the dynamic needs of today's students and society (Giles, 2006; Hargreaves, 2006; Nichols, 2007; Schechter & Qadach, 2011).

## Learning Organizations

The rapid innovation and organizational transformation that characterize many successful businesses is what legislators and business leaders are asking of schools right now (Austin & Harkins, 2008; Hargreaves, 2006; Sztajn, 2003). Business organizations have been driven to become learning organizations for many years because to remain

competitive and profitable, they depend on employee learning and innovation (Thomas & Allen, 2006). Thomas and Allen note that, "…central to the concept of a learning organization (is) the intentional use of learning processes to continuously transform the organization…" (p.123). Some of the business literature shows that even under the most promising conditions an organization's capacity to learn can be stymied without sufficient internal and external support. Climates that support critical inquiry, self-reflection, and connection are necessary for the development of learning capacity (Gilley, Gilley, & McMillan, 2009; Thomas & Allen, 2006). Also important are both stability in the workforce and full participation in the innovation process. In order for an organization to incorporate new learning fully, employees must have an opportunity to continuously innovate while recalling previous learning successes and failures (Austin & Harkins, 2008; Thomas & Allen, 2006). Creating an environment of trust, risk-taking, collaboration, empowerment, and even failure are key characteristics of a learning environment (Bowen, Ware, Rose, & Powers, 2004; Hanson, 2001; Thomas & Allen, 2006). If educators are going to create learning organizations, they must then use these characteristics (Austin & Harkins, 2008; McLester, 2012; Thomas & Allen, 2006).

The challenge, however, is that participatory learning environments require more time of employees because they must attend meetings and make time for discussion. In terms of organization development, time away from the classroom and additional administrative responsibilities could be perceived by teachers as adding to an already heavy workload (Houkes, Janssen, De Jonge, & Bakker, 2003). Similarly, collaboration often requires integrating and negotiating a diversity of perspectives, which may actually surface teacher conflicts (Achinstein, 2002; Dufour, 2011). In an era of frequent public

accountability measures, it could be difficult to convince educators to innovate rapidly and possibly fail. If we are going to transform schools into learning organizations and teachers into collaborators, innovators, and risk takers in their work and with each other, the school leader must understand the nature of change and how to guide their school through transition (Hall & Hord, 2011; Hargreaves, 2001, 2006; Hord & Roussin, 2013; Kotter, 1995; Levasseur, 2012).

## The Need for Rapid Change in Schools

The body of research about change theory and innovation implementation focuses on strategies to overcome the challenges leaders face as they attempt to have members of an organization change their work practices (Hall & Hord, 2011; Levasseur, 2012; Marzano et al., 2005; Rogers, 1971). Some research shows that one-third to two-thirds of major change initiatives fail (Gilley et al., 2009). The history of failed educational reforms certainly aligns with this research. Those that study instructional change have found that institutionalizing a new instructional practice with quality can take three to five years (Hall & Hord, 2011). In this current era of federal and state accountability and public listings of school performance, many educators feel the pressure to rapidly change instructional practice in an attempt to improve student outcomes on standardized tests. In essence, there is not time to complete instructional reform in three to five years, it must occur now (Glass, 2008; Marzano et al., 2005; Protheroe, 2005; Ross, Hogaboam-Gray, & Bruce, 2006). Schools that take three years to show improvement in student achievement can be reconstituted, meaning the entire staff can be replaced given there is a need for reform. Hanson defines reform as major changes in practice that lead to a restructuring of core processes, programs, or procedures (Hanson, 2001).

## Understanding Transition

Reform requires more than a minor adjustment of practice; it requires getting at the core of what one does. However, this may cause cognitive dissonance which, in turn may take an emotional toll on an individual (Bridges, 2003; Hall & Hord, 2011; Hanson, 2001; Marzano et al., 2005). Bridges clarifies this process with his three-phase transition model. Figure 1 illustrates Bridges' transition model.

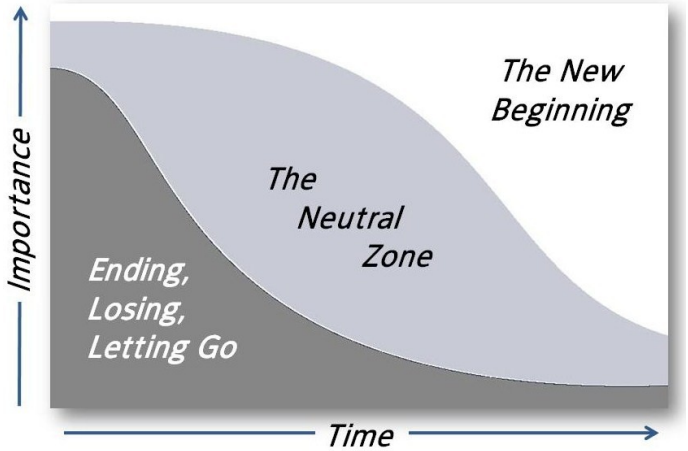


*Figure 1.* Bridges' Transition Model. Source: Boehman (2011) adapted from Bridges.

The figure demonstrates Bridges' change model and illustrates that over time, individuals progress through change only after processing the transition from one event or practice to the new event or practice (Bridges, 2003). This process includes letting go, then experiencing the neutral zone, a challenging aspect of change where the people adapting to a change become unsure as to how to proceed. Finally, during the new beginning, they emotionally and intellectually understand and accept the new practice (Bridges, 2003).

Bridges (2003) work aligns to Hall and Hord's (2011) work on the stages of concern people experience as they experience the transition from one instructional practice to another (Hall & Hord, 2011).

## Theoretical Perspective

This study aims to discover the impact of a change facilitation team on the speed and quality of innovation diffusion at a Title One elementary school. Given this focus, the theoretical lens used is Hall and Hord's (2011) framework on the change process, the Concerns Based Adoption Model (CBAM).

### Concerns Based Adoption Model

Organizational change has been studied thoroughly. Rogers' (1971) work explains how innovations diffuse throughout an organization. He studied the networks and systems people create to make change become part of the culture (Rogers, 1971). This view of change sparked research on organizational change. Hall and Hord's (2011) seminal book on change, *Implementing Change, Patterns, Principles, and Potholes* delivers a psychological model of the change process that people undergo. Their change theory considers change as a continuous and deeply personal process that people experience at different rates and stages (Donald & Palsha, 1992; Hall & Hord, 2011; Hord & Roussin, 2013). Their model recommends the creation of a Change Facilitation Team to shepherd the instructional change process. The CBAM model relies on the team developing an implementation bridge that supports staff as they experience change (Hall & Hord, 2011; Hord & Roussin, 2013). This implementation bridge is a scaffold of just-in-time information and implementation strategies for new practitioners (Hall & Hord, 2011). Their theory for enacting instructional change relies on concrete change

facilitation tools to evaluate the progress of an innovation: the stages of concern survey, innovation configuration map, and levels of use interviews (Hall & Hord, 2011; Tunks & Weller, 2009).

**Change Facilitation Tools**

Once the team has gathered data about teacher response to instructional change, the resulting data analysis from the CBAM tools points the team toward specific interventions they can implement to support their colleagues to move forward. These tools provide waypoints for the change facilitation team as they lead change and help guide the support structures necessary to continue to move a reform forward.

Hall and Hord's Stages of Concern construct frames the transition people experience when change occurs. There are six stages of concern:

- Stage 0: Unconcerned
- Stage 1: Information; general awareness, seeking information
- Stage 2: Personal; unsure of the personal impact the innovation will have
- Stage 3: Management; focus on completing the tasks associated with the innovation
- Stage 4: Consequence; wonder how the use of the innovation impacts student learning
- Stage 5: Collaboration; coordinating and cooperating with colleagues to align implementation
- Stage 6: Refocusing; searching for ways to improve the innovation to have a greater impact on students (Clinton, 2011)

As people transition from non-user to managing the innovation and then eventually to collaboration and refocusing, they move concurrently through Bridges' transition model (Bridges, 2003; Hord & Roussin, 2013). The CFT supports staff as they progress through the stages of concern by providing support that best meets their need for information, materials, modeling, feedback, and collaborative space (Hord & Roussin, 2013). There are two key strategies to measure what stage of concern someone is experiencing: completion of the Stages of Concern Questionnaire or determination based on what Hall & Hord call branching interviews (Hall & Hord, 2011; Hall, Newlove, George, Rutherford, & Hord, 1991).

In addition to monitoring the stages of concern, the change facilitation team should also determine the level of use at which staff implements a new instructional practice. Hall and Hord (2011) recommend using a rubric called an Innovation Configuration Map to measure the level of use of an innovation. This rubric is developed by the Change Facilitation Team and clearly defines what one would see in a classroom that is implementing a given innovation at various levels of fidelity and quality (Hall & Hord, 2011; Hord & Roussin, 2013). Additionally, one can use levels of use branching interviews with staff to support levels of use data (Hall & Hord, 2011). It is of note that one can use a qualitative interview process to support stages of concern and levels of use surrounding an innovation. These interviews are brief interactions conducted by a member of the change facilitation team, and are often called "one-legged" interviews due to their brevity (Hall & Hord, 2011). The Concerns-Based Adoption Model provides a change facilitation team with data tools they can use to monitor and support teachers in

implementing instructional change (Clinton, 2011; Hall & Hord, 2011; Hord & Roussin, 2013).

**Coaching for Change**

Improving teacher performance through coaching has been a research interest for many years (Batt, 2010; Joyce & Showers, 1980). There are many ways to categorize and approach the process of coaching teachers. Coaching perspectives that appear frequently in the literature include consultant coaching, confrontational coaching, cognitive coaching, and peer coaching (Kowal & Steiner, 2007; Olson & Barrett, 2004; Toll, 2004). While it is helpful for school site leaders to have coaching skill, they may not always be the formally designated coach for their teaching staff (Gilley et al., 2009). School site leaders have a wide range of tasks to complete. Knowing this, some school districts have created additional staff positions explicitly designated to coach teachers in non-evaluative ways (Knight, 2005).

Instructional coaching is typically focused on supporting teachers to improve their instructional practice over time (Guskey, 2002a). Changing instructional practice requires change in both thought and behavior (Batt, 2010; Costa & Garmston, 2002; Garmston, Linder, & Whitaker, 1993; Toll, 2004). Dissertation research completed by Clinton (2011) found that coaching informed by CBAM tools made a positive impact on teachers moving through the stages of concern (Clinton, 2011). She also found that teachers that received coaching were more likely to have a greater percentage of teachers move into refinement and refocusing of their work (Clinton, 2011). In order to help move people through the instructional change process, one should include the five components of staff development offered by Joyce and Showers (1980, 2002) as well as be adept in change

management (Guskey, 2002b; Hall & Hord, 2011; Hord, 1994; Marzano et al., 2005; Mitchem, 2003; Rogers, 1971; Schechter & Qadach, 2011). The five components of staff development that positively impact practice include theory, modeling, practice, ongoing feedback, and coaching for application in the classroom (Costa & Garmston, 2002; Dufour, 2011; Joyce & Showers, 1980). Joyce & Showers (1980) state, "Awareness alone is an insufficient condition. Organized knowledge that is not backed up by the acquisition of principles and skills and the ability to use them is likely to have little effect" (p. 380). Included in the model offered by Joyce and Showers is the idea of the coach. Although many school sites have designated someone to specifically fill this niche, the role can be filled by another teacher, site leader, or consultant (Kowal & Steiner, 2007; Steiner & Kowal, 2007). The literature on coaching informed the researcher's interactions with the team, however, there is room in the literature for additional knowledge about the impact of CFT coaching.

## How the Literature Informs this Study

To implement sustainable reform in a school, one should draw upon: historical reform ideology and discourse, the importance of learning organization culture and practice, research on effective instruction, and change theory. With variable achievement scores and looming PARCC assessment implementation, there is a need to improve instructional practices in classrooms rapidly. This study seeks to compress the amount of time it takes for a staff to implement instructional reform while empowering teachers to own and manage the instructional change process through the use of a Change Facilitation Team. This was a new practice for the teachers involved; thus they needed support in change facilitation. The CFT coach drew upon the research on CBAM,

learning organizations, and coaching throughout the course of the research. As a coach, the researcher purposefully worked to build trust and positive relationships with the team, provide support when needed, and stretch their own beliefs about what they could accomplish as leaders. The innovation draws upon what we have learned from organization research, teacher learning, and the diffusion of innovations and change.

## Chapter 3 - Methods

The previous chapter introduced literature addressing organizational change and learning, the mandates requiring educators to change practice more rapidly than research supports, my theoretical frame, and the importance of job-embedded learning through coaching. This chapter describes my action research aimed at attempting to improve the quality and speed with which instructional innovations were used in classrooms and the methodology used to answer the research questions:

1. How, and to what extent, do teacher-leaders trained in change facilitation learn and use concerns-based adoption tools to manage transition and with what result?
2. How, and to what extent, does a change facilitation team of teachers trained in CBAM improve the quality, frequency, and fidelity of an instructional innovation?
3. What change facilitation coach behaviors empower teachers to improve the quality, frequency, and fidelity of an instructional innovation?
4. What impact does a change facilitation coach have on a CFT's Levels of Use of CBAM tools, their Stages of Concern about being a change facilitator, their instruction, and their interactions/leadership with their peers?

### Setting and Participants

As noted in Chapter 1, this action research study occurred in the Cactus Unified School District, a public, K-12 district comprised of 38 school sites spread across 300 square miles in the Northwest Metro Phoenix area (Arizona Department of Education, 2012). The school this study occurred in has a shared leadership and problem-solving

structure that includes Change Facilitation Teams. These teams are charged with supporting instructional innovation in a given subject area. This particular CFT focused on innovations in math instruction.

**Change Facilitation Team**

**Teachers**. The principal of Peace Elementary selected the team well before the research began. The CFT included a teacher from each grade level or department who was charged by the principal to simultaneously change her/his own instructional practices and support her/his colleagues in changing their instructional practices. All nine members of the CFT were invited to be study participants. Although all nine members agreed to be research participants, only eight fully completed all of the requested interviews and questionnaires. These eight full participants represented a cross section of the faculty, from first through sixth grade, special education, and intervention. The CFT was made up of two men between 30 and 39 years old, five women, age 40 and above with the final two female teachers between 20 and 39 years old. The group also has a range of teaching experience, with one participant in their second year of teaching, ranging to two participants with twenty plus years in the field. The average participant had eleven years of teaching experience. All of the members of the team were responsible to teach math, although most of the participants also had responsibilities to teach other subjects. One participant only taught math as an intervention teacher.

**Instructional Coach**. The instructional coach is a veteran teacher, with more than eighteen years of experience and has been in a coaching role for more than three years.

**Role of the researcher.** My role in this study was one of CFT coach in addition to my usual role providing leadership support to a variety of Title One schools. In the

past, my work varied greatly based on informal conversations with school leaders and the Associate Superintendent that supervises the Title One schools. For the purpose of this study, I took on a more formal, active role with the Change Facilitation Team at Peace Elementary. To begin the study, I provided an initial training in the Concerns Based Adoption Model, change management, and implementation planning. During the study, I provided the team with ongoing professional development as well as one-on-one support in the Concerns Based Adoption Model and collected data routinely.

## Innovation

The innovation focused on empowering a team of teachers at Peace Elementary to understand, navigate, and lead instructional change. This innovation matters because the teachers chosen, like others, face rigorous performance standards and on top of this were charged to simultaneously change their instructional practices and also support their colleagues in changing their instruction. However, when it comes to leading change, research shows this can be a challenge (Hall & Hord, 2011; Marzano, Waters, & McNulty, 2005; Schlecty, 2001). Some teachers readily take on the mantle of teacher-leader, meaning they take initiative on various leadership tasks; however, research also shows that a lack of formal training in change facilitation and team building has the potential to cause frustration and impede needed innovation and problem solving (Dufour, 2011; Hall & Hord, 2001; Hall, Newlove, George, Rutherford, & Hord, 1991; Nelson et al., 2008; Tunks & Weller, 2009). This study was designed to support the leadership growth of teacher-leaders empowered with the knowledge, skills, and tools needed to develop their organization.

**Procedure**

The procedure for this action research study is described in detail in this section. This cycle of action research began with a full day training designed to teach the CFT how to categorize the types of change people experience, understand the implications for change, and understand change tools from Hall and Hord's CBAM. Additionally, the team learned about organizational learning. Understanding organizational learning was selected as a teaching point because of its potential to ground the team in collaborative learning and problem solving that they could use to inform their work as they strove to change their instructional practices and those at their school. Over the course of the initial training, the team engaged in a variety of protocols to give the participants some knowledge and skills to facilitate instructional change. The team created a team mission statement, group norms, defined their roles as a CFT, arrived at a shared understanding of their implementation goals, and created an implementation plan. This plan established their course of action as a team to ensure that instructional innovation happened in identified classrooms. The plan included action steps, individual responsibilities, and specific measureable benchmarks (Fullan, 2011; Hall & Hord, 2011; Hord, 1994; Marzano et al., 2005). Although participant outcomes in this first session were expected to be concrete, it was hoped that this initial group training would provide new knowledge. As teachers contextualize their own learning it was expected that their new knowledge would connect with what they have learned and what they know about how change has occurred in the past at their school site.

After the initial summer training, I went to Peace School at least twice per month. During one visit, I gathered classroom data, conducted interviews on levels of use, and

worked individually with CFT members to answer individual questions about the use CBAM tools and application of organizational change theory. After the one-on-one meetings, I transcribed the interviews with each participant and used CBAM tools and Marzano's research on leadership responsibilities and practices to determine how to follow-up with the CFT member (Hall & Hord, 2011; Marzano, et al., 2005). The individual visits began as structured events; however, during the course of the research it became apparent that the school environment was too dynamic to have only structured times to talk with individual teachers. Instead, I purposefully stopped at Peace Elementary strategically throughout the workweek to meet with various members of the team. Thus, I was able to meet with each CFT member briefly once per month. The one-on-one meetings informed my next interaction with the participant, but taken as a whole, I would discover issues cropping up for the team to tackle.

During another visit, I attended the CFT meetings. During those meetings, I provided monthly professional development in CBAM strategies. I supported their ongoing data collection and interpretation; selection of interventions to use with their colleagues, and revision of their implementation plan as needed. Figure 2 captures the process.

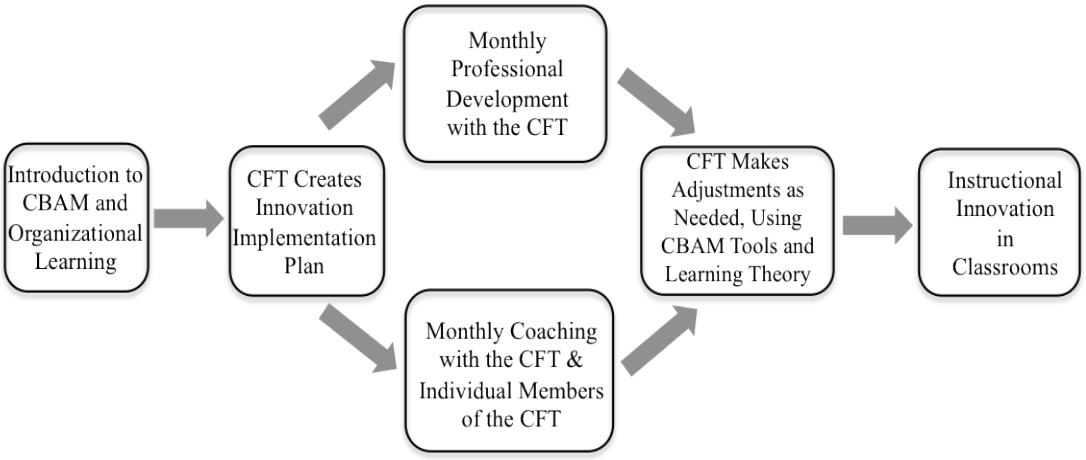


*Figure 2.* Innovation structure.

Ongoing professional development was conducted with the CFT because even though the CFT learned about the CBAM change facilitation tools during the initial training, research shows that to internalize new tools, practices, and concepts in light of their own school context, the team will need ongoing support and coaching (Gallucci, 2008; Hall & Hord, 2011; Hall et al., 1991; Marzano et al., 2005). From my prior experience and action research cycles, I also anticipated the team needing support and coaching in the administration and interpretation of their faculty's Stages of Concern questionnaires and levels of use data at the beginning of the process and that the need for this support would decrease as the innovation progressed.

During individual meetings, I gained insight into the individual learning and my coaching using what Hall and Hord refer to as "one legged interviews" or brief one-on-one interviews designed to get quick and immediate insight (Hall & Hord, 2011). During these visits, I gathered valuable data to inform the monthly professional development with the CFT as well as address concerns and encouraged use of the change facilitation

tools with CFT members. Figure 3 outlines the monthly professional development topics that I delivered to the entire CFT.

| Month | Topics Addressed | Data Collection Tools |
|---|---|---|
| 1 | • Understanding change<br>• Creating a mission, goals and plan<br>• Defining a learning organization<br>• The Concerns-Based Adoption Model<br>• Tools of transition management | • Interviews<br>• Field notes<br>• Baseline change Facilitator Stages of Concern Questionnaire |
| 2 | • Implementation Plan Review<br>• Creating and communicating the vision & understanding the contexts that support change.<br>• Constructing an IC map | • Interviews<br>• Field notes<br>• IC map |
| 3 | • Implementation plan review<br>• Moving through resistance<br>• Interpreting Stages of Concern data from staff<br>• Use of the IC map and establishing Inter-rater reliability<br>• Responding to staff implementation needs based on data | • Walk-through data collection using IC map<br>• Change Facilitator Stages of Concern Questionnaire<br>• Interviews<br>• Field notes |
| 4 | • Implementation plan review<br>• Keeping the momentum<br>• Implementing interventions (handling mushrooms)<br>• Monitoring progress | • Interviews<br>• Field notes<br>• Observations |
| 5 | • Implementation Plan Review<br>• Interpreting Levels of Use and Stages of Concern Data<br>• Using protocols in professional development<br>• Implementing interventions (handling mushrooms) based on survey results | • Walk-through data collection using IC map<br>• Change Facilitator Stages of Concern Questionnaire<br>• Interviews<br>• Field notes |

*Figure 3.* Monthly professional development topics.

## Instruments and Data Collection

To better interpret and understand the context and adequately address the research questions, this action research study used a mixed methods design. Researchers use mixed methods to gain deeper understanding into multi-faceted problems (Creswell, 2009; Greene, 2007). As a result of the robust information one can gather through strategic use of mixed methods, this research practice has gained popularity in many contexts, including contexts that rely heavily on quantitative results to inform practice such as medical research (Creswell, 2009; Scott & Briggs, 2009). Gathering both quantitative and qualitative data allowed greater insight into this innovation that was situated in the complex environment of a public elementary school (Bruce & Ross, 2008; Goddard et al., 2004; Greene, 2007; Scott & Briggs, 2009).

There are a variety of mixed methods typologies to draw upon and I used concurrent triangulation typology (Creswell, 2009). In this study, I use the term triangulation to mean: "…the use of two or more different methods to measure the same phenomena…" (Greene & McClintock, 1985 p. 524). Qualitative and quantitative data gathered throughout the study were used to confirm or disconfirm findings, which is particularly important to my questions (Bowen et al., 2004; Creswell, 2009).

## Data Collection Tools

As noted above this action research study included multiple measures. Specifically, this study included interviews, field notes, questionnaires, and an Innovation Configuration Map to gather data to inform the following research questions:

1. How, and to what extent, do teacher-leaders trained in change facilitation learn and use concerns-based adoption tools to manage transition and with what result?
2. How, and to what extent, does a change facilitation team of teachers trained in CBAM improve the quality, frequency, and fidelity of an instructional innovation?
3. What change facilitation coach behaviors empower teachers to improve the quality, frequency, and fidelity of an instructional innovation?
4. What impact does a change facilitation coach have on a CFT's Levels of Use of CBAM tools, their Stages of Concern about being a change facilitator, their instruction, and their interactions/leadership with their peers?

Figure 4 below captures a summary of the data collection plan.

| Research Questions | Innovation Configuration Map | Interviews | Change Facilitator Stages of Concern Questionnaire | Field Notes |
|---|---|---|---|---|
| How, and to what extent, do teacher-leaders trained in transition management learn and use concerns-based adoption tools to manage transition and with what result? | | X | | X |
| How, and to what extent, does a transition team of teachers trained in CBAM improve the quality, frequency, and fidelity of an instructional innovation? | X | X | | X |
| What change facilitation coach behaviors empower teachers to improve the quality, frequency, and fidelity of an instructional innovation? | X | X | | X |
| What impact does a change facilitation coach have on a CFT's Levels of Use of CBAM tools, their Stages of Concern about being a change facilitator, their instruction, and their interactions/leadership with their peers | X | X | X | X |

*Figure 4.* Research questions and data collection tools.

## Quantitative Measure

### Change Facilitator Stages of Concern Questionnaire.

***The purpose.*** The Change Facilitator Stages of Concern Questionnaire was used to inform the question, What impact does a change facilitation coach have on a CFT's Levels of Use of CBAM tools and their Stages of Concern about being a change facilitator? If my coaching had the intended impact on participant growth, participants moved through stages of concern towards more collaborative practice and a higher level of use of change management practices (Hall, 2011). Using this tool not only informed

my interactions with the team, it also indicated how the participants were reacting to their experience as change leaders.

***With whom it was used.*** I administered this questionnaire to the members of the Change Facilitation Team.

***What.*** A quantitative measure informing the final research question is Hall et al.'s (1991) Change Facilitator Stages of Concern Questionnaire. Researchers created the questionnaire over the course of three years and piloted it with over 1,200 participants. Reliability measures were at levels over .65 on all scales; however there were some areas with high inter-correlation, meaning they were measuring the same construct (Hall et al., 1991). After each administration, the authors revised the questionnaire to increase reliability and establish low enough inter-correlations to establish that the scales measure the seven levels of concern that change facilitators experience. The instrument includes 35 items evaluated on a 7-point scale, with 0 indicating *not concerned about this at all right now* to 7 indicating *extremely concerned with this*. This validated questionnaire instrument measures what Stage of Concern (SoC) change facilitators experience as they take on the role of change leaders (Hall et al., 1991).

***When administered.*** This questionnaire was given to members of the Change Facilitation Team during their initial training and at the end of the research period. These administration results were used comparatively to look for patterns of change in the CFT's Stages of Concern.

***How.*** Participants took the questionnaire on paper independently during the initial CFT meeting and independently at the end of the study. Participants had as much time as needed to complete the 35-item questionnaire.

## Qualitative Measures

### Innovation Configuration Map,

***The purpose.*** To address the research question, How, and to what extent, does a transition team of teachers trained in CBAM improve the quality, frequency, and fidelity of an instructional innovation?, I conducted classroom walk-throughs using the CFT-created Innovation Configuration (IC) Map as a data collection tool. An IC Map is a detailed rubric that describes the instructional innovation and is used to determine the quality, fidelity, intensity, and consistency of an instructional strategy as it is implemented in a classroom. I conducted brief classroom walk thoughs twice during the course of the innovation to collect innovation implementation data.

***With whom it was used***. I conducted classroom walk-throughs in the classrooms of four CFT member participants. Not all members of the team were teaching a math talk during the times I was conducting the walk-throughs. Although members of the CFT conducted walk-throughs in their colleagues' classrooms, their data was not used for the purpose of this study.

***What***. An IC Map is a team-constructed rubric that describes the instructional innovation to be implemented in the classroom. The map is used to determine the quality, fidelity, intensity, and consistency of the instructional innovation as teachers implement the new practice. The IC Map includes four constructs that will be evaluated: quality, fidelity, intensity, and consistency of teacher's implementation of the named instructional innovation. Each construct is evaluated on a 4-point scale (see Appendix B).

***When administered.*** Baseline data were collected during the first month of implementation to determine the percentage of classrooms currently implementing the

targeted instructional innovation. After the first walk-through, classroom walk-throughs were conducted at the third month of implementation. During the course of the study, participants experienced two classroom walk-throughs.

***How***. Walk-throughs were conducted during math instruction, because that is the focus of the instructional innovation. Each walk-through lasted between seven to ten minutes and was considered a brief snapshot of instruction. Walk-through data were gathered using an IC Map. Each category on the IC Map is scored on a 4-point scale ranging from 1 to 4.

**Interviews.**

***The purpose.*** All of the research questions were informed by participant interviews. Interviews provided the main source of data for the question, What change facilitation coach behaviors empower teachers to improve the quality, frequency, and fidelity of an instructional innovation? Semi-structured interviews were conducted concurrently with administration of surveys and classroom walk-throughs as a means to gather more information from participants.

The semi-structured interviews allowed participants to provide information that I may not have considered. Interviews were intended to be the main source of data to inform research question 3, however, interview data were used to inform all of the research questions. These additional data supported triangulation of findings.

***With whom it was used.*** Interviews were conducted with members of the Change Facilitation Team as well as with other study participants.

**What**. The majority of interviews were brief and referred to as "one-legged" interviews by Hall and Hord (2011). These brief interviews were intended to collect data

from a moment in time and were semi-structured. Allowing the participants to drive the content of the interview allowed me to gather data about their current perceptions and provided insight into their current stage of concern regarding change facilitation or the implementation of the instructional innovation. At the end of the study, each participant engaged in a 20-minute, semi-structured interview.

***When administered.*** Participants were interviewed monthly during the coaching and data collection visit.

***How***. Brief one-on-one interviews were conducted at participant convenience. Questions varied based on the situation. Participant response drove the interview past one or two questions. These brief interviews with participants informed the research and guided my moves as a coach. Sample questions are in Appendix C. These questions focused on change facilitation and were audio recorded, and then transcribed. Semi-structured final interviews with members of the CFT were conducted on the same day, one-on-one. The 20-minute interviews were audio recorded and transcribed. All of the interview data were analyzed using a software program called Dedoose Data Analysis Tool v. 4.12.1 (SCRC, 2013) to support the coding process. Analysis began with grounded theory, then axial coding was used to uncover themes and assertions.

**Field notes.**

***The purpose.*** In addition to collecting data from participants, I maintained ongoing field notes to monitor my interaction and behaviors to inform all of the research questions, with a particular focus on the following research question, What impact does a change facilitation coach have on a CFT's Levels of Use of CBAM tools and their Stages of Concern? These notes also allowed a reflective space for the researcher.

***With whom it was used.*** The researcher completed field notes throughout the study.

***What.*** In addition to collecting data directly from participants, maintaining ongoing field notes monitored my interaction and behaviors. Participant contact was tracked as well as my perceptions of their implementation, reaction to professional development, thoughts for the next round of coaching, and their responses to coaching (see Appendix D).

***When administered.*** Throughout the innovation, I maintained field notes regarding impressions, comments, and wonderings as the innovation progresses. I recorded the contacts I made with participants, my perceptions of their implementation, reaction to professional development, thoughts for the next round of coaching, and their reaction to my coaching. I also used field notes to inform the research question regarding change coach behaviors and captured ongoing personal reflection.

**Validity, Reliability, and Trustworthiness**

The analysis of data varied based on the selected tools. This analysis was guided by the questionnaire guidelines for scoring when applicable. What follows are brief descriptions of research tools that inform the research questions.

**Innovation Configuration Maps.** Innovation Configuration Maps were used to gather observation data from classrooms. The tool was created by the CFT as part of their outward understanding of their learning. The Innovation Configuration Map was co-constructed using the specified format that included measures of quality, fidelity, intensity, and consistency (see Appendix B) to align to the research-based model of Innovation Configuration Maps (Hall & Hord, 2001, 2011; Hord & Roussin, 2013). The map uses a 4-point scale that was used to assess ongoing progress of innovation implementation. Members of the CFT were reluctant to use the IC Map. They had concerns about perceptions amongst the staff and each other. As a result, the researcher was the only person using the map during walk-throughs. Percentages of proficiency in each area--quality, fidelity, intensity, and consistency--were graphed to see if there were changes in the classroom data over the course of the innovation.

**Interviews.** In addition to completing quantitative questionnaires, surveys, and walk-throughs, participants were interviewed using a one-legged interview protocol (see Appendix C). These data were open coded and then axial coded to find concepts and themes that emerged as possible impediments to the innovation. The data was used to confirm or disconfirm findings, and had equal weight when considering results.

In addition to the one-legged interview data, participants engaged in a 20-minute final semi-structured interview. These data were open coded, then axial coded to find theme related components; then themes and finally assertions were uncovered through multiple steps.

**Change Facilitator Stages of Concern Questionnaire.** Members of the Change Facilitation Team completed this questionnaire prior to the start of the study and upon

conclusion of the study. This validated questionnaire has alphas of .65 and higher and comes with a specific interpretation process that was created by research team that built it (Hall et al., 1991). Although this questionnaire has been validated as is, there was a need to adapt some of the questions to ensure they addressed the context and questions of this research. Once this data from the questionnaire was compiled and graphed, I compared the findings with the semi-structured interviews with team members to gain further insight into the responses and consider results in light of quantitative and qualitative data. The questionnaire developers built a guidance manual regarding the use and interpretation of the questionnaire that was followed throughout the process (Hall et al., 1991).

**Field notes.** As noted above, I maintained field notes throughout the innovation regarding impressions, comments, and wonderings as the innovation progressed (see Appendix D). I also used field notes to inform the research question regarding change coach behaviors, as well as to capture ongoing reflection. At the conclusion of the innovation, I used open coding then moved to the axial coding process to uncover how the data informed the research questions (Strauss & Corbin, 1998).

**Reliability and validity of research design and data collection instruments.** Measuring the instructional innovation process at a school presents challenges. To address the variety of research questions in the study, a variety of data was gathered. The impact of the Change Facilitation team was measured using observations, questionnaires, and interviews. The questionnaire that was used is research-based and validated. The Change Facilitator Stages of Concern Questionnaire has an alpha of .65. These tools have been used for many years to address school improvement questions regarding culture,

change, and instructional innovation. The questionnaires and interview questions used in the study have been piloted with teachers in similar school settings. In addition to the quantifiable questionnaire results, I collected walk-through data using an innovation configuration map. These walk-through data demonstrated quality, frequency, and fidelity of implementation of math talks through the school. Research field notes and journal data was also maintained to additionally inform the research questions.

Throughout this study, qualitative data were collected with the intention of discovering how the teachers involved perceived themselves as empowered leaders of change as well as their perception of how well the change was taking place. To more fully understand how instructional innovation does or does not occur in an urban school setting, there was a need for this study to include both quantitative and qualitative research methods. Collecting both quantitative and qualitative data throughout the intervention allowed for data triangulation to more clearly provide insight into the research questions.

# Chapter 4

## DATA ANALYSIS AND RESULTS

In Chapter 4, results of this action research with a mixed methods design are presented. The study sought to understand if I as a leader of change, and if my participants as teacher-leaders, could take action and create local theory that in the long run might impact student learning more significantly than educators simply following state or national accountability mandates (Coghlan & Brannick, 2010; Cranston, 2013). I used action research because of its focus on making things better. As Coghlan (2006) states, "The primary purpose of action research is to produce practical knowing which is embodied in daily actions by the manager–researcher and the development of learning organizations and which aims to guide inquiry and action in the present" (p. 295). Given this, action research was the ideal method to use to investigate how workers, in this case a group of teacher-leaders and I as their coach, impacted our local context through implementation of the Concerns Based Adoption Model of change with a Change Facilitation Team (Reeves, 2009).

As a means to better understand the innovation, data presented in this chapter include both quantitative and qualitative results. The quantitative data presented in the first section came from a pre- and post- Change Facilitator Stages of Concern questionnaire. The qualitative findings were drawn from CFT Meeting transcripts, participant interviews, classroom walk-throughs, field notes, and reflections from the researcher. These data were triangulated to affirm findings and provide validity. Data collected were aimed at gaining insight into the following research questions:

1. How, and to what extent, do teacher-leaders trained in change facilitation learn and use concerns-based adoption tools to manage transition and with what result?
2. How, and to what extent, does a change facilitation team of teachers trained in CBAM improve the quality, frequency, and fidelity of an instructional innovation?
3. What change facilitation coach behaviors empower teachers to improve the quality, frequency, and fidelity of an instructional innovation?
4. What impact does a change facilitation coach have on a CFT's Levels of Use of CBAM tools, their Stages of Concern about being a change facilitator, their instruction, and their interactions/leadership with their peers?

## Quantitative Data Analysis

### Change Facilitator Stages of Concern Questionnaire

Quantitative data came from a modified version of the Change Facilitator Stages of Concern Questionnaire. Hall et al. (1991) created the questionnaire to measures the Stage of Concern (SoC) a change facilitator experiences at a given point of an innovation as he/she takes on the role of change leader. The instrument has been validated through many trials. Understanding which of seven stages change facilitators are experiencing can help guide the supports they need.

Pre and post data from the questionnaire were evaluated in two ways per the developer's recommendations (Hall et al., 1991). First, individual responses were reviewed, recorded using the scoring sheet, and then compiled to calculate an average score for each Stage of Concern. The researcher then used a conversion table to convert the raw scores to percentiles. This conversion provided the team percentile for each stage.

Percentiles indicate the percent of scores that fall below the indicated score. For example, if a Stage of Concern score is in the 81st percentile, it is higher than 81% of the other scores. The results are listed below in Table 3.

Table 3

*Pre-Post Change Facilitator Stages of Concern Percentile Scores*

| | Stage 0 | Stage 1 | Stage 2 | Stage 3 | Stage 4 | Stage 5 | Stage 6 |
|---|---|---|---|---|---|---|---|
| Pre Percentile Score | 75 | 60 | 48 | 52 | 38 | 55 | 11 |
| Post Percentile Score | 81 | 45 | 43 | 52 | 33 | 59 | 11 |

The percentiles were then used to create Figure 5 that illustrates the relative intensity of each Stage of Concern. This representation allowed the researcher to see the team's response to the innovation and their role as change facilitators.

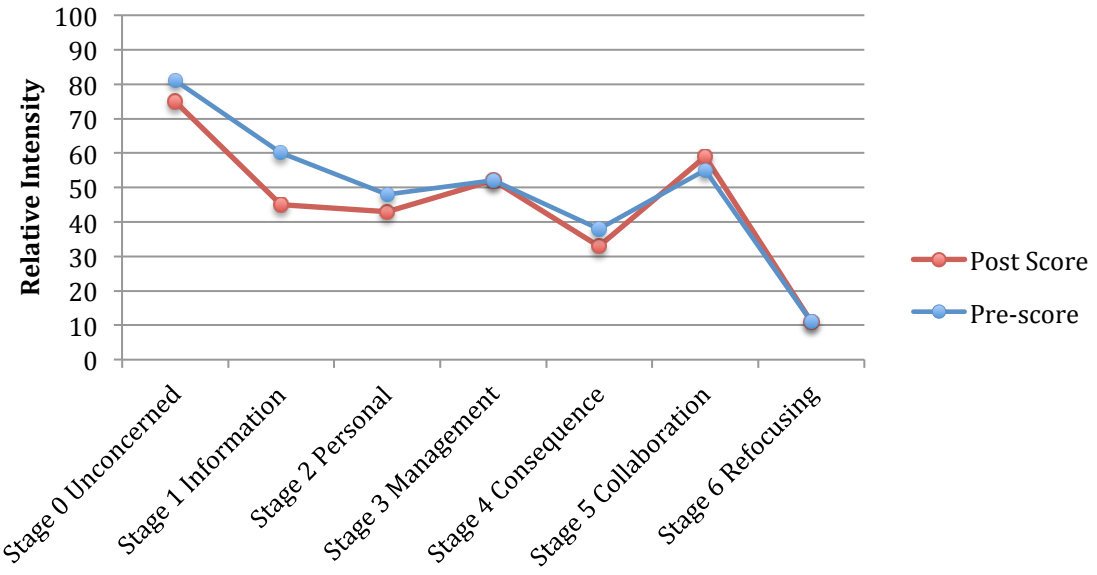


*Figure 5.* Pre-post Change Facilitation Team stages of concern profile.

Using the scoring guide from Hall et al. (1991), the researcher noted the CFT's post scores are at the highest percentiles in the first construct, Unconcerned (Stage 0). To gain deeper understanding into the meaning of these scores, the researcher referenced the Stages of Concern Questionnaire response guides (Hall et al., 1991; Hall & Hord, 2011). When analyzing results for constructs 1 through 6, the higher the percentile rank, the greater the concern. When interpreting the first construct, Unconcerned (Stage 0), there is an important difference. The questionnaire developers clearly note, "A high Stage 0 percentile indicates the facilitator currently has intense concerns about a number of other things besides the innovation being dealt with in the CFSoCQ" (Hall et al., 1991, p. 31). Using this as guidance, the researcher looked at the overall pattern of results created plotted on the graph and noted if the pattern resembled one of the examples in the

guidance document. Once an interpretive model was found, the researcher looked at scores that where either higher or lower than the rest, then followed the interpretive guidance provided by the authors (Hall et al., 1991). After completing this analysis, there were 4 areas that showed differences: Stages 0, 5, 4, and 6.

The questionnaire contained a 7-point Likert scale, with 0 indicating "irrelevant" and 7 indicating "very true of me now." Items in the first construct, Unconcerned (Stage 0), asked participants to rate their level of concern about developing relationships that would facilitate the use of math talks at their site, their need for concrete information about math talks, their level of desire to enhance their facilitation skills, and if the math talks will overload the staff. The participants' percentiles were highest at this Stage (pre-75, post 81). From pre to post questionnaire, the team's level of concern increased from the 75$^{th}$ to 81$^{st}$ percentile. Thus, questionnaire results indicate that the team had other innovations or initiatives happening that caused greater concern than their math talks initiative.

In addition, the post SoC questionnaire shows high levels of concern in the sixth construct, Collaboration (Stage 5). This construct asked participants to rate their level of concern about how the initiative impacted others, how to get teachers excited about the innovation, how the team worked together, and a general desire that the team be recognized as a whole for the work, rather than individuals (Hall et al., 1991). The scale rose from the 55$^{th}$ percentile to 59$^{th}$ percentile indicating an increase in being concerned about collaborative activity as a team. The lower levels of concern in the fifth construct, Consequence (Stage 4), and seventh construct, Refocusing (Stage 6), illustrate that the team was not concerned about actively investigating the impact of the innovation on

student achievement or trying to find ways to refine the math talks to have a greater impact on student learning. Qualitative data discussed later affirms the CFT's unwillingness to improve the quality of the math talks as staff was implementing them.

In addition to the methodology used above, the creators of the instrument recommend that researchers also examine the highest stage score for each team member. To complete this analysis, the frequency of the highest Stages of Concern was analyzed to provide an additional way to understand how the CFT perceived the current innovation. Table 4 shows the highest concerns were in Stage 5, Collaboration, for the majority of the CFT (6 out of 8; Hall & Newlove, 1991).

Table 4

*Highest Stage of Concern About Facilitating the Use of the Innovation*

| Stage Name/Number | Number of Individuals |
|---|---|
| Unconcerned 0 | 0 |
| Information 1 | 0 |
| Personal 2 | 0 |
| Management 3 | 1 |
| Consequence 4 | 1 |
| Collaboration 5 | 6 |
| Refocusing 6 | 0 |

In sum, questionnaire data reveal that this group had higher levels of concern in Stage 5, (Collaboration). This corresponds to the increase in rating of concern from the 55th percentile to 59th percentile and supports the findings in the CFT's Stages of Concern graph. Qualitative data discussed below indicates participant concerns with team relationships and collaboration. Interpretations of this data will be discussed in Chapter 5.

## Qualitative Data Analysis

The qualitative data sources included 5 CFT Meeting transcripts, 16 participant interviews, 2 sets of classroom walk-throughs, and 12 sets of field notes and reflections from the researcher. The CFT meetings and participant interviews were audio recorded and transcribed. Additional details regarding these qualitative data are in Table 5.

Table 5

*Description of Qualitative Data Sources*

| Data Source | Word Count |
|---|---|
| CFT Meetings Transcripts | 15,000 |
| Participant Interviews | 33,209 |
| Field Notes and Reflections | 1,856 |
| Total Word Count | 35,065 |

The researcher began the data analysis process by reviewing all field notes, CFT meeting transcripts, and interview transcripts. After this initial review and reflection, data were input into a software program called Dedoose Data Analysis Tool v. 4.12.1 (SCRC, 2013) to support the coding process. Since this study was focused on CBAM as a change

theory, coding began with two a priori codes: CBAM and change. Using these codes helped me uncover other codes in vivo, and I proceeded in my open-coding (Miles & Huberman, 1994). Codes allowed the researcher to "…organize the material into chunks or segments before bringing meaning to information" (Creswell, 2009, p.186). During the next phase of analysis, all coded data were re-read, then reflected on, and I wrote analytical notes. Following this process, the researcher reviewed the charts of code co-occurrence in Dedoose. The co-occurrence of codes in various data supported the identification of theme related components. The components were explored again in axial coding considering the literature. Doing this allowed larger categories to emerge. These categories were continuously refined based on the analysis of multiple data sources until themes and assertions were identified. Assertions were backed with participants' words.

**Themes**

During the initial analysis of the qualitative data, the researcher identified 39 codes. After reflection and analysis, the codes were merged into five major themes. The themes that emerged from the data included:

- boundaries of teacher-leadership
- culture
- CFT coach impacted productivity
- understanding change
- compliance

The themes from the analysis led the researcher to a set of assertions, which are included in Figure 6.

| Theme Related Components | Themes | Assertions |
|---|---|---|
| Some members of the CFT stated that only the principal should give teachers feedback about instructional practice.<br>Most of the CFT believe they can continue the innovation even if there is a change in site leadership. | Boundaries of teacher-leadership | The CFT never agreed on a measure (an IC Map). So giving instructional feedback to their peers made most of them feel uncomfortable and drained. Despite this, the team hopes that they can continue the innovation in the future and that it will spread. They also noted challenges ahead. |
| Some teachers told the CFT they were not welcome in their classroom.<br>CFT members with more experience at the school site were more comfortable with the idea of giving colleagues feedback.<br>Having relationships with the people you work with impacts culture. | Culture | CFT members new to the campus or those in specialized roles felt less welcome in classrooms than those with more experience – in general a culture of private practice slowed the team's progress on this innovation. |
| Having someone establish norms and team focus helped the group remain focused through the semester.<br>The CFT coach became an insider.<br>The CFT accomplished more than other goal teams at their school site. | CFT Coach impacted productivity | Participants felt the team was more productive and accomplished because of the coaching they received. The fact that the coach was not part of the campus did not influence their perspectives. |
| Learning about CBAM impacted their understanding of change.<br>Participants mentioned the IC Map and learning in CFT meetings. | Understanding Change | Knowledge of CBAM shaped participants' views of their peers and the work of the team. The team understood the ideas but never used technical terms or tools. |
| The team readily went into classrooms to check for implementation of math talks<br>The team created and posted graphs that illustrated the number of teachers implementing math talks in a public space.<br>In each meeting, compliance was discussed. | Compliance | Compliance monitoring had an impact on implementation of innovation and on the team. |

*Figure 6.* Theme related components, themes, and assertions

**Boundaries of teacher-leadership.** *Assertion 1: The CFT never agreed on a measure (an IC Map). So giving instructional feedback to their peers made most of them feel uncomfortable and drained. Despite this, the team hopes that they can continue the innovation in the future and that it will spread. They also noted challenges ahead.*

The theme related components that led to this assertion were: (a) some members of the CFT stated that only the principal should give teachers feedback about instructional practice and (b) most of the CFT believe they can continue the innovation even if there is a change in site leadership. The qualitative data provides examples of the discomfort the members of the CFT expressed about giving peers feedback and their belief that they could maintain their innovation into the future.

Throughout the course of the study, members of the CFT completed short classroom visits, known as walk-throughs, to monitor implementation of math talks. In the original implementation plan, math talks were to be assessed using an Innovation Configuration Map and teachers would receive feedback from each other. Although the team created the map, and some of the members wanted to use the IC Map during their weekly walk-throughs, the team never reached agreement about the use of IC Maps during this research. Instead, they continued to complete walk-throughs in every math classroom 3 times per week without the use of any tools to measure the quality of the math talks instructional practice. During these visits, the CFT only recorded if the teachers were using the math talks strategy at the agreed upon time. During 3 CFT meetings and during brief interviews, various members of the CFT stated concerns about being perceived as an evaluator if they used the IC Maps in their colleagues' rooms. One member of the CFT said: "I am not the principal. I don't want to be judgmental of other

people. It's not my job" (Interview, December, 2013). Another member of the team noted that, "[we were]… still not really wanting to be an evaluator, you know" (Interview, January, 2014).

Some CFT members did not want to evaluate their peers but instead wished they could simply self-evaluate themselves. For them evaluation was draining. One noted,

> Because I just really wanted it [the evaluation process] to be more of a self-reflection. And, I just, you know I just got tired of it, you know? Only a couple of us were like speaking up about it. And so I was just like, whatever it'll be, it'll be. Like, I don't have the energy... (Interview, January, 2013)

This participant also commented: "I'm just not comfortable being someone's evaluator" (Interview, December, 2013).

Despite most of the team's concerns about using the IC Map during walk-throughs, there were some exceptions. One member of the team noted that she was, "So trying to get that [evaluation] out of their heads. Really, we're not evaluating anybody. We're just looking for components, and where our staff development needs to be" (Interview, January, 2013). Another participant said: "…some people on our committee said [they] don't feel comfortable judging other people. And I understand that, but it's not judging, it's more of a kind of a work in progress" (Interview, January, 2014).

The team stated both their discomfort in providing evaluative feedback to colleagues, but they still hoped that they could continue the innovation they rolled out and they wanted this to spread. During final interviews, the researcher wanted to gain insight into participants' perceptions of the team's future impact. Six of eight participants responded that they believed they could in fact continue the innovation work on their own. When asked if their work would continue, one member said, "I hope it does after what we put into it. Because we set the foundation, and next year could be the next

level…getting better with our number talks" (Interview, January, 2014). One participant spoke about the transfer of their leadership work to other innovations in the future:

> I think having a clear direction and a clear path and being able to structure things better…I think that that will help with anything, I mean it doesn't have to be this. It could also be different subject areas other than math (Interview, December 2013)

One participant mentioned wanting the other goal teams on campus to receive the training their team received, "…because at the beginning none of them really felt confident. And now I see them as all feeling, very confident" (Interview, January 2014).

However, team members also noted there could be challenges if school site leadership changed. Two participants said that a new principal could stop number talks if they wanted to: "Sadly it just seems like it wouldn't [continue] like if the principal said I've been through this number talk thing and I didn't see any results" (Interview, January, 2014). Another teacher on the CFT stated: "…I know it should definitely, probably more be on us to do that, but…as we see the staff working collaboratively is not the strongest" (January, 2014). This teacher thought that they could only continue to grow innovations as a team if the school culture became more collaborative and open. Another participant captured the consistent outlook from the CFT about their role in shepherding innovation, "So it doesn't have to be an administrator. Just needs to be someone who's willing to be the personal trainer. You know what, that's exactly what it is. It's a personal trainer for education, basically" (Interview, January, 2014).

**Culture**. *Assertion 2: CFT members new to the campus or those in specialized roles felt less welcome in classrooms than those with more experience – in general a culture of private practice slowed the team's progress on this innovation*. The theme

related components that led to the assertion were: The CFT initially made rapid implementation progress as evidenced by weekly completion of walk-through checks for implementation. The theme related components that led to the assertions were:

- some teachers told the CFT they were not welcome in their classroom;
- CFT members with more experience at the school site were more comfortable with the idea of giving colleagues feedback;
- having relationships with the people you work with impacts culture.

Although the team reported that most of the staff was, "ok with me coming in" (Interview, November, 2013) 7 out of 8 participants reported that one or more teachers said they were not welcome in their classroom to assess the implementation of math talks. During an interview, one teacher reported that colleagues told them and other members of the CFT, "…nope! You will not be doing that. No you will not [come in]…" (December, 2013). During two different interviews, one member of the CFT reported reluctance to use the IC Map as a tool to observe and provide feedback: "…I'm uncomfortable being someone's evaluator" (December, 2013, January 2014). A member of the CFT reported that one grade level team said: "They have the top AIMS scores in the district and they feel that nobody should be frickin monitoring them" (Interview, November, 2013). These explicit statements that members of the CFT were not welcome in some classrooms were an indicator of a culture of private practice and they contributed to the team's reluctance to use the IC Map with colleagues.

All members of the CFT that had less than 5 years of experience at the school site referred to themselves as new to the school during interviews. The teachers with two or less years at the school site said they were uncomfortable giving feedback to colleagues

because they: "…did not have a relationship" (Interview, November, 2013; Interview, January 2014). Another member reported, "…the idea is to go in someone else's classroom and rate them so to speak on how they're doing something. I'm new to this campus I'm not an expert" (Interview, January, 2014).

Field notes from observations and brief conversations also recorded impressions of concern with being an outsider from the members of the CFT that were either new to campus or working in specialized roles other than a homeroom teacher. One person told a story about not telling the people in the room during lunch that she was on the CFT because she "…wanted to hear what they really thought [about the CFT]" (Interview, January 2014). The more veteran members of the CFT spoke about their colleagues differently. For example, one person spoke about their team's openness, "…with my team it's been great. We're really a team. We get along, and we can share. And we can tell each other, you know? It's okay to say, I can't do this part of the number talk. So they're not afraid to say that" (Interview, January, 2014). Another veteran member of the team felt confident going into other classrooms because they have close personal relationships with the people they were assigned to observe. This participant referenced connections in church and even going on vacations with their colleagues. They felt little or no concern about having conversations with those people regarding instruction, because, "what's interesting about my group is coincidentally I socialize with them outside of school. I get along with them very well" (Interview, December 2013). This participant spoke about a change in leadership outlook over time: "When I first came here I didn't know anybody. So I was a little more shy. But now that I'm more comfortable with them you know I think it's easier to take on that leadership role" (Interview, January, 2013). These data are

indicators that CFT members that were on campus longer had deeper relationships and were more comfortable taking on the mantle of teacher-leader. These data indicate that a culture of private practice influenced the innovation and will probably continue to impact the innovation in the foreseeable future.

**CFT coach**. *Assertion 3: Participants felt the team was more productive and accomplished because of the coaching they received. The fact that the coach was not part of the campus did not influence their perspectives.* The theme related components that led to the assertions were:

- having someone establish norms and team focus helped the group remain focused through the semester;
- the CFT coach became an insider;
- the CFT accomplished more than other goal teams at their school site.

All members on the CFT spoke repeatedly about the role the CFT Coach played in helping the group stay focused on their implementation and adherence to the group created norms. During previous initiatives, all of the participants noted that meetings would get off topic, however, "Now I'm not the only one who will say something if we get off topic. Now there are more than one of us that will say, 'Ok, we're off task. Back to the agenda'" (Interview, December, 2013). Another participant said, "I think we are better organized now. We follow the agenda more than in years past" (Interview, November, 2013).

The researcher wondered about the impact of a coach that was not based solely at the school site. Specifically, participants were asked if having a CFT Coach from off-site was a distractor. The researcher purposefully implemented listening strategies and sought

to create a personal connection with each participant. The researcher noted through field notes and reflections that over the course of the innovation, participants opened up and shared personal stories and anecdotes. This was considered an indication that members of the team became more comfortable with the researcher/coach. It was also noted that when asked if the researcher/coach was an outsider, facial expressions appeared to show surprise. One member said, "You've been around forever. I mean not here, but in our district" (Interview, January, 2014). Another person said she valued, "…that different set of eyes. I like to have that fresh, fresh perspective. And honestly, it probably keeps us more on task, or keeps us more focused. To me that's not a, a negative thing, it's led to a more organized final outcome" (Interview, January, 2014). One participant saw the CFT Coach as a resource, "You were part of our mission. And you were, really you were the leadership component that got us started" (Interview, January 2014).

By the end of the innovation, members of the CFT felt as if they had accomplished a great deal. This was evident in comments such as: "Sometimes [in the past] we wasted our time. Sometimes it was just having a meeting, because we're having a meeting every 2 weeks. I feel like we're really taking care of our business." and; "…if we're done…we're done. No more sit there and talk (Interview, January 2014). In a different interview, a member of the CFT stated:

> I think that works great the way it [the CFT] was set up. Because I've never, I've been teaching 14 years, and I've never been on a committee where right from the beginning it was like, okay, this is some hardcore stuff. And you gotta take it serious. Let's not waste our time, and let's get something accomplished by the end of the year. (Interview, January 2014).

Two other members of the CFT spoke about the coach and the committee this way, "We would've gotten there, but it probably would've taken us longer…" and "So it,

it did feel like the math committee has [done more]. We've done way more than any of the others this year (Interview, January, 2014). Members of the CFT stated that the CFT coach impacted the progress the team made and was perceived as an insider by the group.

**Understanding change**. *Assertion 4: Knowledge of CBAM shaped participants' views of their peers and the work of the team*. *The team understood the ideas but never used technical terms or tools*. The theme related components that led to the assertion were: (a) learning about CBAM impacted their understanding of change; (b) participants mentioned the IC Map and learning in CFT meetings.

During final interviews, data about participants' understanding of CBAM were gathered. This data show that participants spoke about the impact the new learning had on their understanding of the change process in a variety of ways. One member of the CFT said that: "I think it [CBAM] was definitely, made me more aware of, where people were coming from sort of thing" (Interview, January, 2014)". A few spoke about how their new understanding of change brought greater awareness and understanding of the transition their colleagues were experiencing. One noted, "…like, the times of year that are more stressful for people and things like that… it [CBAM] made me more aware of it…" (Interview, January, 2014). During a different interview, a participant spoke about CBAM this way, "I think that, especially knowing, the times of year that are more stressful for people and things like that…it made me more aware of it..." (Interview, January, 2014). Another CFT member mentioned their learning made them, "…more understanding and patient, not just with math but with our other stuff [initiatives] too…" (Interview, January, 2014)

The team also referenced CBAM and change management during their regular CFT meetings. They had dialogue about where their colleagues were in the Stages of Concern and asked the coach about interventions they could implement (Field Notes, 2014). Team members created tools to help their colleagues that were having a hard time remembering steps and created concrete ways to celebrate success. They also referenced acting as technical support for their colleagues. One member of the CFT said a new teacher on campus, "…asked me tips about math." They also noted that this was a change from the way they interacted with their peers in past years (Interview, January, 2014). The researcher noticed that the team referenced components and ideas from CBAM, but they rarely used the technical language. It was noted in field notes that the coach modeled the CBAM vocabulary if the team brought up a concept. The team would acknowledge this through body language (nodding agreement) or re-stating their comment, but there was little change in their independent vocabulary usage over the course of the study.

**Compliance**. *Assertion 5: Compliance monitoring had an impact on implementation of innovation and on the team.* The theme related components that led to the assertions were: (a) the team readily went into classrooms to check for implementation of math talks; (b) the team created and posted graphs that illustrated the number of teachers implementing math talks in a public space; (c) in each meeting, compliance was discussed.

At initial planning meetings, the team decided they would conduct classroom walk-throughs to monitor the implementation of their innovation. They planned to determine if the staff was complying with the team's request and these insights were supposed to evolve into opportunities to give peer feedback about the quality of

implementation. As noted earlier, the team never came to an agreement and did not use an IC Map to assess quality, however, they created compliance monitoring charts and graphs. They created these monitoring tools without any feedback from the CFT coach. The researcher believes they did this because they themselves were being evaluated. During the course of the study, the school district conducted two compliance-oriented walk-throughs at Peace Elementary. Although members of the CFT spoke about these negatively, "…they had to nit-pick to find one thing we weren't doing…" and "…they just come to check things off…" the CFT still took a compliance-oriented approach to walk-throughs. They posted the graphs they created in a main thoroughfare on campus and updated them at least 5 times during the course of this study (Field Notes, January, 2014). When asked about their compliance orientation, one member of the team said: "I'd say that's the big thing. There has to be a person to keep that accountability of the whole thing together…" (Interview, January 2014). In a different interview, a CFT member talked about the questions she was thinking about regarding the implementation of math talks. Her response was compliance oriented, "…are you doing it, are we complying" (Interview, December, 2013). When reflecting on her colleagues' implementation of math talks to date, one CFT member said, "I think they are in acceptable compliance and I think some of them are going to say what can I do to improve this" (Interview, January, 2014).

In the review of research field notes and reflections, compliance appeared in each whole group CFT meeting. During data analysis, compliance and monitoring were coded 25 times. This was twice the rate that culture and technical help were coded. Despite stated concerns about the school district's use of monitoring for compliance, the team

used this strategy throughout the course of the research in spite of the coach's efforts to help them move towards feedback for improvement. The next chapter will discuss all of the assertions in relation to the research questions.

# Chapter 5

# DISCUSSION

Hall and Hord (2011) note that institutionalizing a new instructional practice with quality can take three to five years. Yet, as noted in Chapter 1, due to accountability measures, schools today need to be adept at incorporating new practices rapidly. In today's high-stakes environment there is a need to institute processes that support ongoing instructional reform efforts so that the dynamic needs of today's students and societal demands can be met (Giles, 2006; Hargreaves, 2006; Nichols, 2007; Schechter & Qadach, 2011). The purpose of this action research study was to explore a new change facilitation model and discover the impact of a Change Facilitation Team (CFT) that had been taught CBAM tools. CBAM was used because it is research-based and has shown to be a way facilitators of change can roll out innovations. Given this, this chapter presents a discussion of the findings that inform the following research questions:

1. How, and to what extent, do teacher-leaders trained in change facilitation learn and use concerns based adoption tools to manage transition and with what result?
2. How, and to what extent, does a change facilitation team of teachers trained in CBAM improve the quality, frequency, and fidelity of an instructional innovation?
3. What change facilitation coach behaviors empower teachers to improve the quality, frequency, and fidelity of an instructional innovation?
4. What impact does a change facilitation coach have on a CFT's Levels of Use of CBAM tools, their Stages of Concern about being a change facilitator, their instruction, and their interactions/leadership with their peers?

## Tools and Strategies that Lead to Discussion

This action research study employed a mixed methods design. The quantitative data came from a pre- and post- Change Facilitator Stages of Concern Questionnaire (CFSoCQ). To analyze this instrument, the researcher closely followed the published interpretation guide. The qualitative data came from CFT Meeting transcripts, participant interviews, classroom walk-throughs, field notes, and reflections from the researcher. Qualitative data were analyzed using a grounded approach. The data were triangulated to confirm findings. The next section provides these triangulated findings, extends explanations provided in Chapter 3, and discusses the findings. This final chapter also presents lessons learned, the study's limitations, as well as implications for practice and future research.

## Discussion of Findings

The discussion section is separated into two sections: (a) impact and use of the CBAM tools by teacher-leaders, and (b) the impact of a CFT coach.

**Impact and use of the CBAM tools by teacher-leaders**. This study sought to understand the concerns and impact a group of teacher-leaders trained in CBAM could have. To understand this the following two research questions were asked: *(a) How, and to what extent, do teacher-leaders trained in change facilitation learn and use concerns based adoption tools to manage transition and with what result?* and *(b) How, and to what extent, does a change facilitation team of teachers trained in CBAM improve the quality, frequency, and fidelity of an instructional innovation?* To answer these questions it seems appropriate to first discuss the results from the CFSoCQ because it was a

customized version of one created by Hall et al. (1991), authors well versed in change and leadership theory.

There were three results from the quantitative instrument that help answer the research questions. First, post data showed that the CFT was more concerned with issues or innovations happening on campus than the implementation of math talks, their selected instructional innovation (Hall et al., 1991). Hall and Hord's (2011) research indicates that high scores on Stage 0, Unconcerned typically show either a lack of knowledge or lack of concern about an innovation. This group of teacher-leaders were not concerned with being able to conduct and help others lead math talks because they had a great deal of information about them and were given autonomy. The participants identified, selected, defined, and planned the implementation of math talks. They felt math talks were not that complex, or were not perceived as a second order change (Marzano et al., 2005). Qualitative data from the interviews support this finding. The team's lack of concern with the implementation of math talks was evidenced in statements such as, "…everyone is doing [math talks]…" and, "…the kids are amazing! They love it…" (Interview, January, 2014). One member of the team spoke about how little time the math talks took, and how easy they were to do in relation to other tasks with which they were charged (Interview, January, 2014). Analysis of field notes show that instead of math talks, members of the CFT frequently mentioned concerns with state and district mandated standardized assessments and the new teacher evaluation instrument. In short, the team had more concerns with other initiatives.

Another important result from the CFSoCQ showed that as the math talks progressed, the CFT had increasing levels of concern in the sixth construct, Collaboration

(Stage 5). Not only was this an overall high score for the team, but when considering individual scores, six out of eight members of the CFT identified Stage 5, Collaboration as their highest area of concern or focus. This is a positive indicator. Hall and Hord (2011) indicate that high Collaboration scores are an indicator of high-functioning, collaborative groups. A high score at Stage 5, Collaboration, represents the ideal culture for change (Hall & Hord, 2011). Converging this idea with findings indicates that the team was forming into a group that wants to learn and work with each other (Hall et al., 1991; Hall & Hord, 2011, Hord & Roussin, 2013). These findings were also triangulated through field notes and interviews. One team member said, "…everybody's kinda of doing their part. And at least it seems like we're all kind of like working towards a single [goal]" (Interview, January, 2014). During brief interviews, CFT members discussed working with each other in new ways and forming new connections to other members of the team (Interviews, January, 2014).

The CFSoCQ also showed that the CFT had low percentiles in Stage 6, Refocusing. Post results revealed that the team scored in the 11$^{th}$ percentile meaning they had very few concerns about improving the current quality of implementation (Hall & Newlove, 1991). Qualitative data explain why this might be. A lack of concern about quality may have been the result of the team's overall discomfort with giving their peers feedback about their practice. This discomfort stemmed from a variety of sources, including a culture of private practice and a need to build relationships between the members of the CFT and the rest of the faculty. Interviews and the researcher's field notes support this finding.

The CFT learned about CBAM tools through their initial training with the CFT coach and throughout the course of the study. Tools taught included an IC map, administering and interpreting the Stages of Concern questionnaire to their colleagues that teach math, and implementing interventions with colleagues based on their stages of concern. These interventions included creating materials to support implementation, modeling practice as needed, publicly celebrating successes, and gathering input from the staff regarding next steps. Data from interviews show that six out of eight members of the team believed that they could continue the math talks next year, even if there was a change in site leadership. The CFT referenced their learning during interviews. Some members said that their new understanding of change helped them be more empathetic to their colleagues as they implemented a new instructional strategy. Although the team implemented a number of CBAM concepts and processes, the researcher noted that members of the CFT did not use the CBAM vocabulary. During final interviews, the team used the terms "it," "new learning," and "that" when describing the CBAM concepts they implemented. This led the researcher to wonder if the group had a deep conceptual understanding of the model.

In sum, data show that the use of the CBAM tools on the teacher-leaders and their peers was substantial. It was noted that the CFT used CBAM ideas and created an implementation plan that was intended to support their colleagues as they conducted math talks. The researcher looked for evidence that the team had an impact on the quality, frequency of use, and fidelity to the model of the math talks innovation. Field notes and data from CFT meetings showed that 95% to 98% of the teachers asked to implement the new practice in their classroom did so three times per week. Math talk implementation

rates were monitored over the course of the study and shared openly with the staff via charts and graphs. Interviews with members of the CFT also supported the implementation results data they were gathering. One member of the CFT shared a story about a substitute teacher asking how to do math talks because the students wanted her to do them (Interview, January 2014). This was another indicator that math talks had become part of some classroom's daily routines.

Although the team had just begun to consider how they would implement the use of their IC Maps at the very end of this research, it was clear to the researcher that the team was going to move the innovation forward and they had the tools to do so.

**The impact of a Change Facilitation Team coach**. This study was also designed to help me understand about the impact of my coaching on a CFT. To understand this the following two research questions were asked: *(a) What change facilitation coach behaviors empower teachers to improve the quality, frequency, and fidelity of an instructional innovation?* and*, (b)What impact does a change facilitation coach have on a CFT's Levels of Use of CBAM tools, their Stages of Concern about being a change facilitator, their instruction, and their interactions/ leadership with their peers?* There is a body of research about the process and behaviors involved in coaching teachers to improve individual practices in the classroom; however, there is little research that explicitly identifies high-impact coaching practices and behaviors of a CFT coach (Bruce & Ross, 2008; Knight, 2005; Olson & Barrett, 2004). The initial role of myself as the CFT coach was to provide training in the Concerns Based Adoption Model along with its theory and practices (Hall & Hord, 2011; Hord & Roussin, 2013). The team also received support in establishing operational norms, agenda structures, and the creation of a

concrete implementation plan. Members of the team referenced the learning from this training throughout the course of the study and how what I taught them provided a source of insight.

One of the important coaching practices I did was to establish relationships with the members of the team. This seemed particularly important because I had worked within the district, but was not based at the school. So even though I was an outsider, forming this relationship helped the team share their thoughts, concerns, and successes. Frequent visits to the site to conduct brief walk-throughs and interviews helped make me part of the campus (Hall & Hord, 2011). I also made sure to work around teachers' schedules and time. Even though I was on-site at least once if not twice or more per week, I tried not to impose on work schedules or planning time. Weekly visits were easy to fit into both participant and researcher schedules because of their brevity. The frequent visits were strategic to help build familiarity with staff and students at Peace Elementary. They also afforded me the opportunity to provide differentiated leadership support.

Providing differentiated support proved to be another important coaching practice (Bruce & Ross, 2008). When the CFT was unsure of what to do to support implementation, I stepped in and reminded them about CBAM tools, such as the Stages of Concern survey and support strategies they had learned (Hall & Hord, 2011; Hord & Roussin, 2013). Gentle reminders seemed to alleviate implementation concerns. However, they did not always ensure implementation. For example, in the Concerns Based Adoption Model, one can use a tool called an Innovation Configuration Map to assess implementation quality and fidelity (Hall & Hord, 2011). The CFT and I created an initial implementation plan, and by the end of the second month, the team had created

their own IC Map and presented it to the faculty to get their input so they could make revisions and check for group understanding of effective math talks. The CFT was initially surprised by the negative responses from some of their colleagues regarding the use of the IC Map. So as a coach, I had one-on-one conversations with reluctant CFT members, and then facilitated a protocol to provide the team with another strategy to use when faced with different viewpoints. The team engaged in the structured conversation, and then at the following meeting came to a clear decision to move forward. During final interviews, the team cited my impact on speeding up their implementation. Thanks to the tools and training I provided, the CFT was able to roll out math talks faster, better, and with greater focus.

## Lessons Learned through Implementation

There were a number of lessons learned through the implementation of this study. First, it is important to create local teams to address challenges (Austin & Harkins, 2008; Hall & Hord, 2011; Hall et al., 1991). This CFT knew their context well and that made a difference in how they rolled out the instructional change at their site. During the course of this study, the team's sensitivity to their colleagues' stages of concern helped them select appropriate interventions and become more empathetic toward their peers. Members of the CFT noted how their increased empathy impacted them beyond just the confines of their role on the CFT (Interviews, January, 2014).

Another lesson learned because of this study was the importance of training teachers in the Concerns Based Adoption Model. Teachers are frequently called upon to support instructional change; however, few ever learn about the challenges of change, levels of concern, or change management. Although the teachers in this study received

some initial professional development in CBAM, the team did not fully own the CBAM language, which left me wondering whether the team had deep understanding of the concepts and the tools. In the future, spending more time explicitly using instructional practices that support the CFT in acquiring the vocabulary of CBAM will be a key component of coaching.

A third lesson learned was the value of a CFT Coach, even if that coach is not part of the school. Research participants noted the differences in their practices because of the tools and ideas I provided. To them it did not matter that I was not part of their faculty. Simply having someone with a new and neutral perspective supported the group.

### Limitations

Chapter 3 provided potential limitations and here I reiterate these. The number of participants who took the questionnaires was too small to use standard analytical strategies. Thus, no descriptive statistics are provided. Additionally, although local theory has been developed, small sample size impacts wide-ranging generalizability. Qualitative data were used to validate and substantiate findings, but the researcher acknowledges the limitations to research conducted in small settings. Despite the number of participants, those who relate to the setting and shared leadership practices may be able to adapt this work into their practice. The brevity of this action research study also limits what was found.

## Implications for Practice

Although this localized action research cannot be generalized, there are implications for practice. Perhaps the most important implication is the impact of formation and training of teachers as local change facilitators. Members of this CFT

noted that because of what I supplied to them, they made greater progress than their work on other teams. Additionally, members of the team believed that other teacher-leaders at their school should receive some type of structured learning about change and change management before proceeding with an innovation (Interviews, January, 2014). The empowerment of this particular team of teachers to lead an innovation resulted in a 95% to 98% implementation rate at the school site. Although the high implementation rates could be the result of additional factors, participants and the researcher believe that this type of work with teacher-leaders could have significant impact in the future.

Members of the team also spoke about the impact of a CFT coach. Having a coach to support the teacher-leaders, as opposed to directing them encouraged them to take ownership of their decisions and the innovation. The team also received differentiated support for their leadership work. Many members of the team noted that knowing they were going to have someone follow up with them regarding their leadership work made them feel more accountable to act (Interview, January, 2014). In addition to accountability, the purposeful creation of a collegial relationship between participants and CFT coach motivated their actions.

There are also implications for others that may coach other teams. After having been a leader for so many years, coaching a team that I knew yet was not directly responsible for allowed me to have a more neutral perspective and allow them to make more decisions and lead the work. In the future, perhaps site or district leaders will want to create structures that allow sites to share personnel in this way. As an outside coach, it was important to build a collegial relationship with team members quickly. Although there was work to be done, the work was better once a personal relationship was

established. Coaches should consider the impact of their relationships on their work, and return to the literature on coaching and change leadership when selecting their next coaching move.

## Implications for Future Research

Future research is warranted based on findings from this study. Studies that continue to study the impact of change facilitation team coaching processes and practice will help the educational leadership field. As leaders look to expand their impact and empower teacher-leadership, research in this field could provide a significant contribution. This is particularly important in these times of fast-paced change.

There is a need to conduct studies of this type with larger numbers of participants over longer periods of time. There are limitations to these findings as a result of the small number of participants; however; the findings may scale up. Additional studies with a larger count will improve significance of the findings and there may be some findings that are generalizable.

The body of research regarding educational change claims that it takes three to five years for an innovation to become widely used. This CFT made significant progress in the implementation of math talks at their site in a brief period of time. Future researchers should consider longitudinal studies to further understand the long-term impact of teacher-leadership on classroom practice. Additionally, as one empowers teacher leaders, examining the impact of Change Facilitation Team membership on teacher motivation, retention, and efficacy could add to the scholarship and support practitioners.

The body of work about how to effectively coach teachers in the improvement of their instructional practice is growing; however, there is little work in the area of coaching change facilitation teams. Coaches may be called upon to participate in CFT's or perhaps lead them. Research about high impact behaviors when coaching teams is another area of need.

## Conclusion

There are many approaches to leading organizational change. In these times of high stakes accountability in education and increasing demands on site leaders, we need to find local solutions to support innovation (Marzano et al., 2005; Hall & Hord, 2011; Hord & Roussin, 2013; McLester, 2012). This study found that there is an important impact on instructional innovation when teacher-leadership is leveraged to support change. Further, there is an important role for change coaches when leading change initiatives. There is a need to conduct further research in the area of change coaching and shared leadership structures, practices, and policy.

References

Achinstein, B. (2002). Conflict amid community: The micropolitics of teacher collaboration. *Teachers College Record*, *104*(3), 421–455. doi:10.1111/1467-9620.00168

Arizona Department of Education. (2012). Research and evaluation. Retrieved from http://www.azed.gov/research-evaluation/

Arizona Department of Education. (2012). *Research and evaluation- Arizona Department of Education.* Retrieved from http://www.azed.gov/research-evaluation/

Associated Press. (2013, September 20). 'Arizona's college and career ready standards.' *ABC 15 Arizona.* Retrieved from http://www.abc15.com/news/state/common-core-renamed-to-arizonas-college-and-career-ready-standards

Austin, M. S., & Harkins, D. a. (2008). Assessing change: Can organizational learning "work" for schools? *The Learning Organization*, *15*(2), 105–125. doi:10.1108/09696470810852302

Batt, E. G. (2010). Cognitive coaching: A critical phase in professional development to implement sheltered instruction. *Teaching and Teacher Education*, *26*(4), 997–1005. doi:10.1016/j.tate.2009.10.042

Berliner, D., & Biddle, B. (1995). *The Manufactured Crisis: Myths, Fraud, and the Attack on America's Public Schools* (1st ed.). New York, NY: Perseus Books Group.

Boehman, J. (2011, April 27). Bridges' Transition Theory. Retrieved from http://imjoeboe.wordpress.com/2011/04/27/transitions/

Bowen, G. L., Ware, W. B., Rose, R. A., & Powers, D. (2007). Assessing the functioning of schools as learning organizations. *Children & Schools, 29*(4), 199-208. doi: 10.1093/cs/29.4.199

Bridges, W. (2003). *Managing transitions: Making the most of change* (2nd ed.). Philadelphia, PA: Da Capo Lifelong Books.

Broad, E. (2011). What If? *School Administrator*, *68*(3), 40-41.

Bruce, C. D., Esmonde, I., Ross, J., Dookie, L., & Beatty, R. (2010). The effects of sustained classroom-embedded teacher professional learning on teacher efficacy and related student achievement. *Teaching and Teacher Education*, *26*(8), 1598–1608. doi:10.1016/j.tate.2010.06.011

Bruce, C. D., & Ross, J. A. (2008). A model for increasing reform implementation and teacher efficacy: Teacher peer coaching in grades 3 and 6 mathematics. *Canadian Journal of Education*, *31*(2), 346–370.

Business Chiefs to Run Schools. (2007, January 18). *Evening Standard*, p. 3. London, England.

Charalambous, C. Y., & Philippou, G. N. (2010). Teachers' concerns and efficacy beliefs about implementing a mathematics curriculum reform: integrating two lines of inquiry. *Educational Studies in Mathematics*, *75*(1), 1–21. doi:10.1007/s10649-010-9238-5

Clemmitt, M. (2011). School reform. *CQ Researcher*, *21*(17), 385–408. Retrieved from http://library.cqpress.com/cqresearcher/

Clinton, L. (2011). *The impact of coaching on stages of concern and teacher efficacy of teachers implementing an educational innovation* (Doctoral dissertation). Retrieved from ProQuest Theses & Dissertations. (UMI 3536611)

Coghlan, D. (2006). Insider action research doctorates: Generating actionable knowledge. *Higher Education*, *54*(2), 293–306. doi:10.1007/s10734-005-5450-0

Coghlan, D., & Brannick, T. (2010). *Doing action research in your own organization* (2nd ed.). London, England: SAGE Publications.

Coleman, A. (2011). Towards a blended model of leadership for school-based collaborations. *Educational Management Administration & Leadership*, *39*(3), 296–316. doi:10.1177/1741143210393999

Common Core State Standards Initiative. (2012). *About the standards.* Retrieved from http://www.corestandards.org/about-the-standards

Costa, A., & Garmston, R. (2002). *Cognitive coaching: A foundation for renaissance schools* (2nd ed.). Norwood, MA: Christopher-Gordon.

Council of Chief State School Officers. (2008). *Educational leadership policy standards*. Washington, D.C.: Author. Retrieved from http://ww.ccsso.org/Documents/2008/Educational_Leadership_Policy_Standards_2008.pdf

Cranston, N. (2013). School leaders leading: Professional responsibility not accountability as the key focus. *Educational Management Administration & Leadership*, *41*(2), 129–142. doi:10.1177/1741143212468348

Creswell, J. (2009). *Research design* (3rd ed.). Thousand Oaks, CA: SAGE Publications.

Deutschman, A. (2007). *Change or die* (1st ed.). New York, NY: Harper Collins.

Donald, B., & Palsha, S. A. (1992). Qualities of the stages of concern questionnaire and implications for educational innovations. *The Journal of Educational Research*, *85*(4), 226–232.

Dooner, A.M., Mandzuk, D., & Clifton, R. a. (2008). Stages of collaboration and the realities of professional learning communities. *Teaching and Teacher Education*, *24*(3), 564–574. doi:10.1016/j.tate.2007.09.009

Dufour, R. (2011). Work together, but only if you want to. *Kappan*, *92*(5), 57–62.

Fullan, M. (2011). Choosing the wrong drivers for whole system reform. *Centre for Strategic Education Seminar Series*, *204*(May), 3-19.

Gallucci, C. (2008). Districtwide instructional reform: Using sociocultural theory to link professional learning to organizational support. *American Journal of Education*, *114*(4), 541–581.

Garmston, R., Linder, C., & Whitaker, J. (1993). Reflections on cognitive coaching. *Educational Leadership*, *51*(2), p.57.

Giles, C. (2006). Sustaining secondary school visions over time: resistance, resilience and educational reform. *Journal of Educational Change*, *7*(3), 179–208. doi:10.1007/s10833-005-5727-1

Gilley, A., Gilley, J. W., & McMillan, H. S. (2009). Organizational change: Motivation, communication, and leadership effectiveness. *Performance Improvement Quarterly*, *21*(4), 75–94. doi:10.1002/piq.20039

Glass, G. (2008). *Fertilizers, pills, and magnetic strips: The fate of public education in America* (1st ed.). Charlotte, NC: Information Age Publishing.

Goddard, R., Hoy, W. K., & Hoy, A. W. (2004). Collective efficacy beliefs: Theoretical developments, empirical evidence, and future directions. *Educational Researcher*, *33*(3), 3–13.

Greene, J. (2007). *Mixed methods in social inquiry* (1st ed.). San Francisco, CA: Jossey-Bass.

Greene, J., & McClintock, C. (1985). Triangulation in evaluation: design and analysis issues. *Evaluation Review*, *9*(5), 523–545. doi:10.1177/0193841X8500900501

Guskey, T. R. (2002a). Professional development and teacher change. *Teachers and Teaching*, *8*(3/4), 381–391. doi:10.1080/135406002100000512

Guskey, T. R. (2002b). Does it make a difference ? *Educational Leadership*, *59*(6), 45–51.

Hall, G., & Hord, S. (2001). *Implementing change*. Needham Heights, MA: Allyn and Bacon.

Hall, G., & Hord, S. (2011). *Implementing change: Patterns, principles, and potholes* (3rd ed., p. 322). Upper Saddle River, NJ: Pearson.

Hall, G., Newlove, B., George, A., Rutherford, W., & Hord, S. (1991). *Measuring change facilitator stages of concern* (p. 54). Greeley, CO: Center for Research on Teaching and Learning.

Hanson, M. (2001). Institutional theory and educational change. *Educational Administration Quarterly*, *37*(5), 637–661. doi:10.1177/00131610121969451

Hargreaves, A. (2001). The emotional geographies of teachers' relations with colleagues. *International Journal of Educational Research*, *35*(5), 503–527. doi:10.1016/S0883-0355(02)00006-X

Hargreaves, A. (2006). Educational change over time? The sustainability and nonsustainability of three decades of secondary school change and continuity. *Educational Administration Quarterly*, *42*(1), 3–41. doi:10.1177/0013161X05277975

Hattie, J. (2009). *Visible learning* (1st ed.). New York, NY: Routledge.

Hord, S. (1994). Staff development and change process: Cut from the same cloth. *Issues...about Change*, *4*(2).

Hord, S. (2008). Evolution of the professional learning community. *Journal of Staff Development*, *29*(3), 10–13.

Hord, S., & Roussin, J. (2013). *Implementing change through learning: Concerns-based concepts, tools, and strategies for guiding change* (1st ed.). Thousand Oaks, CA: Corwin Press.

Houkes, I., Janssen, P., De Jonge, J., & Bakker, A. (2003). Specific determinants of intrinsic work motivation , emotional exhaustion and turnover intention: A multisample longitudinal study. *Journal of Occupational and Organizational Psychology*, *76*(December), 427–450.

Hunt, T. (2005). Education reforms: Lessons from history. *Phi Delta Kappan*, *87*(1), 84–89. Retrieved from http://intl.kappanmagazine.org/content/87/1/84.short

Jones, J. (2012). Confidence in U.S. public school at new low. Retrieved from http://www.gallup.com/poll/155258/confidence-public-schools-new-low.aspx

Jones, R. (1997). Kids as education customers. *Education Digest*, *62*(5), 10.

Joyce, B., & Showers, B. (1980). Improving in-service training: the messages of research. *Educational Leadership*, (February), 379-385.

Joyce, B., & Showers, B. (2002). *Student achievement through staff development* (3rd ed.). Alexandria VA: Association for Supervision and Curriculum Development.

Kennedy, A., Deuel, A., Nelson, T. H., & Slavit, D. (2011). Requiring collaboration or distributing leadership? *Phi Delta Kappan*, *92*(8), 20-24. Retrieved from http://www.kappanmagazine.org/content/92/8/20.short

Knight, J. (2005). A primer on instructional coaches. *Principal Leadership*, *5*(May), 16–21.

Kotter, J. (1995). Leading change: Why transformation efforts fail the promise of the governed corporation. *Harvard Business Review*, (March/April), 59–67.

Kowal, J., & Steiner, L. (2007). *Instructional coaching.* Washington, D.C.: The Center for Comprehensive School Reform and Improvement.

Kuijpers, J. M., Houtveen, A.A.M., & Wubbels, T. (2010). An integrated professional development model for effective teaching. *Teaching and Teacher Education*, *26*(8), 1687–1694. doi:10.1016/j.tate.2010.06.021

Levasseur, R. E. (2012). People skills: Change management Lewin's change model. *Interfaces*, *31*(4), 71–73.

Levine, T. (2011). Experienced teachers and school Reform: Exploring how two different professional communities facilitated and complicated change. *Improving Schools*, *14*(1), 30–47. doi:10.1177/1365480211398233

Marzano, R., Pickering, D., & Pollock, J. E. (2004). *Classroom instruction that works* (1st ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano, R., Waters, T., & McNulty, B. (2005). *School leadership that works: From research to results.* Alexandria, VA: Association for Supervision and Curriculum Development.

McClain, K., Bowen, E., Schmitt, P., & Zhao, Q. (2006). The relationship between teachers and text: In search of grounded theory. *Psychology of Mathematics Education, North America Chapter*, *2*, 594–599.

McLester, S. (2012). Rick & Becky Dufour: Professional learning communities at work. *District Administration*, *48*(8), 10.

Mcvee, M., Dunsmore, K., & Gavelek, J. (2005). Schema theory revisited. *Review of Educational Research*, *75*(4), 531–566.

Mehta, J. (2013, April 12). Teachers: Will we ever learn? *The New York Times*, p. 1. Retrieved from http://www.nytimes.com/2013/04/13/opinion/teachers-will-we-ever-learn.html

Miles, M.B., & Huberman, A.M. (1994). Qualitative data analysis: An expanded sourcebook (2nd ed.). Thousand Oaks, CA: Sage.

Mitchem, K. J. (2003). Data drives change: Linking professional development to improved outcomes. *Rural Special Education Quarterly*, *22*(1), 28–32.

Nelson, T. H., Slavitt, D., Perkins, M., & Hathorn, T. (2008). A culture of collaborative inquiry: learning to develop and support professional learning communities. *Teachers College Record*, *110*(6), 1269–1303.

Nichols, C. (2007). *Leading change: The study of a leadership team in transition* (Doctoral dissertation). Retrieved from Proquest Theses and Dissertations. (UMI 3273314)

Olson, J., & Barrett, J. (2004). Coaching teachers to implement mathematics reform recommendations. *Mathematics Teacher Education and Development*, *6*, 63–78.

Protheroe, N. (2005). Leadership for school improvement. *Principal*, (March/ April).

Ravitch, D. (2010). *The death and life of the great American school system* (1st ed.). New York, NY: Basic Books.

Reeves, D. B. (2009). *An ASCD study guide for leading change in your school*. Alexandria, VA: Association for Supervision and Curriculum Development.

Rogers, E. (1971). *Diffusion of innovations*. New York, NY: The Free Press.

Ross, J. A., Hogaboam-Gray, A., & Bruce, C. (2006). The impact of a professional development program on student achievement in grade 6 mathematics. *Journal of Mathematics Teacher Education*, *9*(6), 1–27. doi:10.1007/s10857-006-9020-x

Schechter, C., & Qadach, M. (2011). Toward an organizational model of change in elementary schools: the contribution of organizational learning mechanisms. *Educational Administration Quarterly*, *48*(1), 116–153. doi:10.1177/0013161X11419653

Schlecty, P. (2001). *Shaking up the schoolhouse* (1st ed.). San Francisco, CA: Jossey-Bass.

Scott, P. J., & Briggs, J. S. (2009). A Pragmatist argument for mixed methodology in medical informatics. *Journal of Mixed Methods Research*, *3*(3), 223–241. doi:10.1177/1558689809334209

Shaughnessy, M. (2011). Assessment and the Common Core State Standards: Let's stay on top of it! *NCTM Summing it Up!* Retrieved from http://www.nctm.org/about/content.aspx?id=30169

Slack, M. (2012). Kicking off Race to the Top. *The White House Blog*. Retrieved from http://www.whitehouse.gov/blog/2012/07/24/archives-kicking-race-top

Sledge, J., & Morehead, P. (2006). Tolerated failure or missed opportunities and potentials for teacher-leadership in urban schools? *Current Issues in Education*, *9*(3). Retrieved from http://cie.asu.edu/volume9/number3/index.html

SocioCultural Research Consultants (SCRC). (2013). Dedoose: Qualitative and mixed methods research (Version 4.12.1) [Software]. Available from http://www.dedoose.com

Steiner, L., & Kowal, J. (2007). *Principal as instructional coach.* Washington, D.C.: The Center for Comprehensive School Reform and Improvement.

Stillwell-Parvensky, M. (2011). *Reforming Title I: Closing the academic achievement gap for disadvantaged students* (p. 54). *Reforming Title I: Closing the academic achievement gap for disadvantaged students* Boston, MA:

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research* (2nd ed.). Thousand Oaks, CA: SAGE Publications.

Sztajn, P. (2003). Adapting reform ideas in different mathematics classrooms: Beliefs beyond mathematics. *Journal of Mathematics Teacher Education*, *6*(1), 53–75.

Thomas, J., & Willcoxson, L. (1998). Developing teaching and changing organisational culture through grass-roots leadership. *Higher Education*, *36*, 471–485.

Thomas, K., & Allen, S. (2006). The learning organisation: A meta-analysis of themes in literature. *The Learning Organization*, *13*(2), 123–139.

Toll, C. (2004). Separating coaching from supervising. *English Leadership Quarterly*, *27*(2), 5–7.

Troman, G., & Woods, P. (2000). Careers under stress: Teacher adaptations at a time of intensive reform. *Journal of Educational Change*, *1*, 253–275.

Tunks, J., & Weller, K. (2009). Changing practice, changing minds, from arithmetical to algebraic thinking: an application of the concerns-based adoption model (CBAM). *Educational Studies in Mathematics*, *72*(2), 161–183. doi:10.1007/s10649-009-9189-x

U.S. Department of Education. (2007). *Executive summary of the No Child Left Behind Act of 2001*. Retrieved from http://ed.gov/nclb/overview/intro/execsumm.html

U.S. Department of Education. (2009). *Race to the Top program executive summary*. Washington, D.C.: Author.

U.S. Department of Education. (2011). *Race to the Top fund*. Retrieved from http://www2.ed.gov/programs/racetothetop/faq.html

Wagner, T. (2008). *The global achievement gap* (1st ed.). New York, NY: Perseus Books Group.

Wagner, T. (2012). *Creating innovators* (1st ed.). New York, NY: Scribner.

Walters, L. (1992, January 21). CEO run school means business. *The Christian Science Monitor*, p. 2. Boston, MA.

Zhao, Y. (2012). *World class learners: Educating creative and entrepreneurial students* (1st ed.). Thousand Oaks, CA: Corwin Press.

# APPENDIX A

# INSTITUTIONAL REVIEW BOARD APPROVAL

ASU Knowledge Enterprise Development

Office of Research Integrity and Assurance

| | |
|---|---|
| **To:** | Debby Zambo<br>4701 West |
| **From:** | Mark Roosa, Chair<br>Soc Beh IRB |
| **Date:** | 08/27/2013 |
| **Committee Action:** | **Exemption Granted** |
| **IRB Action Date:** | 08/27/2013 |
| **IRB Protocol #:** | 1308009551 |
| **Study Title:** | The effect of change facilitation coaching using the concerns-based adoption model with an urban elementary school teacher leadership team |

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

# APPENDIX B

# INNOVATION CONFIGURATION MAP

Innovation Configuration Map: Math Talks

| Component 1: Talk Moves | | | |
|---|---|---|---|
| | | | |
| The teacher is not using the Talk Moves during each number talk session. | The teacher posts talk moves in classroom. | The teacher incorporates talk moves during "Number Talks" session. | Appropriate "Talk Moves" (Revoicing, Repeating, Reasoning, Adding on and Waiting) used by teacher and students during number talk session. |
| Component 2: Teacher Procedures | | | |
| | | | |
| The teacher is not implementing number talks. | The teacher is doing most of the talking. | The teacher:<br>1.Posts/Displays visuals/ problem(s)<br>2. Accepts some answers<br>3. Records each unique student response on the board<br>4. Did not prompt students for what other way could you solve?<br>5. Doesn't limit time to 10-15 minutes. | The teacher:<br>1. Posts/displays problem(s)<br>2. Accepts all answers<br>3. Records each unique student responses on the board<br>4. Prompts students for more than one way to solve. (what other way?)<br>5. Limits the number talk to 10-15 minutes.<br>6. Uses appropriate mathematical vocabulary<br>7. Encourages students to use appropriate math vocabulary. |
| **How is Number Talks/Talk Moves helping your kids? How is it helping you? What evidence have you gathered/collect?** | | | |
| Component 3: Student Procedures | | | |
| | | | |

| | | | |
|---|---|---|---|
| Students are not:<br>• Using mental computation (No pencil/paper)<br>• Using Signals show thinking suggested:<br>  • Fist on chest<br>  • Thumb up<br>  • With index finger<br>  • Another finger<br>  • Shaking hand<br>• Defending their answer/ explain strategy<br>• Using appropriate math vocabulary | | | The students are:<br>• Using mental computation (No paper and pencil)<br>• Using Thinking Signals: Suggested:<br>  • Fist on chest<br>  • Thumb up<br>  • With index finger<br>  • Another finger<br>  • Shaking hand<br>• Defend their answer/ explain strategy<br>• Using an appropriate strategy and math vocabulary |
| Component 4: Student Response | | | |
| | | | |
| Students:<br>• Produce unreasonable answers and choose an inefficient or off grade level strategies (attached) to defend their solution.<br><br>**See attachment for grade level appropriate strategies. | Students:<br>• Produce an answer and choose a strategy (attached) to defend their solution.<br><br>**See attachment for grade level appropriate strategies. | Students:<br>• Produce an answer and choose an efficient grade level strategy (attached) to verbally defend their solution.<br><br>**See attachment for grade level appropriate strategies. | Students:<br>• Produce a reasonable answer and choose an efficient grade level strategy (attached) to verbally defend their solution.<br><br>**See attachment for grade level appropriate strategies. |

# APPENDIX C

# INTERVIEWS

The interviews will be brief and semi-structured. The following stems will be used to begin the conversation with study participants, including members of the CFT. The interviews will grow based on response from the participant.

**Math Instruction Innovation**
Are you using the math small group strategies innovation? Why or why not?

When you think about math small group strategies, what are you concerned about?

**Change Facilitation Team**
How is your Change Facilitation Team working?

Have you facilitated instructional innovation at your school in the past?
If not, why not? If yes, in what ways is this implementation the same or different than previous initiatives?

How did you get involved in this change facilitation team?

In what ways has being on the CFT impacted you? Your colleagues?

In what ways has the ongoing professional development and coaching impacted you? Your colleagues?

Are your interactions with your colleagues different this year than in previous years?

When you reflect on the school year thus far, what there an aspect of the goal team meetings or trainings has impacted your leadership?

Did your knowledge of CBAM impact your leadership?

In what ways did my interaction with your goal team impact the work? What wasn't effective?

In what ways did my interaction with your goal team impact the work? Was it helpful to have someone from the outside or was it a distractor?

# APPENDIX D

## FIELD NOTES

Date / Time: Location:
Duration:

Staff Member:

Focus:

| Descriptive Notes | Reflective Notes |
| --- | --- |
| | |

# APPENDIX E

## PERMISSION TO REPRODUCE FIGURE 1

From: **Boehman, Joe** <jboehman@richmond.edu>
Date: Sunday, March 23, 2014
Subject: Permission to use a figure from your blog?
To: Jennifer Cruz <jmcruz@asu.edu>

Hello Jennifer,
I actually adapted the figure from Bridges' text from an old copy of his book Transitions. I am fine with using my graphic, but I think it should be noted that it was adapted from Bridges' original model.

I wish you the best of luck with your dissertation. What is your topic?

Best,
Joe

Dr. Joe Boehman
Dean of Richmond College
University of Richmond

*Sent from somewhere that is not my office.*

On Mar 22, 2014, at 11:21 PM, "Jennifer Cruz" <jmcruz@asu.edu> wrote:

Hello Dr. Boehman,

My name is Jennifer Cruz and I am an Ed.D. candidate. I am writing to ask permission to use the figure about transitions located at the following url in my dissertation: http://imjoeboe.wordpress.com/2011/04/27/transitions/

Thank you for your consideration,

Jennifer Cruz
jmcruz@asu.edu
602-690-1200