Title
Exploring Lesson Study as an Improvement Strategy at a High-Stakes Accountability School

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Publication Date
2012

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA

Los Angeles

Exploring Lesson Study as an Improvement Strategy at a High-Stakes Accountability School

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Education

by

Alice Tae Lee

2012

ABSTRACT OF THE DISSERTATION

Exploring Lesson Study as an Improvement Strategy at a High-Stakes Accountability School

by

Alice Tae Lee

Doctor of Education

University of California, Los Angeles, 2012

Professor Diane Durkin, Co-Chair

Professor Tyrone Howard, Co-Chair

This study addressed the problem of chronic low student achievement in language arts at a Program Improvement 5+ school by implementing two cycles of facilitated lesson study. Using action research to facilitate and monitor change in instructional practices at a school that is currently undergoing a teacher-initiated turnaround reform effort, this study put into practice a facilitation model with lesson study cycles with teachers in the third, fourth, and fifth grades. As facilitator and content expert, I guided teachers through the elements of lesson study including: (a) defining and problem, problem analysis, and goal setting; (b) designing and planning a lesson; (c) implementing, teaching, and observing the lessons; (d) evaluating and reflecting on lessons while analyzing student work; (e) revising and improving the lesson; (f) reteaching the revised lessons; and (g) re-evaluating the retaught lesson and analyzing student work for the second time. Through facilitating the lesson study cycles, I analyzed the process of teacher

collaboration, changes to pedagogical practices, impact on student achievement, and the value of lesson study.

Teachers reported an increase to their instructional capacity following the intervention. Teachers were able to engage in focused planning and develop explicit instruction and attend to student learning, and began to perceive themselves as facilitators of instruction. Teachers found that the lesson study process increased their motivation and confidence as educators. Further, the study found that the intervention impacted student learning through increased student achievement scores in the targeted standards and in the quality of writing. Lesson study, as a professional development model, was reported to provide consistency, accountability, and a safe environment for teachers. Teachers also reported that they valued the collaboration and cross-grade level articulation through the lesson study process.

The study provides implications for other high-stakes accountability schools with chronic low student performance to change, build, and sustain the instructional capacities of teachers to impact student achievement.

The dissertation of Alice Tae Lee is approved.

Christina A. Christie

James W. Stigler

Diane Durkin, Co-Chair

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University of California, Los Angeles

2012

DEDICATION

This dissertation could not have been completed without the patience and support of my family.

Thank you for holding my hand through this incredible journey.

To my amazing parents who instilled in me the love of learning and the art of perseverance

Jane and Timothy Lee

To my children – the reasons why I laugh, cry, dance, and sing

Bennett and Charlotte Lee

&

To my best friend and wonderful husband – thank you for everything

John Lee

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ACKNOWLEDGEMENTS

I would like to thank my committee members, Dr. James Stigler and Dr. Christina Christie, as well as my co-chairs, Dr. Tyrone Howard and Dr. Diane Durkin, for supporting me throughout this process. Thank you for believing in this project. A special thank you to Diane Durkin for her guidance over the past three years through the ELP program.

I would like to acknowledge the teachers who participated in this study and volunteered months of their time to collaborate on this project with me. I thank you for your input, your enthusiasm, and your commitment to ensuring that your students receive the very best you have to offer.

I would like to thank EKKO, Bryan and Michelle Kim, for inspiring me to go on this journey. Thank you for dreaming for and with me. The adventure continues…

To my parents, Jane and Timothy. My love for education is all because of you. Thank you for always believing in me and encouraging me that anything is possible.

To Bennett and Charlotte, my hope for you is that you find your passion and make an incredible impact in this world. I love you!

And last but certainly not least, to my husband, John. Thank you for your enduring patience and sacrifice. This is half yours.

VITA

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CHAPTER 1: PROBLEM STATEMENT

In this project, I used action research with teachers to facilitate and monitor change in practice at a Program Improvement 5+ school, one that is currently undergoing a teacher-initiated turnaround reform effort. Research indicates that focus on curriculum and instruction has been missing in past reform efforts, contributing to the continual failure of raising student achievement (Fager, 1993; Wohlstetter, 1995; Wohlstetter & Mohrman, 1996; Wohlstetter & Oden, 1992). Through facilitated professional development within the context of lesson study, I helped teachers identify English Language Arts skills that not only meet elements in the action plan proposal the school has devised, but also need improvement on based on student achievement data. Specifically, I facilitated lesson studies focusing on specific learning goals with teachers and guided the meetings, debriefings, and reflection processes.

Facilitation of professional development is not a new concept. However, within the current high-stakes environment of a turnaround initiative, the benefits of facilitation are underemphasized (Corallo & McDonald, 2001; Doppelt et al., 2009; Strahan, Geitner, & Lodico, 2010). Facilitation of the pedagogical change process deliberately keeps the focus on instruction to impact student achievement. While using sing the selected intervention, I documented the process of how teachers changed their pedagogical practices through and ongoing professional development and examined how student achievement was impacted as a result of teachers' participation in lesson study.

Background

Since the inception of the No Child Left Behind (NCLB) Act in 2001, schools across America are facing immense pressure to meet the AYP goals of students meeting proficiency in English Language Arts and Mathematics (Brady, 2003; Brinson & Rhim, 2009; Pappano, 2010).

School districts and local governments across the nation are increasing accountability efforts to identify failing schools. In 2003, over 1,000 schools entered into Program Improvement (PI) status, meaning the school failed to meet their adequate yearly progress (AYP) target goals for 2 consecutive years (EdSource, 2011). The high stakes accountability measures set forth by NCLB and other federal and state policies seek dramatic improvement in school performance, particularly for the schools that have failed to meet student achievement benchmarks for more than 5 consecutive years (Brady, 2003; Brinson & Rhim, 2009; Malen & Rice, 2004; Mintrop, 2003; Pappano, 2010). In 2003, 1,292 schools in California had failed to meet AYP goals for at least 6 consecutive years and were mandated to remain in PI for at least 5 years (EdSource, 2011). The Los Angeles Unified School District (LAUSD) alone has 175 schools that have remained in PI for more than 5 years (PI 5+). These new reform policies pressure failing and low-performing schools to initiate immediate change or face the threats of reconstitution, schools closure, and district or state take-over.

High Stakes Accountability and Turnaround Initiatives

Experiences with past school reforms such as school reconstitution, school-based management, and other school restructuring efforts provide the context to the teacher-led turnarounds to improve low-performing schools. School turnaround focuses on

> rapid and dramatic improvement not just in test scores but also in culture, attitude, and student aspirations. It is marked not by orderly implementation but by altering a lot at once and being willing to step in and change – and change again. It is a new paradigm for education, one not about trusting the process but about seeking results, both measurable and immeasurable. (Pappano, 2010, p. 3)

The turnaround model is a fairly new concept being implemented by thousands of schools and districts (Meyers & Murphy, 2007; Malen & Rice, 2004; Pappano, 2010). Turnarounds involve school improvement planning, expert consulting and support, external resources and services,

adaptation of a reform model, and occasional school reconstitution (Meyers & Murphy, 2007). School turnarounds focus on improving student achievement by changing the operation of schools and classrooms involving quick yet sustained improvement in a short period of time (Herman et al., 2008; Pappano, 2010). Researchers concur that two of the most important elements of a successful turnaround school are relentless focus on instruction and targeted professional development (Duke, 2006; Pappano, 2010; Salmonowicsz, 2010).

In turnarounds, curriculum and instruction have been shown to be a powerful strategy in impacting student achievement (Cotton, 1992; Duke, 2006; Malen, Ogawa, & Kranz, 1990; Mass Insight, 2010). A number of researchers have studied the failures of past reform efforts and attributed their failures to over-attending to issues regarding governance and operations rather than focusing on curriculum and instruction (Cotton, 1992; Malen et al., 1990; Wohlstetter, 1995; Wohlstetter & Odden, 1992). Schools under past reforms "rarely became centrally involved in technical core issues of curriculum and instruction," instead focusing energies on "peripheral issues such as school climate, campus beautification, career education, remedial education, parent involvement, scheduling, safety, and the use of the copying machine" (Wohlstetter & Odden, 1992, p. 533). Another common theme prevalent across schools that were unable to effectively sustain reform efforts includes a lack of focus on goals, inability to build instructional and leadership capacity, no reliance on student data to inform teacher practice, and a superficial application of the reform efforts by school sites (Datnow & Stringfield, 2000; Mintrop & Sunderman, 2009).

Researchers who analyze the turnaround process recommend that schools undergoing high-stakes reform maintain their focus on instruction and building capacity at the school sites

(Corallo & McDonald, 2001; Harris, 2010; Mintrop & Trujillo, 2005; Mintrop & Sunderman, 2009).

Mandated Reform Process

On August 25, 2009, the LAUSD Board of Education approved a measure to reform failing schools. It established a process for increasing student achievement at selected focus schools called *Public School Choice*[1] (PSC). These "focus schools" were identified as schools that remained in PI status of 5 or more years, demonstrated an Academic Performance Index (API) score of 600 or less, failed to meet AYP in 2009, had fewer than 20% of students meeting proficiency on the California Standards Test (CST) in English Language Arts or Math, and showed less than a 100 point gain on the API over a period of 5 years.

In the first cycle of PSC, the district identified three elementary, three middle, and six high schools as *focus schools*. Once a school district identifies focus schools as well as potential new schools to undergo reform, applicants (consisting of various organizations and school teams) are eligible to submit a plan demonstrating an "unwavering focus on academic achievement," school culture, climate and operations to support student achievement, and leadership that will facilitate and support high achievement for both students and staff (LAUSD School Review Rubric, 2010). Subsequently, of the three focus elementary schools for PSC 1.0, the district selected one charter organization and two teacher-initiated plans.

Facilitating Professional Development

Despite efforts to reform struggling schools, the support necessary to sustain and adequately implement the reforms did not always exist. Datnow and Stringfield (2000) found in

[1] Public School Choice schools also include newly constructed facilities, relieving overcrowding in neighboring year-round schools. Both "focus schools" and new sites must submit a proposal under Public School Choice and are subject to review after 3 years.

their comprehensive study of reform implementation that support for implementing the reform change at school sites was missing. When the reform efforts failed, teachers and administrators felt "relieved that they no longer had to implement reforms" and "others were simply delighted to go back to business as usual" (p. 198). The recent high-stakes accountability has placed enormous strain on schools. Schools that lack the capacity and resources to meet the demands of the accountability goals in particular face the likelihood of the brooding sanctions including school closure, reconstitution, or turnover to another educational agency (Mintrop & Sunderman, 2009). Therefore, there exists a need to build capacity at low-performing schools, beginning with increasing the knowledge and pedagogical skills of teachers through professional development (Aladjem et al., 2010; Mintrop & Sunderman, 2009).

Professional development has been found to be a key component in improving instruction (Doppelt et al., 2009; Mintrop & Sunderman, 2009; Perry & Lewis, 2009; Rock & Wilson, 2005). However, studies have found that professional development is often disjointed and fragmented in terms of topics and issues covered, bringing about little change to improve student achievement and effective teaching practices (Borko, 2004; Corallo & McDonald, 2001; Rock & Wilson, 2005; Thibodeau, 2008). Only when systems are established in schools to focus on elevating the teaching capacities of teachers through meaningful professional development, can reform initiatives have an effect. Stigler and Hiebert (1999) state that "American teachers aren't incompetent, but the methods they use are severely limited…It is teaching, not teachers, that must be changed" (p. 10). In order to improve student achievement, efforts must be made to improve teaching quality first (Stigler & Hiebert, 1999). One method of bringing more effective professional development to schools is to establish a form of facilitation to focus on the instructional program (Corallo & McDonald, 2001; Doppelt et al., 2009; Thibodeau, 2008),

especially at schools under high-stakes accountability. The facilitation component will keep the focus on the instructional program, ensure that teachers are aligning their pedagogical strategies to the proposal, and serve as a "support to teacher thinking" during this collaborative process (Rock & Wilson, 2005, p. 91). Such a concerted focus on supporting infrastructure can provide teachers with the opportunities to collaborate; further, support structures to facilitate the professional development will promote the pedagogical change process and improve the quality of teaching (Rock & Wilson, 2005). In my study, this facilitation will be analyzed through the action research process using an abbreviated version of lesson study.

Lesson Study

Given the need for efficient, high-quality professional development, particularly in failing and low-performing schools, a lesson study process provides a "system for building and sharing practitioner knowledge" among teachers (Lewis, Perry, & Friedkin, 2009, p. 142). Emerging from the Japanese model of professional development, lesson study is a collaborative instructional cycle that involves research, planning, and reflection (Lewis et al., 2009; Lewis, Perry, & Murata, 2006). Lesson study revolves around inquiry "designed to improve instruction and to build and share knowledge of teaching and learning" (Lewis et al., 2009, p. 143). In relation to high-quality professional development, lesson studies revolve around student data driving the focus of the lesson content and are "sustained, intensive, collaborative, and practice-based" (Perry & Lewis, 2009, p. 365). During the lesson study cycles, teachers collaboratively engage in a cyclical process that involves: (a) constructing goals based on student data and planning lessons; (b) conducting the lessons as other teacher participants observe and analyzing student data; (c) debriefing, evaluating, and reflecting on the lesson based on observations and student work; (d) revising the lesson as needed and reteaching the lesson; (e) evaluating and

reflecting a second time, and sharing results (Rock & Wilson, 2005; Stigler & Hiebert, 1999; Perry & Lewis, 2009).

Once lesson study is applied at a failing school undergoing high-stakes accountability with a facilitator to guide and support the implementation of each element of the lesson study process, the instructional capacity of teachers will be built, leading to an improvement in student achievement over time (Lewis, 2009). Lesson study, according to Wilms (2003), "holds the potential to radically alter the structure and culture of public schools" (p. 614). However, research on lesson study indicates that there is a continued need for further exploration on the effects of this professional development model of lesson study in the U.S. (Perry & Lewis, 2009; Rock & Wilson, 2005).

The Project

I based my project on previous reform efforts indicating the need for more accountability in teacher professional development to sustain school improvement (Thibodeau, 2008). My action research study put into practice a facilitation model during the lesson study cycles. As facilitator, I guided teachers through the elements of lesson study, including: goal setting, curriculum study and research, planning, observing lesson implementations, and guiding reflection. Through facilitating the lesson study cycles with upper elementary grade teachers, I analyzed the process of teacher collaboration, the strategies teachers decided to implement in their lesson studies, and the impact on student achievement. This project targeted a focus school identified through Public School Choice during their second year of an intensive 3-year reform process.

Research indicates that sustaining change is a difficult to maintain and is a timely process. Furthermore, the second year is critical when examining the process of change because

the school may be in danger of regressing back towards familiar practices (Fullan, 2001; Malen, Croniger, Muncey, & Redmond-Jones, 2002; Datnow & Stringfield, 2000). One study stated that in a 3-year reconstitution reform effort, at the end of the second year, schools reverted to "familiar routines" and did not exhibit compelling evidence of sustained organizational change (Malen et al, 2002).

Specifics of the Intervention

I investigated a teacher-initiated school reform process at a school that was on the verge of receiving severe sanctions (including school closure or contracting the school to an external organization for operation). I facilitated two cycles of lesson study, a form of systematic professional development (Perry & Lewis, 2009) shown to be effective in preventing the return to old, familiar practices (Malen et al., 2002; Datnow & Stringfield, 2000; Perry & Lewis, 2009). As facilitator, my role was to guide teachers in a structured series of professional development opportunities, engaging teachers to collaborate with one another focusing on instruction and specific learning goals for students in English Language Arts. During the lesson study process, I examined the process by which teachers identified pedagogical strategies and change initiatives. I then assisted teachers in the process of goal setting by reviewing the action plans documented in the turnaround proposal submitted to the district and cross-referencing the action plans with current student data. I organized and provided resources for research based on the target standards in addition to guiding the reflection and debriefing sessions of the lesson study cycle (Rock & Wilson, 2009; Perry & Lewis, 2009).

My goal was to sustain pedagogical changes through this process of lesson study at a site with less than 30% of students performing at proficiency in both mathematics and English Language Arts in the state assessment. Teachers need consistent, accountable, and ongoing

support to provoke, maintain, and sustain such pedagogical changes (Perry & Lewis, 2009; Rock & Wilson, 2005; Taylor, Anderson, Meyer, Wagner, & West, 2005). As facilitator, I provided support to teachers in their endeavor to make changes in their pedagogical practices. I led weekly meetings after school, in two 5-week cycles, over a course of 3 months starting in the winter quarter for two lesson study iterations. Throughout the duration of the lesson study intervention, I documented the process of teacher collaboration and their perceptions of changes in their own teaching practices as a result of the process. I also analyzed the role of facilitation and its effects on the lesson study process, teacher collaboration, and building instructional capacity.

Research Questions

This study explored and sought to answer the following research questions:

1. What is the process of facilitating lesson study with teachers in a turnaround PI 5+ school to change or modify their teaching practices to improve student achievement?
2. What do teachers say, what do they show of student work, and what do the literacy assessments over time reveal about the impact of the lesson study process on student learning?
3. What types of changes to instructional strategies are made as a result of the facilitated lesson study process?
4. What do teachers report is the value of the lesson study process?

Research Design and Methodology

A qualitative research design was implemented for this study. As I worked with a small group of teachers to help them change pedagogical practices through lesson study, a qualitative action research study allowed me to detail in depth the perceived changes prior, during, and after the intervention. Furthermore, qualitative data collection was necessary to determine teachers'

perceptions about instruction, to observe classroom instruction throughout the intervention, and to document the process of the facilitated professional development sessions. Given that the focus of the study was on the action research process and teachers' perceptions of their own instructional change, a qualitative study was most appropriate.

Site

Baldwin Academy is located in a large urban school district in Los Angeles. This site has been designated as a PI school since 2004, making it a PI 5+ school. Over 75% of the student population is performing below proficiency in both English Language Arts and Mathematics. According to the 2009-2010 CST, only 24% of students in the second through fifth grade met the Proficient and Advanced benchmarks on the English Language Arts test, and 28% of students met the Proficient and Advanced benchmarks on the Mathematics test. On both subject tests, nearly 50% of students performed at Below Basic or Far Below Basic levels.

Baldwin Academy is currently undergoing a high-stakes reform initiative under a turnaround effort. The school has been offered 3 years to increase student achievement or the district will take drastic measures, either shutting down the school or giving the site over to another LEA.

Participants

The participants involved in the action research were composed of six self-selected teachers from the third, fourth, and fifth grades. These teachers detailed current practices and collaboratively developed new pedagogical practices based on the goals they set. Such goals emerged after the teachers identified the greatest area of need and the aligned their practice with the action plan as written in the PSC proposal. These grade levels were chosen because only about 30% of these students are performing at proficient or advanced levels on the state exam in

both Mathematics and English Language Arts. Teachers teaching the third, fourth, and fifth grade levels also focus on developing literacy skills in English Language Arts to deepen understanding of all content areas. This study sought to enhance the literacy skills across the third through fifth grades by targeting specific standards.

Data Collection and Analysis

Teacher interviews: Individual and group. Two individual teacher interviews were conducted with the participants during the study. Initial interviews with teachers involved a semi-structured protocol during the first iteration of the lesson study sessions. The second individual interviews took place at the end of both lesson study cycles and served as exit interviews. The exit interviews included participants' reflections on their experience and perceptions regarding changes to their teaching practices.

One focus group interview also took place at the conclusion of the project. This interview allowed participants to collectively describe their experience engaging in the lesson study process, perceived changes in their instructional practices, and perceptions of how the facilitation of lesson study and content expertise had impacted their pedagogy.

Observations: Classroom and teacher collaboration. Classroom observations were conducted as an element of the lesson study design. Each participating teacher had one observation conducted and recorded during either the first teaching of the developed lesson or the revised lesson. The recorded lesson was then shown to the lesson study team for debriefing and discussion. Observation discussions focused on the delivery of the lesson, student to teacher interactions, and adherence of the lesson plan to actual implementation. I also observed teachers during the lesson study sessions, anecdotally noting evidence of negotiation, compromise, problem solving, and collaboration among teachers.

Journals. Participating teachers were asked to journal their reflections during the course of the intervention. The reflective journals offered teachers a space to document insights and comments at the end of each professional development session as well as record their successes and challenges during the lesson study process. I also kept a facilitator's reflective journal to document anecdotes and reflections after each lesson study development session.

Student work samples and student achievement data. Student work samples were used to facilitate dialogue and collaboration among the teachers. As teachers reviewed student work samples, they had the opportunity to self-reflect and collaborate with the group regarding implementation, challenges, and successes of the lesson. This protocol facilitated the analysis of student work samples and guided teacher reflection on pedagogical practices.

Teachers also reviewed aggregate student performance data from the quarterly literacy performance assessments, the district's language arts exam, to analyze with which standards students were struggling across the grade levels. This data analysis guided the initial lesson planning process and directed teachers in narrowing a focused objective for the two lesson study cycles.

Public Engagement

This project will contribute to the effectiveness of turnaround school reforms, particularly through the lens of pedagogical changes at a low-income, high minority school site struggling to procure consistent, successful student achievement under high pressure accountability measures by the local district and state government. The project captures what is happening at a time of increasing NCLB demands and expectations. The process of changing teacher practices using systematic action research and structured lesson study may serve as a guideline for other PI 5+

schools implementing professional development initiatives to facilitate and sustain pedagogical changes.

CHAPTER 2: THE LITERATURE REVIEW

Introduction

Since the inception of No Child Left Behind (NCLB) in 2001, schools across America are facing immense pressure to meet the annual yearly progress (AYP) goals of students meeting proficiency in English Language Arts and Mathematics (Brady, 2003; Brinson & Rhim, 2009). As a result, school districts and local governments are increasing accountability efforts to identify failing schools.

In this project, I facilitated the process of pedagogical change through lesson study with teachers at a PI 5+ school. This literature review begins with the problem of the growing numbers of failing schools in America. It then turns to past reform movements targeting student achievement and the reasons behind their failures. Following the history of school reform, I discuss the current trend of turnaround schools under high-stakes accountability. Specifically, I focus on what the Los Angeles Unified School District (LAUSD) has done to address failing schools in PI 5+ status through their Public School Choice (PSC) initiative. Next, I discuss how building teachers' instructional capacity empowers them to make lasting pedagogical changes that impact student achievement. I then describe how lesson study and teacher collaboration facilitate instructional capacity building to analyze the effects of their instruction. Finally, I describe how facilitating professional development can affect changes in teacher pedagogy.

The Problem of Failing Schools

The bottom five percent of schools is known as the "crucible of education reform" (Calkins, Guenther, Belfiore, & Lash, 2007). Under the federal guidelines of NCLB, these schools are subject to severe sanctions of school closure, reconstitution, state take-over, or turning the school over to a charter or private organization (Center for Comprehensive School

Reform and Improvement, 2008; Rhim, Kowal, Hassel, & Hassel, 2007). These schools are identified as chronically low performing and thus have remained as PI schools for over 5 consecutive years.

In 2003, over 1,000 schools entered into PI status, meaning the schools failed to meet the AYP target goals for 2 consecutive years (EdSource, 2011). These schools are struggling to meet annual Academic Performance Index (API) growth targets to keep up with NCLB's mandates. Since 2003, 1,292 schools in California have been in PI for at least 5 years; these schools are known as PI 5+ schools (EdSource, 2011). In 2009, only 58% of schools met all API growth targets, meaning 42% of schools have not met their API growth targets. Furthermore, only 42% of all public schools (elementary, middle, and high schools) meet the 800 API goal in the state of California (EdSource, 2010). LAUSD alone has 175 schools in the PI 5+ category. Reform efforts are underway to address the growing problem of schools failing to increase student achievement.

Reform Efforts Funded through Title I: Improving the Academic Achievement of the Disadvantaged

Reform efforts are made possible through Title I funding under NCLB of 2001. Billions of federal funds are annually allocated to Local Education Agencies (LEAs) to provide supplemental funding to help educationally disadvantaged students meet proficiency in state standards (Education Week, 2004). First enacted in 1965 under the Elementary and Secondary Education Act of 1965 (ESEA), Title I was amended in 2001 under NCLB to ensure that all children have access to a "fair, equal, and significant opportunity" for high-quality education (U.S. Department of Education, 2010). With the high-stakes accountability standards that accompany NCLB, Title I funds are allocated to schools where a minimum of 40% of students come from low-income families [Section 1114(a)(1) of Title I of ESEA]. More than 50,000

public schools across the nation currently qualify for Title I funding to provide additional academic support to low-achieving students, with priority given to students who are failing to meet or at risk of failing to meet state standards (U.S. Department of Education, 2010).

Title I funds have been used to provide targeted assistance programs to schools with high-risk, low-income students since the 1960s. The implementation of school-wide reforms became prevalent in the 1990s to provide further intervention to underperforming, high-poverty schools (Borman, Hewes, Overman, & Brown, 2003). Accountability benchmarks monitor whether instituted reforms and school wide instructional programs are improving student achievement (Edwards & Perry, 2005). However, research on the effects of supplemental reform efforts failed to show compelling evidence of increasing student achievement (Borman et al., 2003).

Consequently, consistent failure to meet AYP goals of students meeting proficiency on state assessments results place schools in PI (Edwards & Perry, 2005). Once schools fail to exit PI status after 7 years, districts must sanction such schools, including reconstituting, restructuring, or closing down sites and reopening them under new governance structures (Leithwood, Harris, & Strauss, 2010; Meyers & Murphy, 2007).

Reform efforts funded under Title I have shifted from being "piecemeal and uncoordinated categorical targeted assisted programs" (Borman et al., 2003, p. 129) to standards-based and school wide reform. Title I was first implemented with the intention of closing the achievement gap with students living in high-poverty. Unfortunately, the gap still exists and schools continue to struggle to meet the demands of NCLB. Although Title I has provided the necessary funding for instituting various reforms, research indicates that sustaining reform efforts remains difficult (Datnow, 2005).

Past Reform Efforts and Their Obstacles to Closing the Achievement Gap

Before delving into the current reform movement of turnaround schools, I will present a brief history of past reform efforts targeted at closing the achievement gap. Best characterized as "waves," school reform movements over the past 20 years primarily focused on raising student achievement and school accountability (Darling-Hammond, 1992; Desimone, 2002). However, these waves struggled to actually produce improvement in student achievement. The first wave of reforms starting in the 1980s was characterized by state and local government agencies passing legislation and commissions to upgrade educational standards and increase school accountability (Darling-Hammond, 1992). New testing requirements were established, along with mandated curriculum guidelines and governing management procedures at the school and district sites (Cuban 1990; Darling-Hammond, 1992, 1998; Guthrie, 1986).

In the late 1980s, a second wave of reform was enacted as the state-driven reforms failed to make significant differences in schools (Cuban, 1990). Systemic reform efforts took place in the form of restructuring schools that focused on raising expectations for students, improving teacher practice, and reorganizing school governance (Elmore, 1990; Murphy, 2001). One such reform effort, as part of decentralizing decision-making structures through restructuring schools, was School-Based Management (SBM), which implemented shared decision-making responsibilities with key stakeholders over budget, personnel, and curricular materials to directly impact instructional priorities at local school sites (Cotton, 1992; Darling-Hammond, 1992; Mutchler, 1990; Wohlstetter, 1995). Despite the ambitious goals of SBM, this movement failed to substantially improve student achievement. As sites devoted much of their time to operational and governance issues rather than the instructional program and improving student outcomes, the SBM reform effort was deemed weak, inconsistent, and ineffective (Borman et al., 2003; Cotton,

1992; Fager, 1993; Wohlstetter, 1995; Wohlstetter & Mohrman, 1996; Wohlstetter & Odden, 1992).

With the failure of SBM, a third wave of reform was initiated: Comprehensive School Reform (CSR; Desimone, 2002). This reform movement emphasized effective, research-based instructional practices to help low-performing students at high-poverty schools improve their academic achievement (Borman et al., 2003, Desimone, 2002). Research found that, overall, CSR yielded significant gains in student achievement, but in order for any reform to have a consistent effect and impact on student growth, it requires regular professional development, measurable goals to assess student learning, faculty buy-in, and implementation of effective instructional practices to continuously improve student learning (Borman et al., 2003).

Obstacles to Effective School Reform

Past reform efforts failed due to numerous obstacles that prevented them from successfully closing the achievement gap (Cotton, 1992). Some of the obstacles included complexity of the reform process itself, time demands on staff, unrealistic expectations, lack of support for site councils, and constraints to decision making abilities (Brady, 2003; Calkins et al., 2007; Cotton, 1992; DuFour & Eaker, 1998). However, one critical component explaining the failure of past reform efforts was the lack of focus on student achievement and fostering instructional capacity for teachers (Cotton, 1992; DuFour & Eaker, 1998; Harris, 2009; Malen et al., 1990; Wohlstetter, 1995; Wohlstetter & Odden, 1992).

Conducting school wide reform efforts, whether dictated by central or local government, is time consuming and requires more than good will towards making sustainable changes (Brady, 2003). In a study observing eight restructured schools through the Coalition of Essential Schools, Muncey and McQuillan (1993) found that faculty members had difficulty building consensus

regarding the implementation of implementing reform efforts, particularly with respect to changes in structure and teaching practices. They implied that even in schools where there appeared to be consensus, when unanticipated problems arose, the change process was threatened and impeded. Reforms require teachers and administrators to commit to the change process and to re-educate themselves in new ways of conducting school operations and teaching pedagogy (DuFour & Eaker, 1998; Muncey & McQuillan, 1993).

School Restructuring and School Transformation

As of the late 1980s and early 1990s with the Comprehensive School Reform (CSR) movement, school restructuring has gained prevalence in educational reform strategies (Teddlie & Stringfield, 2007). Restructuring schools is a response to years of decline in student achievement and failure to meet NCLB mandates. It involves schools being dramatically and comprehensively redesigned, not just improving certain parts of failing schools (Brady, 2003; Brinson & Rhim, 2009; DuFour & Eaker, 1998; Newmann & Wehlage, 1995). Typically, the last stage of school improvement under NCLB (Manwaring, 2010), the consequences of restructuring include: reconstitution of school staff, school closure, reopening of the school under a charter or private organization, state takeover, or a major restructuring of a school's governance structure known as school turnaround (Brinson & Rhim, 2009; Manwaring, 2010; McKeon, 2009).

Turn Around Schools under High Stakes Accountability

A turnaround is a bifurcation point in the life of an organization, a point of system instability, a point at which the organization has to make a choice about its future.
(Ashmos & Duchon, 1998, p. 234)

In a 2007 study, Calkins, Guenther, Belfiore, and Lash examined why some schools were failing perpetually. They found that the challenges these schools face were substantial; the

schools themselves were dysfunctional and "the system of which they are a part [was] not responsive to the needs of the high-poverty student populations they tend to serve" (p. 12). Through an extensive literature analysis and interviews with over 50 practitioners, researchers, policymakers, and reform experts across the nation, Calkins et al. looked at the challenges of turning around underperforming schools. Based on a corporate business model driven by a "bias for action and better results" (Leithwood, Harris, & Strauss, 2010, p. 3), the turnaround model offers a new response for consistently low-performing schools under high-stakes accountability (Kowal & Hassel, 2005; Murphy & Meyers, 2008).

Different from past school improvement reform efforts, the turnaround model is the current emerging response to high-stakes accountability in public education and the threat of closure for persistent underperformance (Calkins, et al., 2007). Turnarounds seek to dramatically improve schools within a short period of time by not only improving operational functions in regards to resources, funding, and increased autonomy, but also building capacity at the school site and maximizing leadership and staff capacities through effective professional development opportunities (Calkins et al., 2007; Herman et al., 2008; Mass Insight, 2010; U.S. Department of Education, 2010). Research on turnarounds focuses on creating an "urgency for action" (Murphy, 2010, p. 163) and a strong vision to propel this reform movement in troubled schools (Murphy, 2010). The U.S. Department of Education (2010) wrote the following statement regarding the turnaround movement:

> [Turnaround] schools can accelerate reform efforts and see the same sort of quick, dramatic improvement if they engage in a process – characterized by strong leadership, a clear focus on improving instruction, achievement of 'quick wins,' and building of a committed staff – similar to that used by successful corporations. The business-model literature suggests that much more rapid-improvement is possible in less time than the usual three to five years. (p. xiii)

With effective instructional practices as its focus, turnarounds aim to increase the impact of instruction while removing the barriers that impede teaching and student learning (Herman et al., 2008). Connected to my study, the school in question is a teacher-initiated turnaround school, previously faced with the threat of closure and district takeover. As a result of a turnaround effort, the school has been placed back into the hands of the teachers at the site and is now part of a 5-year reform process to make significant achievement gains.

Los Angeles Unified School District's Public School Choice Reform Initiative

As my own study targets persistently low performing schools undergoing high-stakes reform, I next describe LAUSD's reform initiative in order to build context and background for my study. In LAUSD alone, over 350 schools are in PI, and over 175 schools have been in PI for over 5 years (LAUSD, 2010). Schools in PI are located in low-income, high minority neighborhoods, and receive Title I resources. PI status results when schools fail to meet national AYP goals for 2 consecutive years,. Unfortunately, nearly 30% of LAUSD's schools are struggling to meet national and state student achievement goals.

Consistent with the recent school restructuring and turnaround reform efforts, LAUSD implemented its own reform process in a six to one vote with the Board of Education on August 25, 2009 called *Public School Choice* (PSC). The PSC resolution identified the lowest performing schools in the district according to the following criteria: schools have been in PI for more than 5 years, less than 20% of the student population scores proficient or advanced in English Language Arts and Mathematics on the CST, less than a 100 point gain in the annual API over the past 5 years, and less than a 600 API growth score, and failure to meet the AYP goals.

In the first round of PSC, 12 schools were identified as "focus schools." Once a school has been identified in this way, various organizations including charter school operators, non-profit entities, and other independent groups are permitted to submit an instructional and educational proposal to the district to take over the school. Teacher-initiated and school teams from the existing site are also eligible to submit a plan, but they must "provide evidence of a quality instructional program and track record of success" (LAUSD, n.d., para. 5). Once applications have been submitted to the district, all proposals must be evaluated through a rubric that analyzes the following components: curriculum and instruction, school culture and climate, assessments and school-wide data, professional development, serving specialized populations, community analysis and context, community engagement strategy, school governance and oversight, school leadership, staffing, finances, and implementation plan.

After proposals are submitted, an initial review team reads the individual proposals. The proposals then are sent to the Superintendent's panel and the Superintendent makes a recommendation to the Board of Education. The Board of Education then makes the final vote that decides which proposal is chosen for the new campuses and focus schools.

Once proposals have gone through the review process and have been selected by the district, a PSC team composed of school personnel, parents, community members, and local and central district personnel engage in a biannual review process in the fall and spring semesters. A "School Review Rubric" is used to analyze evidence of (a) unwavering focus on academic achievement; (b) school culture, climate, and operations that support academic achievement; and (c) leadership that supports high achievement for students and staff (LAUSD, School Review Rubric, 2010). An annual report is then submitted to the Board of Education and Superintendent.

While schools are considered for renewal every 5 years, the Superintendent reserves the right to take action "if the academic situation requires more urgent attention" (LAUSD, Public School Choice Motion 2.0 Brochure). Recently, focus schools also have the option to exit PSC if they are able to make improvements that render the criteria that identified them as a target focus school inapplicable.

Currently, the district is in its third round of reviewing PSC proposals, with 17 new campuses and 23 identified and eligible focus schools. My own study analyzed the change process occurring at one of the PSC focus schools through my intervention of facilitated lesson study cycles to change teachers' pedagogical practices.

Changing Teacher Pedagogical Practices

This study is based on the premise that low-performing schools facing high-stakes accountability can turn around through a concerted focus on curriculum and instruction. For this reason, I next look at capacity building through frequent and targeted professional development as a critical component in raising student academic success (Darling-Hammond, 1992; Doppelt et al., 2009; Salmonowicsz, 2010).

Changing teachers' instructional practices requires time, commitment, and a collaborative effort by the entire school staff in order to build instructional and professional capacity (Harris, 2009; Pascal, 2009). Through building capacity of teachers' knowledge in pedagogical skills and incorporating collaborative opportunities, teachers begin to not only grow as professionals but also increase their interest and role in a learning community consisting of their colleagues, inevitably and positively impacting student achievement (Darling-Hammond, 1992; Doppelt et al., 2009; DuFour & Eaker, 1998; Pascal, 2009). The following section synthesize studies that have been conducted on changing instructional practices through professional development

models because my own study explored the implementation of a type of professional development known as lesson study and its impact on teacher pedagogy.

Professional Development

As my project involves professional development in low-performing schools, I examined the literature for effective professional development strategies and ways to build teacher capacity and improve instructional practices. Particularly for low-performing schools undergoing drastic transformation, it is imperative that teachers engage in continuous learning and skill building to refine and share best teaching practices (Desimone, Porter, Garet, Yoon, & Birman, 2002; DuFour & Eaker, 1998). Studies have found that when professional development is tied to the classroom and curriculum and is collaborative, teacher practices change and student achievement increases (Schmoker, 2006).

Strategies for Effective Professional Development

Professional learning communities must be established to facilitate effective professional development. In Schmoker's *Results Now* (2006), he describes fundamental concepts for an effective collaborative learning community: establishing common curricular standards on which teachers and teams rely when making instructional decisions; allocating time to meet regularly; and continuously analyzing student work to reflect, refine, and guide their teaching.

Accordingly, research indicates some key strategies to deliver effective professional development within the context of a learning community to sustain changes in teacher pedagogy. These strategies include: highly focused professional development on no more than three content areas, active engagement of teachers, and collective participation.

High Focus and Commitment to Professional Development

Rather than attempting to cover a broad spectrum of topics, high-quality focused professional development that is sustained, targeting no more than two or three areas throughout the year, deepens teacher knowledge and skill (Doppelt et al, 2009; Harris, 2010; Joyce & Showers, 2002; Newmann, King, & Youngs, 2000; Salmonowicsz, 2010; Williams, Kirst, Haertel, et al., 2006). One longitudinal study (Desimone et al., 2002) conducted with over 400 teacher participants in schools across the nation found that schools "generally do not have a coherent, coordinated approach to professional development, at least no an approach that is effective in building consistency among their teachers" (p. 105). Further, this study found that when teachers did participate in professional development focused on specific teaching practices, the transfer and implementation of practices increased during instructional delivery and increased student achievement.

Another study assessing the impact of a sustained, focused, whole-school professional development program on student achievement found increased use of instructional practices by teachers and positive impact on student achievement. The study asserted that in order for professional development to transfer into instructional practices, there must be a consistent time commitment to the professional development (Johnson, Kahle, & Fargo, 2006). Langer (2000) studied middle and high school teachers across four states, finding that when teachers were involved in a collaborative learning community, their students outperformed peers from similar schools.

Therefore, time must be provided to teachers and staff members to focus, reflect, and engage in discourse regarding their teaching practices (Harris, 2009). When teachers are given the opportunity to collaborate and discuss how to improve teaching in conjunction with curriculum and assessment, student achievement increases (Cohen & Hill, 2000).

Active Engagement

As teachers engage in professional development within their learning communities, time must be spent discussing instructional strategies and engaging in "thoughtful, explicit examination of practices and their consequences" (Little, as cited by Schmoker, 2006, p. 107). In these learning communities, teachers become accountable to each other, begin to work as a team, and learn from each other (Pascal, 2009). Under the guidance and facilitation of the leadership at the school sites, teachers can then take ownership of improving instructional practices through "analyzing the effectiveness of current instructional practices, determining a plan for necessary professional development to improve student outcomes, monitoring implementation of new strategies, and repeating the process until all students are successful" (Pascal, 2009, p. 171).

One study examined the impacts of professional development on teacher practice and student achievement in a middle school setting with 13 science teachers. Doppelt and his colleagues (2009) found that when teachers were actively engaged in a collective community, shared student work samples and portfolios, and exchanged instructional strategies during the workshop sessions, teachers not only successfully implemented the science reform curriculum, but also significantly impacted student learning.

Collective Participation

Professional development is effective in changing teacher practices when there is an element of "collective participation from teachers…and active learning opportunities, such as reviewing student work or obtaining feedback on teaching; and coherence, for example, linking to other activities or building on teachers' previous knowledge" (Desimone et al., 2002, p. 102). When professional development sessions involve teachers in collectively designing lessons,

implementing the learned pedagogical strategies, and reflecting on teaching practices, only then can professional development be effective in making a difference in changing existing practices and improving student learning (Joyce & Showers, 2002; Schmoker, 2006).

Building Teacher Capacity to Improve Teaching Practices

> *Indeed, the only sure way to transform dysfunctional schools into effective schools is to build capacity in them – to provide smart, strong leadership, a mission clearly and intensely focused on children's learning, highly competent committed teachers… and an environment that fosters collaboration, trust, and continuous learning.*
> *(Wolk, 1998)*

It is crucial for low-performing schools to build capacity to turn around student achievement and increase teacher skills to improve instruction (Fullan, 2005; Mintrop & Sunderman, 2009; Thibodeau, 2008). Building capacity at school sites goes beyond merely providing additional instructional materials for support; it also involves improving the instructional system to support teachers in honing their practice as educators (Mintrop & Sunderman, 2009). Capacity building includes the "knowledge, skills, and dispositions of individual staff members" (Newmann et al., 2000, p. 263), as well as motivation within the context of a professional community, where there are shared goals and vision for the school and a culture of collaboration (Fullan, 2005, 2008; Newmann et al., 2000). As a group's collective efficacy is established through collaboration, the capacity to significantly improve organizations also increases (Fullan, 2008). Particularly at low-performing schools undergoing turnaround, building instructional capacities within school sites also increases collective knowledge and competencies (Fullan, 2005).

In a study conducted with 11 schools in two states undergoing high-stakes accountability in probation status, Mintrop (2003) found that the schools that improved over time perceived their faculty as possessing more skill and greater capacity than schools that did not improve over

time. Further, as a result of added pressure from the sanctions placed on these schools, educators reported an increase in engagement and work effort towards school improvement.

Common vision and shared commitment are important steps towards building capacity (Darling-Hammond, 1992). According to Darling-Hammond (1992), "the most successful schools were characterized not by the particular innovation they had adopted but by their willingness to search and struggle for valid objectives, for new strategies, and for new forms of assessment" (pp. 23-24). As schools dedicate time for teachers to engage in dialogue and collaboration, teachers are able to focus on progressing "toward the fundamental goals of improving teaching and learning," particularly during professional development sessions (Copland, 2003, p. 380).

One study analyzed the effects of a collaborative study group and the integration of literacy strategies within instruction on teacher development and student achievement (Thibodeau, 2008). The researcher functioned as the facilitator throughout the process offering expertise in literacy instruction, sharing strategies and research, and leading the development of a collaborative team where teachers shared their experiences and knowledge. At the end of the study, teachers reported a greater knowledge about literacy, "increased capacity for the integration of new instructional techniques, increased feelings of self-efficacy, increased motivation for the changes required by the instructional innovation, and the ability to sustain the effort the changes required over the long-term" (Thibodeau, 2008, p. 59). Furthermore, teachers participating in the study increased their frequency of use of various literacy strategies during instruction. They expressed an eagerness to continue collaborating with their colleagues to sustain their instructional practices and raise the capacity of the entire school.

As professional learning communities continue to foster growth in teacher capacities, teachers begin to not only take more ownership of their instructional practices but also "learn how to give and to get support from teammates, as the anxiety of change subsides. Spirits are lifted as hard work pays off in improved results" (Pascal, 2009, p. 171). Through acts of purposeful interaction, teachers become empowered to motivate and maintain positive accountability among staff members, which is necessary to change and sustain teacher practices, improve student achievement, and systematically build teachers' instructional capacity (Fullan, 2008; Jennings, 2007). Consequently, as teachers build their instructional capacity, student learning also increases (Joyce & Showers, 2002).

Facilitating Sustainable Pedagogical Change at Low-Performing Schools

Teacher training enables the acquiring of new content knowledge and skills to be implemented in the classroom to enhance the quality of instruction (Borko, 2004; Corallo & McDonald, 2001; Doppelt et al, 2009; Thibodeau, 2008). When teacher training and professional development are accommodated by facilitation, directed training, or coaching, research indicates a "dramatic increase in transfer of training" and that "teachers can acquire new knowledge and skill and use it in their instructional practice when provided with adequate opportunities to learn" (Joyce & Showers, 2002, p. 77).

Facilitators in a professional development setting take on the role of guiding the inquiry process, preparing and scheduling meetings with a location and a written agenda (Saunders & Goldenberg, 2005), moderating discussions, probing for understanding, and providing a balance of support while pressing for deeper dialogue in a safe space as teachers focus on improving instruction (Ermeling, 2010). Facilitators also ensure that all participants engage in the discussions and redirect the group towards the focus and goal of the sessions (Organizational

Learning Associates; National Clearinghouse for Professions in Special Education). Without the infrastructure of facilitation during professional development, research indicates that schools have difficulty establishing and performing school initiatives (Joyce & Showers, 1995).

Particularly at low performing schools, it is essential that there is a concerted focus on improving student achievement through implementing and sustaining effective pedagogical changes to instruction (Cotton, 1992; Duke, 2006; Malen et al., 1990; Mass Insight, 2010; Pappano, 2010; Salmonowicsz, 2010). The facilitator in this endeavor serves as a guide and catalyst for growing and building teachers' instructional capacity (Herman et al., 2008; Strahan, Geitner, & Lodico, 2010). Research found that in low-performing schools that have succeeded, facilitators focused on the instructional program, provided structured time for planning and reflection, and articulated standards, which led to a supportive, collaborative school culture (Corallo & McDonald, 2001). This deliberate and focused type of facilitation helps teachers to assess and develop plans according to students' needs (Corallo & McDonald, 2001; Newmann & Wehlage, 1995; Thibodeau, 2008).

Facilitating Lesson Study: Building and Changing Teacher Pedagogy through Focused Professional Development

Building instructional capacity through effective and focused professional development is a critical part of improving the conditions of low-performing and failing schools. Change theory states that without capacity building, change cannot occur in organizations unless there is a sense of collective internal accountability (Fullan, 2006). One way of providing high-quality professional development to increase teaching capacity is through a collaborative lesson study process, gradually and incrementally improving pedagogy (Stigler & Hiebert, 1999). With the support of a facilitator to guide the lesson study process, instructional knowledge and skills are

sustained and transferred for a long-term effect, impacting student learning and achievement (Joyce & Showers, 2002; Thibodeau, 2008).

Collaboration for Instructional Planning and Teacher Development

Collaboration as a practice involving "joint work, mutual engagement, and shared repertoire" (Parks, 2009) is essential when engaging teachers in making pedagogical changes to their teaching practices (Fernandez, 2010; Kraus & Volk, 1997; Thibodeau, 2008). Teachers drive curriculum and instruction in impacting student achievement. Particularly for schools undergoing a turnaround reform, teachers are in the front lines to make dramatic changes in their practices in order to improve student achievement. Research shows that in the best turnaround schools, teachers worked collaboratively and engaged in professional development to improve instruction (Pappano, 2010). In such learning communities where teachers were accountable to each other, they took ownership in improving their practices, took responsibility over improving student outcomes, and implemented new strategies in their instruction to ensure the success of their students (Pascal, 2009). A study from a small district in Illinois looked at the building and sustaining of leadership as nearly 20% of their experienced teachers and administrators were planning to retire within a few years. Through collaboration and building relationships, this small district was able to train a new group of leaders to continue the accountability and responsibility of student learning. Another study conducted at six urban public elementary schools (Sawyer & Rimm-Kaufman, 2007) found that as teachers collaborated with few perceived barriers, teachers felt a "greater sense of shared educational goals and values in their schools" (p. 227). These teachers who participated in the particular reform effort, known as the Responsive Classroom (RC) approach, collaborated more frequently and added to their instructional pedagogy by implementing the RC strategies into their instruction. Through

collaborating in these learning communities, teachers were able to share and add to their pedagogical knowledge and expertise, and together refine and improve their teaching practices (Battey & Franke, 2008; Hiebert, Gallimore, & Stigler, 2002; Sawyer & Rimm-Kaufman, 2007).

Lesson Study

Building on the notion that teaching is complex and changing teacher pedagogy requires commitment and time, lesson study is a method implemented by Japanese educators as a way to reform educational practices (Stigler & Hiebert, 1999). Known as *jugyou kenkyuu* in Japan, it describes the "continuous process of school-based professional development" (Stigler & Hiebert, 1999, p. 110) within a structure that facilitates the transmission, formation, reformation, and reflection of lessons and instructional practices through collaboration (Marble, 2007). Lesson study is a teacher-driven activity focused on student learning that requires a long-term commitment to the process (Stigler & Hiebert, 1999). Implementation of lesson study is conducted over a period of time to: (a) define a problem based on a collaboratively decided focus content area that is based on student data, (b) design and plan a lesson to address the learning goal, (c) implement and teach the lesson, (d) evaluate and reflect on the lesson, (e) revise and improve the lesson, (f) reteach the revised lesson, and (g) evaluate and reflect on the lesson again (Hiebert et al., 2002; Fernandez, 2005; Marble, 2007; Stigler & Hiebert, 1999). Through an iterative process of reflection based on student learning and achieving the learning goals of the lesson, teachers constantly improve instruction, thus improving their instructional capacity.

As a result of lesson study, teachers in Japan found themselves to be "true professionals" and "contributing to the knowledge base that defines the profession" (Stigler & Hiebert, 1999, p. 126). When lesson studies were adapted to American schools and teachers, one study found that "participants repeatedly demonstrated a strong tendency to view their teaching as an evolving

practice requiring active attention and thoughtful reflection" (Marble, 2007, p. 949). Lesson study provides a place and process for teachers to engage through collaboratively constructing lessons, generating knowledge, and sharing and building instructional capacity (Chokshi & Fernandez, 2005; Hiebert & Stigler, 2000; Hiebert et al., 2002; Perry & Lewis, 2009).

Lesson study serves as a powerful professional development method while helping teachers focus on the curricular standards and curriculum, also impacting student learning (Wilms, 2003; Fernandez, 2005). Through the establishment of authentic learning communities focused on building knowledge and collaborative reflection about students' progress, lesson studies provide persistent and extended learning opportunities for teachers (Perry & Lewis, 2009).

Particularly for low-performing schools, lesson study has the ability to foster collaboration among teachers and facilitate the development of high-quality lessons (Wilms, 2003). Two lesson study projects were conducted in Los Angeles public schools to determine potential effects on building teacher collaboration. Teachers stated that they were "convinced lesson study could be a powerful tool in reaching the lowest-performing students" (Wilms, 2003, p. 611) and "confident that lesson study help[ed] children learn, including students who are academically marginal" (Wilms, 2003, p. 614).

In a study conducted between 1999 and 2002, Fernandez (2005) conducted a project that implemented lesson study with over 30 teachers at an urban elementary school. Fernandez found that lesson study provided opportunities for teachers to develop pedagogical and mathematical content knowledge, learn how to handle unexpected instructional challenges during lesson implementation, and improve teachers' understanding of how to best teach mathematical content to students. Since lesson study provided teachers with the time, place, and process to

collaborate, teachers were able to immediately reflect on their instruction and make changes to their instruction.

Another study (Ermeling, 2010) found that as a group of high school science teachers worked together through lesson study or teacher collaborative inquiry over a course of 14 months, there were detectable changes to instructional practices and an increase in student engagement. The teachers attributed the changes in their practices and increased student engagement to their participation in and commitment to the collaborative inquiry process.

A study conducted with 15 urban schools in Southern California (Saunders, Goldenberg, & Gallimore, 2009) found that when schools participated in grade-level teams to collaborate and engaged in reflective dialogue to improve instruction and student learning, these 15 schools were able to produce statistical and significant improvements toward student learning. Implementing a lesson-study-like process over 5 years, this study was able to compare how classroom instruction improved at schools participating in the intervention (Getting Results schools) in comparison to similar schools not using the intervention. These Getting Results (GR) schools showed significant growth on the state assessment (SAT-9 test) over the 5 years of the study, surpassing the comparison schools and the district's average. On average, GR schools raised their API scores by 172 points between 1999 and 2002, whereas comparison schools' scores rose by an average of 122 points. This study provided evidence that when collaborative grade-level teams meet to improve student learning under focused goals and implementation, teachers' instructional practices and student achievement improve. During the second phase of implementation at the GR schools, external assistance was provided in the form of project advisors meeting monthly with the administrative team, supporting the instructional leadership team through specific training opportunities. As a result of the external assistance, the outcomes

from Phase 2 produced better results than programs that did not provide such external assistance (Saunders et al., 2009).

Facilitating Lesson Study

As teachers commit themselves to the lesson study process with a facilitator to guide the collaborative planning, curriculum development, and strategy application to their instructional delivery, pedagogical change occurs in an accountable setting and builds teachers' instructional capacity to impact student learning and achievement (Joyce & Showers, 2002). Particularly during the lesson study process, a facilitator's main role is to steer the conversations for teachers to challenge, solidify, and redirect perspectives and provide opportunities to probe deeper during the collaborative planning and reflection process (Fernandez, 2005; Rock & Wilson, 2005).

When lesson studies were conducted without a facilitator, research found teachers to "maintain politeness at all costs and offer superficial and tentative feedback rather than constructive criticism" (Chokshi & Fernandez, 2004, p. 524). Kratzer and Teplin (2007) also found that without a facilitator, teachers were unable to push each other towards "greater levels of instructional analysis" (p. 42). With facilitators leading lesson study teams over the course of 2 years, Kratzer and Teplin found that the facilitators held key roles in guiding instructional conversations, expressing the shared ownership of co-planned lessons, building trust and comfort among participants, providing structure to "too-familiar" groups, and ensuring that all voices were heard and valued. Both teachers and facilitators reported transformational changes in both their lesson planning and instruction as a result of lesson study, which allowed teachers to "more effectively address students' academic needs" (Kratzer & Teplin, 2007, p. 31).

To help sustain the implementation and effectiveness of the lesson study process to change teacher practices and improve student achievement, facilitators serve as strong advocates

for the process, providing various forms of support as authentic and knowledgeable experts to impact and motivate teachers in making changes to their instructional practices (Perry & Lewis, 2009).

Theory of Action and Logic Models

The process of facilitating lesson study can be described through the theoretical lens of theory of action and logic models. The theory of action explores the questions of whether a particular program makes sense, is understood, and is logical (Alkin, 2011). It includes systematically developed activities to fit a certain purpose that will lead to a desired goal. The logic model, a graphical or diagrammatic depiction of a theory of action, delineates "the connections between program inputs, activities and processes (implementation), outputs, immediate outcomes, and long-term impacts" (Patton, 2002, p. 162). The logic model visually displays the program's activities, their sequence, and relationships. The inputs are the resources needed to conduct a program. Activities refer to the actual events and processes that are to take place within the program. The outputs include the short-term consequences or artifacts that will be produced as result of the program's implementation. Finally, the outcomes are the realization of the goals and benefits experienced at the conclusion of the program (Alkin, 2011; Patton, 2002). The full process of the logic model is steeped in reflection and evaluation, which includes whether the program is doing what it is intended to do (Alkin, 2011).

The logic model then helps to "define the rationale for why different activities [are] taking place" (Alkin, 2011, p. 138). Through the examination of a program's theory or purpose, the team then develops a "shared vision or understanding of the program" (Alkin, 2011, p. 72) around the logic model. As the theory of action is "practitioner derived and practice based" (Patton, 2002, p. 163), the lesson study cycle process and this action research project is essentially a form of applied theory of action. The lesson study cycle is a logic model, as it

contains the components of problem identification and analysis, collaborative lesson design and implementation, and evaluation for revision of the lesson design. This cycle incorporates the theory of action to determine whether the lesson studies change student achievement and teacher practices through this iterative action research project.

Summary

Various reforms in the past have set the stage for school improvement efforts. Within the current high-stakes accountability mandates under NCLB, schools can no longer continue the cycle of underperformance. Once schools are placed in PI for 5 or more years, immediate and urgent action must be enacted to turn around these schools or face severe sanctions. One way to dramatically impact low-performing schools is to establish a focused professional development structure that incorporates and facilitates teacher collaboration, active engagement, discourse, and reflection, building teachers' instructional capacities. Instituting lesson studies provides the infrastructure for teachers to engage in effective professional development and target curricular standards and the curriculum. However, a facilitator guiding and supporting teachers through this focused professional development structure of lesson study develops, increases, and sustains teacher pedagogy and instructional capacities.

CHAPTER 3: RESEARCH DESIGN AND DATA COLLECTION METHODS

Introduction

As a result of NCLB, schools are under pressure to meet AYP goals for students to perform at certain proficiency levels in English Language Arts and Mathematics on state tests (Brady, 2003; Brinson & Rhim, 2009). More than 1,000 schools in California have failed to meet their AYP target goals for over 5 consecutive years. LAUSD alone has 175 schools in the PI 5+ category. Reform efforts are underway to address the growing problem of schools failing to increase student achievement.

Research on schools undergoing high-stakes accountability calls for frequent and focused professional development as a critical component in increasing student achievement (Darling-Hammond, 1992; Doppelt et al., 2009; Salmonowicsz, 2010). Such professional development targets teachers' instructional practices and instructional capacities at failing schools. Research has shown that lesson study, a form of professional development, provides the infrastructure for transformation of pedagogical practices (Stigler & Hiebert, 1999).

In my project, I facilitated the pedagogical change process through lesson study with teachers at a PI 5+ school currently undergoing a teacher-initiated, high-stakes turnaround school reform effort. During the lesson study, I facilitated an action research group composed of six teachers in developing strategies and effective pedagogical practices in the area of literacy to implement into their collaboratively planned lessons. Through this intervention, I examined the effects of this facilitated support and ongoing professional development to changes in teacher pedagogy and impact on student achievement.

Research Questions

In analyzing and facilitating the pedagogical change process at a PI 5+ elementary school undergoing high stakes reform, I was guided by the following research questions:

1. What is the process of facilitating lesson study with teachers in a turnaround PI 5+ school to change or modify their teaching practices to improve student achievement?
2. What do teachers say, what do they show of student work, and what do the literacy assessments over time reveal about the impact of the lesson study process on student learning?
3. What types of changes to instructional strategies are made as a result of the facilitated lesson study process?
4. What do teachers report is the value of the lesson study process?

Research Design

A qualitative action research design was used in order to examine and analyze the effects facilitation has on changing teachers' pedagogical practices. Through multiple data sources, including interviews, observations, and documents, I used these various data collection methods to "review all of the data, make sense of it, and organize it into categories or themes that cut across all of the data sources" (Creswell, 2009, p. 175). A qualitative study allowed me to engage in observations to "yield detailed, thick description" and use interviews with teachers to "capture direct quotations about [teachers'] personal perspectives and experiences" (Patton, 2002, p. 40). A survey instrument would not have been able to adequately capture or give the depth regarding the process nor the experiences of teachers undergoing an action study. I compared student achievement scores from their literacy periodic assessments (LPAs) before, during, and after the intervention, as the study was grounded in the process of teachers'

perceptions of changes to their instructional practices. My research questions were developed to understand the role of the facilitator and the process of facilitating lesson studies in order to change or modify teaching practices; thus a qualitative design was critical in conducting this study.

A part of this qualitative design involved embedded action research to address the larger issue of turning around a failing school. Since action research "explicitly and purposefully becomes part of the change process by engaging the people in the program or organization in studying their own problems in order to solve these problems" (Patton, 2002, p. 221), my study focused on lesson study as an approach to collaboratively engage teachers in making changes to their pedagogical practices. Through this action research qualitative study, I served the dual roles of facilitator and content expert over the lesson study process.

Methods

Site

The study was conducted at Baldwin Academy, an elementary school in a large urban school district in Los Angeles that has been in PI for over 5 years and has been struggling to meet both NCLB goals and state API goals. Currently, the school's API score stands at 660 (out of 1,000 possible points). Over 75% of the student population is performing below proficiency in both English Language Arts and Mathematics.

Baldwin Academy faced possible reconstitution of staff or being turned over to an external educational operating agency in 2010. The teachers at the site, together with the administrative team, decided to initiate their own turnaround reform initiative and rewrote a school plan to reclaim the school through the PSC initiative by the LAUSD. Because this school is typical of other PI 5+ schools in terms of demographics and academic challenges, a change in

instructional strategies and student achievement would provide insight for other schools that have struggled to exit PI. Baldwin Academy serves an urban, multi-cultural, multi-ethnic student body of approximately 675 students in pre-kindergarten through fifth grade. Sixty-one percent (60.7 %) of the students are Hispanic/Latino, 39% percent are African American and 41% are English Language Learners. Based upon recent trends and current enrollment, 96% of Baldwin Academy students receive free and reduced lunch. Similar to other elementary schools undergoing PSC, over 50% of students at Baldwin Academy are performing below proficiency in both English Language Arts and Mathematics.

Access and Recruitment

In order to gain access to the third, fourth, and fifth grade teachers at Baldwin Academy, I met with the administrator to obtain permission to conduct the project at the site. I then disseminated a study recruitment letter to all teachers in the third, fourth, and fifth grades as well as a Memorandum of Understanding (MOU) to the site administrator describing the project, an overview of what was asked from participants, time commitments, and expectations for project participation.

Participants

The participants included six teachers from the third, fourth, and fifth grades working at a Title I, PI 5+ school undergoing a turnaround reform. These grade levels were chosen as the sample group given that only about 30% of their students are performing at proficient or advanced on the Mathematics and English Language Arts state exams. Teachers in grades three, four, and five also focus on developing literacy skills in English Language Arts that are necessary for deepening understanding and comprehension in all content areas.

The Project

Lesson study examines practice through "commonly viewed features of teacher learning to create a well-defined and structured process" (Fernandez, Cannon, & Chokshi, 2003, p. 182). I facilitated a group of six teachers using the lesson study cycle consisting of the following elements: (a) collaboratively defining a problem evidenced by student data, (b) designing and planning a lesson to address the learning goal, (c) implementing and teaching the lesson, (d) evaluating and reflecting on the lesson, (e) revising and improving the lesson, (f) reteaching the revised lesson, and (g) evaluating and reflecting on the lesson again (Fernandez, 2005; Hiebert et al., 2002; Marble, 2007; Stigler & Hiebert, 1999). As a facilitator, I provided teachers with aggregate student data so they could decide on a common problem shared across three grade levels to focus their lesson study learning goals for each lesson study cycle. Teachers then collaboratively planned a lesson to deliver to their students, incorporating a variety of effective teaching strategies. After the lessons were conducted in their classrooms, teachers brought back their student work samples and shared their results to make adjustments to the original lesson. Teachers then revised the lesson and incorporated other strategies and approaches to reteach the lesson. This cycle was then repeated for one more lesson study iteration.

Through the facilitation of the lesson study cycles, I observed teacher interactions and discussions for evidence of changes and modifications in teaching practices that improved student achievement. My role was to facilitate the lesson study cycles while concurrently serving as the content expert with my theoretical and practical knowledge of effective teaching strategies. As facilitator, I facilitated all sessions of the lesson study development process, including implementation and reflection. My role was to keep the lesson development sessions focused on the agenda and instructional goals, and monitor the time. I managed the logistics for each meeting, ensured participation from all group members, resolved conflicts, and asked

guiding questions to lead the group into deeper and richer instructional discussions and reflections, I also conducted classroom observations and videotaped the instruction for teachers to debrief during the lesson study session.

Data Collection and Analysis Methods

In order to ensure validity, credibility, and trustworthiness in collecting data, I triangulated a variety of sources to obtain a broad yet secure set of findings (Maxwell, 2005) through two individual teacher interviews and one focus group session, classroom and lesson study observations, reflective journal entries by teachers, the facilitator's reflective journal, and student data and work samples. This action research project also provided information regarding the process of facilitating changes and modifications to teaching practices.

Teacher interviews: Individual and focus groups. I conducted two separate sets of interviews with the teachers involved in the project. The first set of interviews was conducted with individual teachers using a semi-structured protocol some time during the first iteration of the lesson study cycle. The second interview session, the exit interview, took place after the second lesson study cycle. During this session, I interviewed teachers regarding perceived changes to their teaching practices and impacts to student achievement as a result of their participation in the lesson study project. A semi-structured protocol for the interviews allowed for flexibility to ask follow-up questions during the interviews. All interviews were conducted individually and in a confidential setting. Each interview took about 30 minutes and was audio recorded and transcribed. All transcriptions were coded so that participants' identities would remain anonymous.

A focus group session was also conducted after the second lesson study cycle. A colleague who had never met the participants conducted the focus group. The interviewer asked

participants to describe their experiences in the lesson study during the past 4 months and their perceived changes in instructional practices as a result of the lesson study process and facilitated support. The focus group interview lasted about an hour. The focus group took place in a classroom and was audio recorded and transcribed, with identities coded to ensure confidentiality.

All individual and focus group interviews were digitally recorded using two devices to accurately capture teachers' voices and content. I used a LiveScribe pen that records audio and handwritten notes electronically during the interview and lesson study sessions. I then transferred the audio files to ExpressScribe, a dictation program, to transcribe the files into a word document. I created an Excel chart with recurring themes and categories to organize the data for analysis. These recurring themes and patterns are detailed in both the findings and implications chapters.

Observations: Classroom instruction and teacher collaboration. One type of observation occurred in the classrooms, as I video recorded teachers' lessons to present to the other participants during the lesson study sessions. I observed each participating teacher's classroom delivering the planned lesson for at least one half hour. I observed three classrooms per lesson study cycle: two classrooms during the first teaching of the planned lesson and one classroom during the reteach lesson. A total of six classroom observations were conducted during the project's duration. Since teachers were unable to physically observe each other, video recording was the best way to observe teachers delivering the lessons. Through the collaborative debrief of the video observation, teachers were provided with immediate feedback regarding the lesson delivery. As the videos were primarily used to facilitate discussion for debrief of the

lesson, I deleted the video files after the debrief sessions to maintain confidentiality of the teachers and students.

The second type of observation took place during the lesson study sessions. I observed teacher interactions and their process of negotiation, compromise, and collaboration. After each weekly lesson study session, I recorded basic demographic information including the date, time, place, and attendance (Creswell, 2009). All identifying information was coded to safeguard participants' confidentiality. I included anecdotal and reflective notes on how teachers collaborated, negotiated, and compromised issues, as well as any unique observations or comments during these meetings in the facilitator's journal entries. All lesson study sessions were digitally recorded with the LiveScribe pen and a separate audio recorder. Each meeting's audio recording was transferred to the ExpressScribe program for transcription and used during data analysis. Using the same coding protocol criteria chart, I coded the observations to triangulate the data from the interviews, classroom observations, and teacher collaboration sessions.

Reflective journal entries. Participants were asked to reflect on the lesson study process online through SurveyMonkey, a survey website, where they were asked to answer weekly reflection questions correlated to the lesson study sessions. This online platform keeps responses confidential while providing respondents a forum to document their insights, comments, and reflections on the lesson study process, impacts on student learning, and impacts on instructional practices.

I also responded to a separate facilitator's journal through SurveyMonkey after each lesson study meeting to reflect on the process of facilitation. I used my personal reflections and audio recordings to triangulate the results with the teacher focus group in gauging the impact of

facilitation on the lesson study process and determine how I managed my dual role as facilitator and content expert.

Student work and data analysis. Teachers were asked to bring student work samples as a product of the lesson study sessions to evaluate, reflect on, and hone their instructional practices. Student work samples were used to facilitate dialogue among the teachers. As teachers reviewed student work samples, teachers had the opportunity to self-reflect and collaborate with the group regarding implementation, challenges, and successes of the lesson implementation. A student work protocol facilitated this analysis and guided teacher reflection on best pedagogical practices.

Teachers were also given aggregate student data with teachers' names redacted from the quarterly LPAs (district mandated tests that are given quarterly to assess students' proficiency in language arts) to analyze at the beginning of each lesson study cycle as part of the problem identification and analysis. Teachers looked at the data across three grade levels and identified the specific standards where students struggled to understand and achieve proficiency. The frequent analysis of student work and student data guided teachers and provided feedback on whether their pedagogical practices had an impact on student learning.

Ethical Issues

In the Teacher Participation Consent Form, I clarified to participants the expectations for this action research intervention. Teachers were encouraged to reflect on their current instructional practices as well as the implementation of new instructional practices as a result of the lesson study process. Permission to be observed in their classrooms and to be recorded during interviews was also obtained from teachers.

Teachers were ensured anonymity and confidentiality for participating in the study. All characteristics of teachers including names, gender, ethnicity, and years of teaching experience were changed to protect their identity. When presenting the results from the study to site administrators, findings were discussed in generalities to further ensure confidentiality of the participants.

Role Management

I am currently an instructional coach working with, facilitating, and leading teachers in implementing various strategies, including SDAIE (Specially Designed Academic Instruction in English) strategies, across all curricular subjects to provide access to core instruction for English Language Learners. I established a clear distinction with the teachers at the site between my role as a coach and my role as a facilitator for the purpose of this study. I clarified my role as the researcher and facilitator to the teachers and administrators in the recruitment letter, MOU, and during the lesson study sessions in order to differentiate my role from that of their instructional coach and researcher. All action research related work occurred on my own personal time, including the after school lesson study development meetings and the classroom observations. Safeguards to confidentiality of the participants were provided in the Teacher Participation Consent Form to assure teachers that their thoughts, reflections, and actions during the lesson study sessions, interviews, and classroom observations would not be disclosed to anyone but the researcher.

Since I had already been working for a year at this site at the commencement of the study, I was aware of the cultural and political dynamics that existed. A challenge that may have arisen is the possible reactivity from the participants since I am a member of the administrative leadership team. However, I reinforced to teachers that I do not hold a supervisory role in either

role and participation in this project would in no way affect their evaluations. I reassured participants that their comments, reflections, and experiences shared would be confidential and that all identities would be protected. Furthermore, through the triangulation of data for consistency of responses using archival documents, student data and work samples, classroom observations, and interviews, I was able to safeguard against potential reactivity.

Credibility and Trustworthiness

To ensure the credibility and validity of my study, I closely monitored and protected against the threats of small sample size and potential reactivity from working with my colleagues. As I worked with a group of self-selected third, fourth, and fifth grade teachers in a focused lesson study process, there was a possible threat to validity due to the small size. I ensured the trustworthiness of my sample size of six teachers through multiple data sources, including triangulation of data, utilizing classroom observations, student achievement data, journal reflections, and interviews. The intervention spanned over a period of 10 weeks, prolonging the variety of interactions with teachers and providing multiple and varied opportunities to gather detailed exchanges.

Again, to safeguard against possible reactivity from participants as I am currently an instructional coach at the site, I reiterated to teachers that I do not hold a supervisory role at the site and do not serve in the capacity to evaluate teachers. During the focus group interview, I purposely asked an outside interviewer to conduct the group interview session so that participants would be able to freely express themselves without restraint.

Summary

This study aimed to improve student achievement at an elementary school with a history of low performance by focusing on building teachers' instructional capacity through the

facilitation of lesson study cycles. The data from this qualitative action research study through interviews, a focus group sessions, aggregate student data, reflective journals, and observations provided evidence regarding the impact that facilitated support during lesson study development had on changing and modifying teachers' current teaching practices to improve student achievement.

CHAPTER FOUR: FINDINGS

Introduction

The purpose of this project was to address the problem of the chronic low student achievement at a high-stakes accountability, PI 5+ school by implementing facilitated lesson studies with a group of six volunteer teachers in the third through fifth grades.

The facilitated lesson study cycles included collaborative goal setting, curriculum study and research, planning of lessons, observations of lesson implementation, and guided reflections throughout two iterations of lesson study cycles. Through the analysis of multiple data collection sources, I sought to answer the following research questions:

1. What is the process of facilitating lesson study with teachers in a turnaround PI 5+ school to change or modify their teaching practices to improve student achievement?
2. What do teachers say, what do they show of student work, and what do the literacy assessments over time reveal about the impact of the lesson study process on student learning?
3. What types of changes to instructional strategies are made as a result of the facilitated lesson study process?
4. What do teachers report is the value of the lesson study process?

The findings from this chapter are based on the following data: lesson study session transcripts, two interviews per participant, one focus group session, one classroom observation per teacher, weekly reflective teacher and facilitator journal entries, and classroom data from quarterly Literacy Periodic Assessments (LPA).

Findings

Through the facilitation of two lesson study cycles, this study found that teachers valued the lesson study project, felt that lesson study positively impacted their pedagogical practices, and believed their participation in lesson study contributed to increased student learning in their classrooms. Specifically, teachers valued collaborating with cross-grade level colleagues, sharing strategies and ideas, focusing and analyzing student work and student data, planning explicit instruction, and reflecting on their teaching practices. Evidenced by student work, teacher observation, and LPA scores, students' learning expanded in their reading comprehension, inference skills, ability to identify main ideas, and writing.

This chapter is organized into four sections. The first section describes the process of facilitating a lesson study project at a high-stakes accountability school site. The following three sections focus on the major findings around changes to teacher pedagogy, student impact, and what teachers valued about participating in lesson study.

Finding 1: The Process of the Lesson Study Project

Over the course of three months from January to March, a group of six teachers attended 10 weekly afterschool sessions for 1-1.5 hours to plan, develop, reflect, and revise their lesson plans focusing on standards for which students in their grade levels were struggling to meet proficiency. Each lesson study cycle consisted of seven components that would ensue over a 5-week period per cycle: (a) defining and analyzing a problem, (b) creating goals with measureable objectives while designing and planning a lesson, (c) implementing and teaching the lesson, (d) evaluating and reflecting on the lesson while analyzing student work, (e) revising and improving the lesson, (f) reteaching the revised lesson, and (g) re-evaluating and reflecting on the retaught lesson and analyzing student work for the second time. The lesson study cycle (Figure 1) served

as this study's logic model and visual theory of action, helping participants establish a common goal, vision, and purpose.

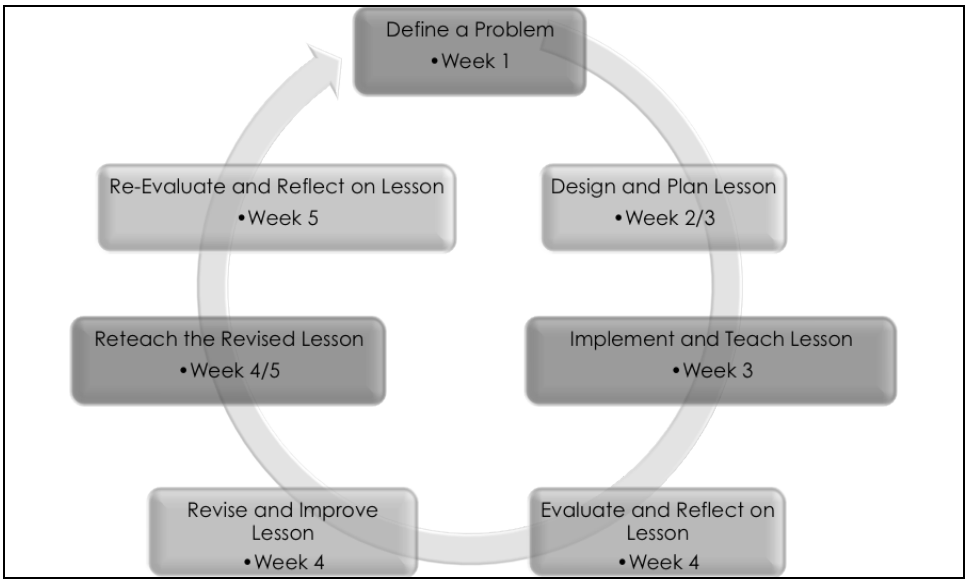


Figure 1. Lesson study cycle.

The Lesson Study Cycles

The beginning of each lesson study cycle began with teachers defining and analyzing a common problem that students were experiencing throughout the three grade levels. I guided the teachers in looking at their respective grade levels' assessment reports. These came from the fall Literary Periodic Assessment (LPA 1) – the district's required language arts standards-based assessments for elementary students, given three times over the course of an academic year. The data reported classroom aggregate performance, delineated by standards. Although the percentages for questions answered correct determining proficiency ranges varies by grade level, the average percentage range for each performance band is as follows: Advanced (83-100%), Proficient (69-82%), Basic (50-68%), Below Basic (34-49%), and Far Below Basic (0-33%). The teachers then decided to focus the lesson study on standards where students performed "below proficient," or performing in the Basic, Below Basic, or Far Below Basic range.

After analyzing the data, teachers found that students in all three grade levels struggled to meet proficiency in understanding inferences and main ideas. In fact, for inferences, all three grade levels' proficiency ranged from Far Below Basic to Basic. Therefore, teachers agreed that the first lesson study cycle would focus on explicitly teach inferencing skills. For the second lesson study cycle, teachers chose to teach students how to find the main idea from a given literary passage, another common difficulty across grade levels and a standard where students were performing in the Far Below Basic and Basic range of proficiency.

After determining the focus standard, I facilitated a discussion of why teachers believed students struggled to understand these concepts. With inferences, many teachers agreed that some reasons for students' lack of understanding was their lack of prior knowledge, exposure, and academic vocabulary. One teacher commented, "Grade level comprehension is weak. If their grade level comprehension is weak, they're not going to understand the story let alone inferences because they have to infer based on the information in the book. So, prior knowledge is lacking." Another teacher stated, "It requires them to think and think outside the box…the answer is not the passage. Now I'm having you use prior knowledge, I have to understand the vocabulary, and I have to understand the content of what we're doing."

When teachers deliberated as to why students had difficulty finding the main idea for the second lesson study cycle, one teacher admitted that it was not just the students who had a hard time finding the main idea, but it was also challenging for the teacher to effectively teach the concept as well. "Yes, that's really hard. They [the students] can find the potential order, they can find events in the story, they may be able to pull out the important events in story. But putting it all into main idea is a difficult thing and difficult to teach."

Once teachers analyzed why the problems were occurring, they set measureable goals and identified strategies to mitigate problems students encountered when trying to understand these concepts through the lesson design. For example, teachers decided to utilize graphic organizers and thinking maps to graphically and visually demonstrate the process of inferencing and finding the main idea. Teachers also wanted to include an interactive opening activity through role-playing for students to infer what was happening in the mini skit. This engaging introduction created a space that did "not [have] that much pressure so that the children will be talking and making dialogue," commented one teacher.

Since teachers were unable to physically observe each other teach the lessons, I videotaped two teachers during the week and then edited the video into 20-minute segments of instruction. At the beginning of week four in the lesson study cycle, the teachers first debriefed how the lesson went in their classrooms. They shared what did and did not go well, where the students understood the objectives clearly, and where in the lesson the students struggled to comprehend the concepts taught. The teachers then watched a video of two of their colleagues teaching. They used the Observation Protocol (see Appendix M), which was collaboratively developed, to notate teacher actions and the nature of student talk. After we debriefed their observations, we then analyzed student writing as evidence of student understanding and learning. We used the Student Work Protocol (Appendix N) to analyze the student work, gauging the depth of understanding and grasp of the lessons' objectives from student responses. Analyzing student work gave the teachers insight into specifically where and how the lesson would be revised and improved for the reteach.

After the lesson had been revised, I printed copies of the revised lesson for the teachers and also posted the materials online for teachers to access during the week. I then videotaped

one teacher teaching the revised lesson during the following week. The last week of this 5-week lesson study cycle was dedicated to watching the teacher reteach the lesson and debriefing the lesson using the observation protocol once again. Student work was analyzed a second time using the Student Work Protocol, and this time participants gauged the growth in their learning compared to the first lesson's student work samples.

Cycle 1 and Cycle 2. From a facilitator's perspective, the first and second lesson study cycle differed in that the role of the facilitator shifted from taking a more directive role during the first cycle to a facilitator's role in the second cycle. The first cycle was a new experience for all the participants involved, and necessitated a shift in my role from an instructional coach to a facilitator for this lesson study project. In four of the five reflective journals during the first cycle, I wrote how I had to frequently maintain the focus of the session on instruction and on occasion steer the conversation back towards the agenda. "When the topics were going off into tangents, I brought the focus back to the lesson study and agenda through interjecting and verbally stating, 'We need to get back to the agenda for time's sake,'" I reflected. However, during the second cycle, I notated that it was easier to facilitate the sessions because the teachers were already familiar with the lesson study cycle and the components of the cycle. "Since a lot was discussed during the first session, in this second cycle, not much explanation was needed. It was more of a guiding and leading of the lesson [design]." Teachers also noticed that not only did the planning of the lesson itself go more quickly during the second cycle, but also their reteach lesson "went well and quickly" as well. During the first cycle, teachers spent the first 3 weeks analyzing the problem and planning for the lesson, whereas in the second cycle, teachers were ready to start planning the lesson after the first week of analyzing and discussing why students had difficulty understanding the concept of main ideas. Teachers easily navigated

through the lesson study components in the second cycle. The role of the facilitator shifted during the second cycle. I commented in the facilitator's reflective journal that I saw my role during the sessions to primarily "paraphrase[e], summarize[e], and restat[e] for clarity."

Surfacing and Management of Conflicts

During the 10 weeks of the lesson study project, minor disagreements and conflicts occurred as teachers collaborated and competed with ideas. One teacher explained the management of these conflicts as, "Oh, well you know, there's always disagreements, but we always came up with an ultimate plan, you know? Which one would work better, this one or that one?" As facilitator, I ensured that all ideas were heard and frequently checked for consensus, "What do you think? Do we all agree?" Teachers described this negotiation process in the focus group:

Destiny: I remember only one thing that would be considered disagreement was that last session, do we put in the writing portion or do we not put in the writing portion. I think we ended up going, well, if you think your kids are ready, put in the writing portion. If you don't think so…

Phyllis: So that was an alternative. You can do this, this, or this. You can do this, this, or this.

Destiny: And we wouldn't have lost focus nonetheless. Yeah, that was the only time I remember anything close to a disagreement.

Facilitator: So that was Destiny and then Phyllis added that the range of choices helped you, gave you the ability to make selections about what you wanted to focus on.

A minor dispute with a teacher, Deborah, occurred during the second lesson study cycle when she did not want her lesson to be observed. Since she was the only teacher who had yet to be videotaped, she was automatically "volunteered" as the final teacher for observation. As the facilitator, I reminded her that she agreed to be taped per the conditions of participating in this study. I was not alone in my attempts to urge this particular teacher when I then suggested other teachers could have a second opportunity to be observed if Deborah continued to refuse to be videotaped. Three teachers interjected into the conversation to encourage the reluctant teacher:

Facilitator: Would anyone like to take her place to be videotaped?

Deborah: I mean, you can do it [videotape the lesson]. I'm not comfortable with it [the videotaping] though.

Facilitator: Well, what's not comfortable? I edit down the video for time.

Sadie: And now there's all those great transitions. The first time…

Facilitator: And you know what? I don't even keep it [the video footage]. I delete it. Remember what I said? As soon as I tape it and show it to you, I'll delete it. It's only for us to watch and talk about it.

Phyllis: I will say, the day she did mine, I was hot.

Deborah: I'm sick of the behavior problems in my classroom.

Grace: Deborah, it's good to see yourself.

At the end of this conversation, Deborah agreed to be taped and observed. Further, during the final lesson study session, Deborah's attitude had shifted. She shared that she was not only incorporating the concepts and strategies to help students find the main idea, but also implementing the practice of inductive reasoning across other curricular content areas. "And

everything we're doing now, it's like, oh my God, we're inferring and we're doing this…it's like that's all I'm hearing. They're understanding it much more."

Role of the Facilitator

As the facilitator, I managed the meetings and distributed resources related to the lesson study content. Teachers were provided with hard copies of all needed materials, which were also available to them online through the lesson study blog. On the blog, I posted the session agendas, reminders, and any related documents prior to each session's meeting. During the sessions, I guided the meetings according to the agenda, kept the focus on the instructional goals, ensured participation from all the teachers, asked probing questions regarding instructional practices, and managed conflicts if they arose.

Teachers found the facilitator effective in organizing and managing the sessions. In answering the first research question, What was the process of facilitating lesson study with teachers at a PI 5+ school to change their pedagogy?, I considered how a facilitator guided this professional development structure to build upon the instructional capacities of teachers. I sought to avoid issues related to reactivity or overstating their comments given that I was the facilitator of the lesson study project. For this reason, I triangulated teacher responses from teacher reflective journals, interviews, lesson development sessions, the focus group, and my facilitator's reflective journal. Based on their responses, teachers perceived the facilitator's role as someone who guided, managed, and facilitated the sessions.

During the focus group session, a question was posed to the teachers regarding my role as the facilitator and how I guided the lesson study process. Four teachers described the facilitator's role as someone who provided them in advance all the materials that were needed to conduct the lesson study, including notices of upcoming meetings, the agendas, lesson plans, and

related resources. In preparation for the lesson study project, I created an online blog where the teachers could collaborate, view and share resources, and download documents. I primarily used this site to upload the agendas, reminders, links to the reflective journals, and lesson plans. It was a tool that provided accessibility and helped me manage the logistics of the meetings. One teacher explained during the focus group session,

> We had reminders that the meeting was coming up so we all knew, we were all prepared. Multiple emails, which was nice, we had to remind us. Also, everything was put on the school website, Posterous, so we could access it that way. We had the agenda online if we needed to look at it. Then when we got here, it was in paper format as well. All the data was ready for us, the standards, so we could really, all we did was collaborate when we were here. And it was just up to us to bring what she had told us to bring.

Another role I personally took into consideration was time management and redirecting the focus to instruction. One of my main objectives as a facilitator was to ensure that the lesson study cycle was being followed and that teachers were engaging in a meaningful way. Four teachers validated this facilitation in their journal responses with: "The facilitator helped move us through the process, step by step, as well as explain when necessary," "kept the meetings going," and "herd[ed] us all in the right direction."

On at least five separate occasions, I reflected about being conscientious about the time. Given that the teachers were already meeting outside their regular school hours for at least an hour or longer every week, I wanted to ensure that the time we collaborated together was used frugally and efficiently. Examples of the comments I wrote were, "I tried to keep the focus on the lesson planning when it seemed like the conversation was veering off topic," "I brought the focus back to the lesson study and agenda through interjecting and verbally stating, 'We need to

get back to the agenda for time's sake,'" and "I thought that the teachers felt a little rushed during the last cycle. I wanted to move the agenda in a more organic way this time around." I did notice, though, that by the second cycle, the teachers did not need me to keep them "on task" or "focused on instruction" as much. In the final journal reflection, I wrote, "Now that this was the second time going through the lesson study cycle, I didn't really have to do too much to stay on task." Teachers were able to self-regulate by the second cycle and redirected themselves back to the task at hand. However, the teachers recognized that having a facilitator "kept us on target and we always had our objective and goal for every meeting."

Teachers were also asked to comment on how they perceived the facilitator in helping the group. The following description from one teacher's journal response was a typical response: "The facilitator helped the group by making sure that we all understood the process of the lesson study. During the development of the lesson she allowed the teachers to share ideas and come to a consensus." Four teachers acknowledged that the facilitator tried to engage all the participants through asking questions and discussing student work; "She took opinions from everybody on what they thought about how should we do this. Everybody gave their input." On a personal level, I indicated in my journal entries that engagement from all the participants was something I tried to ensure weekly. I reflected on who participated to make sure that "all teachers had an opportunity to speak" and who seemed reticent in sharing, which informed my "Next Steps" regarding to whom I needed to direct more questions.

Finding 2: Changes to Teacher Pedagogy

Teachers revealed through their interviews, journals, and lesson study sessions that their participation in this project impacted their teaching practices. All teachers found that the collaborative planning was essential to teaching effectively. Teachers believed that attending to

student learning through analyzing student work was reflective of their instruction and evidence of their lessons' effectiveness. As the participants began to see themselves more as facilitators of knowledge, they found that their confidence and motivation as educators increased. Finally, because the teachers were asked to reflect consistently, they became more aware and cognizant of their instructional practices and whether their practices were effective or ineffective.

Participation in the Lesson Study Built the Instructional Capacity of Teachers

Teachers stated that their expectations for participating in this professional development model through lesson study were to increase student learning and achievement and increase their capacity to be an effective and "better" teacher. Teachers indicated in their journals and interviews that through their participation in this study, their professional learning as educators increased. Going through the lesson study process, all the teachers shared that it "add[ed] to my own teaching repertoire." Specifically, the discussions regarding teaching reading comprehension skills explicitly gave teachers a "better understanding of how to teach comprehension," "how to teach reading comprehension explicitly, effectively, with ease," which they were able to then "apply…across the curriculum."

Prior to this project, the only opportunity teachers had to plan together was in same-grade teams during the weekly common grade level planning time. Although that time is designated for teachers to plan curricular content, much of that time is instead used for operational and school-related activities rather than instruction. Therefore, teachers typically plan instruction individually. One teacher's description explains how the participating in lesson study allowed her to learn from her colleagues: "The planning would happen all on our own. But having people around to help me get ideas from them, that's what happened." Another teacher revealed that she was able to benefit from the teacher interaction because "I lack in my instruction and

what the students needed to help them achieve the standards." After going through the lesson study cycle, this teacher stated there was "a lot of learning from what other people had to say and taking that information and taking it back to the classroom." Teachers were able to directly apply the ideas shared from the collaborative sessions into their instructional practices and in their lessons. Specifically, teachers reported that they are able to be more detailed in their planning, "more specific," and "more differentiated." They found themselves becoming more cognizant of incorporating more strategies such as graphic organizers, charts, and modeling into their instruction, thereby increasing the rigor in their classrooms. Also, teachers stated that they were now analyzing and examining student work more carefully.

All teachers reported that they felt that their capacity as educators and impact on student learning increased. Their attitudes and comments indicate that their practice had changed. One teacher said that the lesson study process:

> made me aware that we can always improve on something that we thought we already had down pack. Sometimes we think, we teach my idea really really well and then you come here and think, uh oh. I can do it a little bit better. So I think as a teacher you also grow from this type of experience.

Teachers remarked that the lesson study sessions "constantly [built] on what you know and you learn something from each of the teachers, things that you didn't do or have never done in the classroom," and "at the end of the sessions, you always felt a little more powerful and empowered with your teaching strategies."

Specific changes to practice included teachers incorporating a variety of strategies into their lessons such as using graphic organizers and engaging introductions to lessons in order to gain students' attention, explain, and simplify lesson objectives. Teachers realized that the use

of graphic organizers helped students understand concepts that they would otherwise have difficulty understanding. During the second cycle, teachers collaborated and created a graphic organizer (Figure 2) to explicitly teach students about finding the main idea using inductive reasoning.

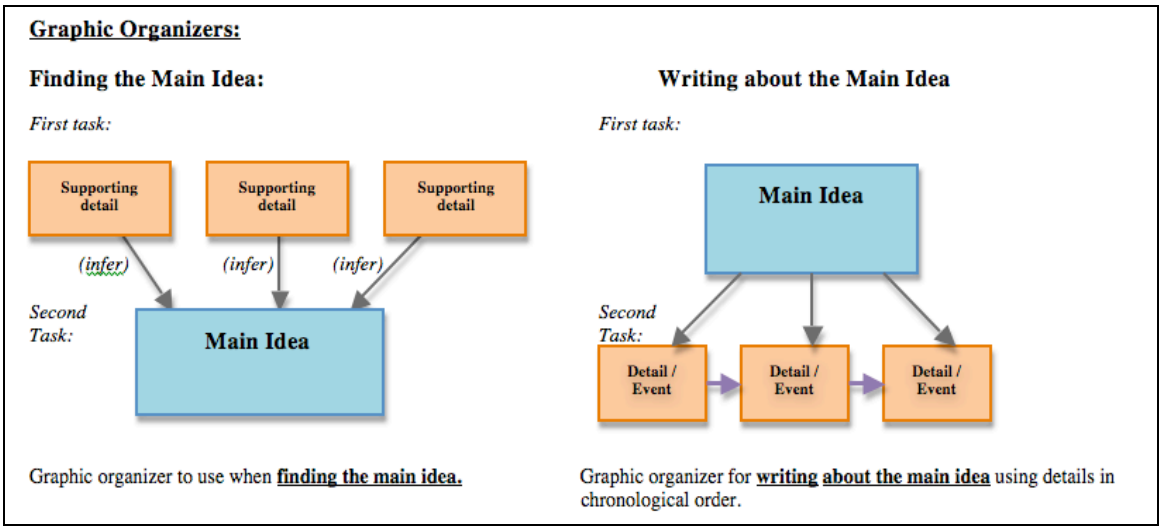


Figure 2. Main idea graphic organizers.

Teachers decided that by visually representing the process of finding main idea, students would metacognitively derive the main idea through first identifying supporting details from a text. Teachers would then help students infer from the details into finding the main idea. "Bring a funnel to show them, 'Oh you have all this, pour it through, you get the main idea,'" explained one teacher. After the main idea has been identified, teachers wanted to create another graphic organizer that would help students write about the main idea in a paragraph. Teachers commented, "I think without the graphic organizers, I don't think they can do it" and "I've never looked at main idea like this [and] I've taught it 3 years now." The collaboration provided teachers with another perspective in looking at their instructional delivery and strategies.

Another practice teachers began to implement more consistently was to immediately engage students through an interactive introductory activity. One teacher was initially hesitant

about introducing her lesson using a different strategy, as she perceived herself to be more of a "visual learner." She typically only relied on visuals and graphic organizers to support her instruction. She was not accustomed to incorporating other modalities in her lesson delivery. However, teachers planned to use a skit as part of the introduction for students to infer the scenario. This teacher describes her initial reluctance, how she followed through the plan, and her reaction:

> I surprised myself because during the planning, I've never done this and I'm not interested in doing this but I kept listening an I thought, "Why not." I've committed and I went and I did it. My kids were so pleased so see me do this role…I'm more like I'll show them pictures, I'll show them little bits of something online to capture the inferencing just to—that's how I normally learn. But I never used me as a prop. I think they got it so I think that kind of opened my eyes…I had no idea that was so exciting to them, to their teacher in a little skit scenario thing. I've never done that! More of that in the future.

Teachers were able to go outside of their comfort zones and try new practices, which not only increased students' motivation but also benefited their professional growth as educators.

Teachers Engaged in Purposeful Planning

Teachers found the opportunity to engage in an uninterrupted period of time to focus on planning instruction and lesson delivery to be an essential and valuable component of lesson study. The following description was typical of what frequently happened at the grade level meetings and how the lesson study development sessions differed:

> The main focus was the lesson study so we were all focus on that, which I thought was very valuable. We as teachers can learn to do that at our grade level planning but I don't know how…like I said, there are too many things happening at grade level that we don't get to do this.

Rather using the time to discuss non-curricular issues, the lesson study meetings were dedicated to instruction. Within this context, two teachers specifically emphasized that "effective planning and instruction is a must." The two areas of focused planning teachers agreed were critical in planning effective lessons included: (a) planning instruction explicitly and rigorously, and (b) revising and teaching the lessons a second time.

Planning explicitly. With explicit and rigorous planning, teachers were able to focus their planning to instruct specific standards and use curricular materials to support instruction rather than let the curriculum dictate when and what needs to teach students. Some comments were:

> Sadie: It's more meaningful and better teaching to teach to the actual standards and not try to get the teacher's guide in there.
>
> Phyllis: Instruction that is standards-based with clear expectations support quality work.
>
> Destiny: I'm moving away from the Teacher Editions as the end all, be all. Now I can look at a lesson and say, "Oh they're doing reading comprehension this week. Let me drag in this other piece of something that we've been working on and using that instead."
>
> Grace: When you developed your own lesson plan and you know what your children need and you zero in on teaching skills instead of teaching "stuff," you zero in on what you see your kids need. And that should be done at all times.

The focused planning allowed teachers to slow down their instruction and thoroughly teach to the standards. All the teachers expressed that they became more specific and systematic when they delivered instruction and used a variety of teaching strategies. When asked what kind of changes she made to her instructional strategies as a result of her participation in the lesson study project, one teacher stated:

> I'm a little more detailed when I plan my lessons…More specific. Before I was more general with whatever I was teaching. Now I'm more specific and a little more differentiated. I can understand what the kids are doing, I mean, I work as if I'm a kid and I need to have full understanding. I need it to be explained explicitly whereas I would do it generally and move fast to move on. But no I integrate; I can integrate everything that I am doing with almost everything I am doing,

Teachers understood that they needed to have a consistent format when delivering explicit instruction to students, requiring them to "set clear expectations," "make sure that the students understand the objective," provide consistency "in modeling in front of the children," and be "more detailed and specific" during instruction. Teachers also reflected that focused planning increased the rigor of instruction and stimulated higher levels of thinking from students. Teachers commented, "I'm definitely emphasizing reading comprehension a lot more and moving away from just skill based activities" and "Kids just need to be pushed to think more deeply, questioned more intensely, not just yes or no, and most importantly, expected to do so."

Reteaching the lesson. Lastly, a critical component of focused planning was the element of revising and reteaching the lessons. Built into the lesson study cycle, the revision of the lesson allowed the teachers to reflect on the strategies that were successful and were not successful from the first teach of a lesson and provided the opportunity to go back and replace the

ineffective strategies with other strategies. “The one part that helped me reflect on instruction is the coming back to the lesson; it was consistent” reflected one teacher in her journal. Another teacher expressed in her exit interview,

> The recursive method really lends itself to our school because we can continue improving and that’s part of the conversation of this process. But for our school in particular, this can be successful because it gives people the space to reflect on their own teaching without having too much of an emphasis of, “You’re doing it wrong so fix it.”

All the teachers reported that they understood the reteach as an important and meaningful process as the practice of revising and reteaching a lesson does not generally occur.

> It’s not just “Okay, we did the lesson study, we did the video” and stop. It’s continuous and we go back to our class and we try these things work and that didn’t work so I have to do this all over. That’s why I think lesson studies work because it also motivates the teacher.

Teachers reported seeing the difference the reteaching practice made, not only in their pedagogy, but also in their students’ work and achievement on the LPAs. As the teachers retaught the lessons, they found that their students understood the content more in depth, “needed less guidance,” and were more “confident during the revised lesson.”

Teachers Attended to Student Learning

Attention to student learning was amplified during the lesson study cycles. Through the analysis of student work and student data, teachers expressed that they were able to observe the impact their instruction was having on their students. Teachers thoroughly examined student work to analyze “exactly where he or she needs any help.” Teachers viewed the analysis of

student work to be a "true indication of how well the student understands the [taught] concept." For one teacher, instruction changed as

> I now [pay] more attention to the work that students produce at the end of the lesson. I used to just skim over their work but now I look at it carefully looking for clear evidence that tells me they got the lesson.

The analysis of student work occurred at two points during each lesson study cycle: once after the initial teaching of the lesson, and the second after the reteaching of the lesson. The first student work analysis guided the discussion of what strategies and elements of the lesson were successful and what needed to be revised. After their initial debrief of student work, the lesson was revised with the expectation that students' understanding would increase and be evidenced through subsequent work.

Teachers were anxious to share their student artifacts during these meetings. One teacher shared,

> My highlight would probably be looking at the artifacts. I go back because I don't do that often or in such detail…I think sharing those artifacts really tells us about what our children are learning. It's like evidence of your teaching as well. Did we convey the concept? Did we meet our goal as far as getting that concept across? And certainly the artifacts would be an indication of that.

As teachers are increasingly pressured to rush through the curriculum and cover a broad array of standards, the analysis of student work provided teachers the opportunity to "zero in" and change their teaching strategies. Previously, teachers would primarily look at quantitative test data to inform their teaching. The practice of analyzing student work from classroom assignments was not frequently done. Through the embedded process of analyzing student work in the lesson

study cycle, teachers had the opportunity to begin to look at other summative forms of student learning to inform effective instructional practices.

> I mean, it wasn't just a test I was grading, it was written work. I like the written work. I like looking at that. And it means more to [the students] when they get it back…Their work is more meaningful than taking a test and turning it in.

One teacher also found that by thoroughly examining her students' work, she became aware of who she frequently called on to respond to questions during whole group instruction. The analysis of her student writing gave her an opportunity to acknowledge that although some students were not active participants during class discussions, they had understood the objectives of the lessons. This teacher realized that she should elicit more participation from these students and not merely call upon those who constantly raised their hands. "Their writing tells you a lot," explained this teacher, "Maybe some kids are just quiet."

A suggestion four teachers made was that they wished more time was allotted to the analysis and discussion of student work. Teachers agreed that developing a consensus regarding expectations for "what the finished product should look like" needed to be more consistent throughout the grade level and that time should be allotted to ensure that all teachers had a uniform understanding of these expectations. Teachers also concurred that the lesson study sessions might also benefit from engaging in more in-depth conversations about how to better meet the needs of struggling students through the analysis of student work.

Teachers Saw Themselves as the Facilitators of Instruction and Student Learning

The most common answer to "What do you see your role as when it comes to student learning?" during the teacher interviews was that most teachers viewed themselves as a facilitator of learning. Sample responses from the five out of the six teacher participants

included: “A facilitator…but allowing the children to work in their groups and to develop their own ideas through their interpersonal communication and contact,” “letting them direct their own learning,” and learning “how to probably give children more control, back up a little bit, [rather than] thinking that I have to teach everything.” Two teachers spoke about giving over some of their control to their students and the internal struggle they faced in doing so. One teacher admitted,

> I want to move towards becoming a facilitator. I’m not quite there yet; I’m still very much the instructor but every once in a while, I would be able to arrange an activity and facilitate their learning and exploring. As a teacher, ultimately, I want to facilitate, not instruct.

Throughout the duration of this lesson study project, however, all the teachers began to perceive their role in the classroom as a facilitator of learning. During a conversation with one teacher who was initially hesitant about giving more control over instructional conversations to her students shared how she realized that her students were able to stay on task and engage in academic discussions.

Facilitator: So you’re seeing yourself let go and seeing your students get more control of their learning?

Grace: Yeah. That and I see that they’re more capable and that they can handle it. They know how to read. They can use the graphic organizers. They can see if the story is an inference kind of story or is it main idea? Plot? Character? They have to look and they are able to look deeper into character analysis. That’s what I started to do. Let them have more control and I just walk around and listen to their conversations.

Teachers increasingly saw themselves transferring the ownership of learning to their students through incorporating collaborative group opportunities and allowing students to struggle with the content before teachers interjected in students' conversations. One teacher shared that when her students worked in small groups and encountered a block, she allowed them to collaboratively resolve their confusion before she intervened. Another teacher shared a similar approach in that when she observed her students going off on tangents, she just helped them "move along" and guided them rather than giving them the correct solution because she believed that "they'll learn more."

The gradual change teachers embraced of perceiving themselves as facilitators resulted in increased student motivation.

Facilitator: So you're taking the role as the facilitator?

Grace: Yes, exactly. I want to teach that way. Definitely. Because I saw how easy it was. Like at the last lesson study we did, I thought I did something wrong because it was so easy. It really was! It was really too easy. They really enjoyed it. My students are, for the most part, are really interested. They're interested in their outcome, what they're doing.

"They are learning more when they have more control," describes how teachers realized that their students were able to engage in instructional dialogue and illustrates the general sense of efficacy teachers had when viewing themselves as facilitators of learning.

Teachers' Confidence and Motivation Increased

Three of the six teachers initially shared through their reflective journals that they wanted to increase their confidence their instructional practices. By the second lesson study cycle, these three teachers responded in their interviews, in their focus group, during the lesson study

sessions, and in their journals that not only did their confidence as an instructor increase, but so did their motivation. One teacher summed up this increase in confidence in her exit interview:

> I learned how comfortable it is when you really, really, really know what you're doing as a teacher. You're confident in yourself and you're confident in the children. They will comprehend as well. The planning together, you trust your colleagues. And especially when you collaborate and come up with similar ideas, it really does give you the confidence.

At a school where such collaboration among colleagues, particularly collaborating across grade levels, is not a frequent practice, teachers shared that the accountability embedded in the lesson study process was motivating for them as professionals. "At the end of the sessions, you always felt a little more powerful and empowered with your teaching strategies overall," expressed a teacher regarding the lesson study sessions. Teachers also expressed their desire to continue with the lesson study after the project completed its two cycles. When asked why, a teacher responded, "Because I want some results! It keeps me motivated and now that my kids are improving, this is something that I can say, 'What I'm doing is not working.' So I need something else that's going to work."

Two teachers made comments regarding the unanticipated benefits from their participation: "It was an experience I didn't expect to be so rewarding. I'm enjoying it," and "I didn't think it was going to be that fantastic but the teachers really worked together so everyone was okay watching everybody but me. But I got over it." Teachers seemed to attribute the specific environment of the lesson study to have facilitated authentic collaboration and affected their motivation.

Unique to this school year, the district adopted a new literacy program; teachers attended a 3-day training in the summer to acclimate to its resources and the curriculum. Given the novelty of the program, all the teachers agreed that there was not enough time for them to thoroughly peruse the curriculum, let alone collaborate effectively during their grade level meetings. Therefore, teachers viewed their engagement in the lesson study process as beneficial to understanding the components of the new reading program, as it allowed them to assess what was provided in the curriculum and what needed to be added or edited to best meet the needs of their students. Teachers decided to focus more on the standards, and as a result, found that their confidence and efficacy increased. "We don't need these different crutches anymore, because we feel like we really understand [how to teach comprehension] now and so we can apply it now to other areas and other materials and under different situations," acknowledged one teacher. As the facilitator, I reflected in my weekly journals that I too observed an increase in teachers' confidence as well as growth in student achievement and learning, evidenced by student work and classroom aggregate achievement scores from the LPAs.

Five teachers did note, however, that the one component of the lesson study process that negatively impacted their confidence was the inconsistencies of one participant's commitment to the project, making three of the teachers feel "less confident" in sharing their experiences during the lesson study sessions when this one teacher returned to the meeting after missing two consecutive planning sessions. "Having a teacher who started the process with us and then quit part of the way through or disappear and then came back, it made me feel discomfort, a little bit vulnerable," summarized how these three teachers felt.

Teachers Reflected on Their Instructional Practices

The final finding teachers made reported with respect to their instructional practices was that lesson studies helped them reflect on their pedagogy. They reported looking back at their practices, the strategies that they implemented in their lessons, and the nature of student work and student talk for evidence of the effectiveness of their instruction. One teacher found that the collaborative process in planning the lessons "helped me reflect on what I do as a teacher in my own closed-door classroom. It helps me be more honest with myself also." Another teacher admitted, "I need some work on my instruction. I should've picked a different question for the students to answer for the written paragraph. Another sentence stem probably would have been more effective."

Four teachers made the connection that the lesson study cycles facilitated the reflective process during the revision session: "The one part that helped me reflect on instruction is the coming back to the lesson. It was consistent." Four teachers also reported that the analysis of student work prompted self-reflection on instructional delivery.

Another discovery related to reflection was that teachers realized that as their motivation and interest in their teaching practices increased, students increased their interest in the lessons, evidenced by their participation and engagement during instruction. Some sample comments included: "The more effectively I plan, the better the presentation will be for my students. I think it'll be easier for students to grasp the information;" "I think my instruction, the expectations, delivery *and* content equally affects my students in a positive way;" "My instruction directly affects student learning. The better prepared I am, the better the lesson;" and "My instruction directly affects students' learning. Intensive, repeated, explicit instruction."

The time allotted at the end of each lesson study session to reflect was also important to teachers. A common sentiment, typified in the following statement, was:

> With the lesson study process, you're constantly, you're turning in the student work, but you're also doing a journal every week so you're reflecting on what you did. It helps me with my motivation in teaching a lesson and I know that this is what needs to be done and it has to be consistent. So it's helping me. And if it helps me, then it's going to help the kids.

Teachers frequently connected their practice and reflection to students' learning: "I'm more aware of what needs to be done and actions equals results and it helped a lot with the teacher reflection."

Finding 3: Teachers Believed and Evidence Showed that Lesson Study had an Impact on Student Learning

Teachers reported that the impact on student learning was a result of their participation in the lesson study project. Teachers were eager to share their observations of the increase in student motivation and learning evidenced by student participation during instruction, student work, and performance data on the LPAs. Aggregate classroom data from the LPAs also indicated growth and increases in student achievement. My second research question sought to find what teachers said, what they showed of student work, and what the literacy assessments over time revealed about the impact on student learning as a result of the lesson study process. In this section, I discuss four changes in student learning that teachers reported: overall improvement in student achievement, improvement in student writing, increased use and understanding of academic vocabulary, and increased motivation to learn.

Assessment of Student Achievement Indicate Improvement

Teachers reported across multiple data sources that students showed an overall improvement in their learning, particularly in literacy and in general reading comprehension.

The assessment data from the LPAs for most teachers indicated improvement in both the overall assessment over time and in the specific targeted standards. One teacher stated in her interview, "Out of 22 kids, 19 scores improved… I figure all this [lesson study] must work. I want to do this for math and work on some skills." Other teachers shared in their journals, "LPA2 (Literacy Periodic Assessment 2) scores significantly rose," and "My students comprehension has improved."

When determining which standard to focus on for the lesson study cycles, teachers targeted the standards where students were performing below proficiency. Using the first LPA as the unit of analysis, teachers saw that four of the six classes scored between 30% to 50% correct on the inference standard, falling in the Below Basic category (Table 1). After teachers completed the first lesson study cycle and took the second LPA exam in February, four of the six teachers' classes scored above the 60% goal in the inference target standard. One class decreased from 43% to 33% and the other class improved from 30% to 52%.

Table 1

Percent of Correct Responses on Inference Target Standard on LPAs (N=127)

	3rd	3rd	4th	4th	4th	5th
LPA 1 (November)	65%	43%	64%	30%	51%	32%
LPA 2 (February)	65%	33%	67%	52%	79%	75%
LPA 3 (April)	75%	43%	72%	52%	82%	55%

By the third LPA exam in April, five of the six classes grew in the percent correct on the questions targeting the inference standard, and one class remained the same. Three of the classes achieved above the 70% correct mark, placing their classes' understanding of inferences in the proficient category.

Table 2 shows the percent correct of responses on the main idea target standard from the second lesson study cycle. The data indicate that for the main idea standard, every participant's classrooms increased its understanding of main idea over time. One fourth grade class initially went from 57% correct on LPA 1 to 82% correct on LPA 3. Three classes were in the Proficient category in understanding main idea. Though not every class's score indicates proficiency in the main idea standard, every class did increase its percentage correct by the third LPA in this particular standard.

Table 2

Percent of Correct Responses on Main Idea Target Standard on LPAs (N=127)

	3rd	3rd	4th	4th	4th	5th
LPA 1 (November)	55%	31%	57%	58%	74%	33%
LPA 2 (February)	85%	48%	46%	35%	65%	48%
LPA 3 (April)	78%	48%	82%	63%	79%	44%

Table 3 presents the percent of students at the proficient and advanced levels across the three LPAs. Overall, every class increased the number of students performing at the proficient and advanced performance levels. The fifth grade class saw a 164% growth from the first LPA with only 14% of the class performing at Proficient or Advanced, to 37% proficient by the third LPA. One third grade teacher also went from 50% of her class performing at Proficient and Advanced to 85% of students in the Proficient and Advanced range by the end of the year. The other third grade teacher initially did not have any students in the Proficient and Advanced range, yet by April, nearly a third of her class was in the Proficient and Advanced category. Teachers commented on this growth of student achievement on the LPAs:

> The assessment was, for LPA 1, I had three students pass. Really, three just passed and was just proficient. For LPA 2, I had one advance and eight proficient. I think it was

nine total. One advance and eight proficient. All scores, none of my scores decreased. I went from three proficient to nine proficient and advanced.

Table 3

Percent of Students Scoring Proficient and Advanced on LPAs (N=127)

	3rd	3rd	4th	4th	4th	5th
LPA 1 (November)	50%	0%	30%	22%	35%	14%
LPA 2 (February)	65%	6%	46%	17%	46%	41%
LPA 3 (April)	85%	28%	50%	39%	60%	37%

Teachers further confirmed academic growth during the focus group interview:

Destiny: Our reading comprehension scores showed our marked growth in the last assessment that we took compared to the first assessment that we took, which is nice hardcore data to take back, that this (lesson study) is definitely results oriented.

Interviewer: Thank you, Destiny. And then, Grace you shook your head and so did Sadie. Does everyone else agree?

Grace: Yes, there was a tremendous growth, I mean, from a 10-week period of time.

Comparing the teachers who participated and those teachers who did not participate in the study, the data reveal that over the course of the three LPAs, while both groups grew over time, the average percentage of students scoring proficient and advanced on the LPAs were greater with the teachers who participated in the study than those teachers who did not participate (Table 4).

Table 4

Average Percentage of Students Scoring Proficient and Advanced on LPA

	Participating Teachers (*N = 6*)	Non-participating Teachers *(N = 8)*
LPA 1	25%	12%
LPA 2	37%	15%
LPA 3	50%	16%

Non-participating teachers saw a growth of four percent between LPA 1 and LPA 3 while the participating teachers experienced a growth of 25% between LPA 1 and LPA 3.

When looking at the specific target standards between the participating and non-participating teachers, there was a similar pattern. Again, there was overall growth over time, yet the degree of growth between the participating teachers and the non-participating teachers was apparent in the impact lesson study had on teachers' instruction and student learning (Table 5).

Table 5

Average Percentages of Correct Responses on Target Standards

	Participating Teachers (*N = 6*)	Non-participating Teachers *(N = 8)*
Making Inferences		
LPA 1	48%	41%
LPA 2	62%	43%
LPA 3	63%	46%
Identifying Main Ideas		
LPA 1	51%	40%
LPA 2	55%	49%
LPA 3	66%	45%

During LPA 1, which was administered in November, the average percent correct for students of both the participating and non-participating teachers was similar in both target standards. However, as the year progressed and students took the subsequent LPAs, the discrepancies between the students of participating teachers and non-participating teachers become more

pronounced. By the third LPA, the average percent correct for teachers involved in the lesson study for making inferences was 63%, whereas the non-participating teachers' students averaged at 46%. For identifying the main idea, participating teachers' students scored 66% correct, in contrast to the non-participating teachers' students who scored 45% correct.

Teachers also believed that students were increasing their learning and achievement in general. One teacher shared, "I had more students participating, meaning they did their work. So something happened there. More papers were turned in and more people were trying." Teachers said the following during the focus group meeting:

Sadie: I think I remember everyone saying that it went to other curricular areas.

Destiny: Yes.

Sadie: I'm mean it definitely, I saw it in math, I saw it in discussion, I saw it when they, the vocabulary that we went over that we highlighted for the actual lesson. They really started enjoyed using those words. It just went other...

Interviewer: Other people were shaking their heads that it went to other content areas.

Teachers observed student growth in achievement through teacher observation, student work, and the quarterly LPAs that ultimately affected students' learning across other curricular areas.

Student Writing Improved

When the project first began, the concept of student writing was hardly mentioned during the lesson study sessions and in teachers' reflective journals. However, as we began to plan and implement the lessons in the classrooms, the topic of students' writing became more prominent when discussing the evidence for student learning. When teachers were asked how they knew their lessons' goals and objectives were achieved, five of six teachers responded that it was

through student writing. Further, when asked what kind of impact on student learning occurred as a result of the lesson study process, three of six teachers responded that writing was one of the major areas of growth in student achievement. Common responses included: "I think all students regardless of their level made improvements, probably in their writing, any written response in any curricular area," "Their writing is more organized," "Their writing is much better," and "My students' comprehension has improved as well as paragraph writing."

As the lesson study sessions progressed, teachers also began to notice that the quality of students' writing improved, which further evidenced student learning. One teacher commented during a lesson study session, "I've come a long ways from journal writing in the morning to these things that you're asking 9-year-olds to do. And the work looks good. It looks very good. I can read it, I can follow along."

Students who previously were not producing quality writing, or much writing at all, were now writing more in quantity and with substantial content. This description was typical of the kind of growth in student writing:

> Originally in the beginning, [students' writing] was very short, I mean, not enough details so I think with this class, they've learned to go into the text and get more information from it and be able to write a paragraph.

In my own facilitator's reflective journal, I wrote:

> Student work was used to discuss the reteach of the lesson. Teachers loved looking at the work and commented on how students seemed to have grasped the concept of main idea much better this time around. Also, I could tell the excitement teachers had in sharing some of their stellar work with others. Even more, I was impressed the improvement in the writing with all the students!

Students were asked to write paragraphs as the evaluative piece for the lessons. All teachers found that students were writing with appropriate details in their inference and main idea paragraphs. One teacher stated, "I think as we've progressed through [the lesson study], their topic sentences have become a little stronger. And they're learning how to stay focused to write details."

Students Increased Their Usage and Understanding of Academic Vocabulary

Teachers observed that students increased their use of academic vocabulary associated with their lessons. In multiple journal entries, lesson study sessions, and interviews, teachers stated that they observed students incorporating the academic vocabulary throughout the day, particularly in their writing. "I'd say about 21 out of 24 students really showed their understanding of inferencing because of the vocabulary that they chose to include," reflected one teacher in her journal. Other teachers shared: "Student writing samples shows students making inferences and using academic vocabulary," "Students stayed on task and used the vocabulary words in context," and "I've noticed that their vocabulary's come out in all the writing since we started."

The teachers also noticed that students were incorporating the vocabulary into other subject areas as well as in their everyday vernacular. One particular teacher shared during the lesson study session that while she was administering an assessment with the students on reading comprehension, her students responded,

> "Well, the main idea is this and this happened first"…And some of my students in other conversations would say things like, "I infer that you can use this number because blah blah blah," using inferences as well. So I find that a great success, that they're using [the vocabulary] not just only when I tell them to.

Another teacher reported, "I'm inferring that they were learning because they're always bringing up 'inferences' when we're doing other things and in other conversations." Teachers expressed that students were becoming more confident using their newly acquired vocabulary during conversations with one another:

> I can hear it in their conversations as I was walking around during their partner work. I can hear in the vocabulary they are using, the confidence with which they are inferring and asking questions and sharing their ideas about what the evidences are. I can also see it in their paragraph write ups of sharing what their inferences and evidences are.

Students' Motivation to Learn Increased

A final finding related to student impact was an increase in student motivation. All teachers mentioned at various stages of the project that they observed an increase in student motivation to learn. One teacher shared during her exit interview that she found her students to be more interested in their learning:

> My students are, for the most part, really interested. They're interested in their outcome, what they're doing. If I give them a paper, they want to know what's going on in that paper. "How did you like it?" And their education means something to them because it means something to me.

Another finding was that students were motivated because of the lesson introductions. One teacher reported during a lesson study session, "Yes, that little intro went super well. I mean they were really interested and that went well." Another teacher journaled, "The picture from the introduction activity motivated the students." One teacher expressed that the introductions "set the mood for them going on to the next step."

Teachers also found that the strategies they implemented in the lessons, such as the graphic organizers, varied reading selections, and student engagement strategies, were factors in motivating students to participate and actively engage during instruction. As a part of the materials for one lesson, teachers decided to use outside reading material to teach the concept of main idea rather than using the district's adopted curriculum. One teacher reflected,

> They're deep into the conversation and they're able to dig deeper and bring up a lot of great solutions that are not evident in the story. So their thinking is more in depth because they are more invested in these stories.

Another teacher found that students were more engaged because of the strategies she implemented in her instruction:

> I gave them a chance and I gave them markers and chart paper and they really liked working with chart paper. So I guess it's similar to art. They got the idea of the skills and I found that they liked working in small groups so they can help each other.

Teachers also discussed how students were also motivated *because* they knew their teachers would be sharing their work with other teachers. One teacher shared in the focus group session,

> It seemed like [the students] were more engaged and more interested in the lesson because they knew that, I informed them we were doing this for the lesson study, so I think they were more focused, which helped them to understand the lesson more.

Finding 4: The Value of Lesson Study

To determine how teachers valued the lesson study process, I triangulated teacher responses from multiple data sources. Overall, teachers described their involvement in the lesson study as one of the primary reasons their students' achievement increased. In this section,

I discuss the components teachers that believed make lesson study an effective professional development model, the flexibility of the lesson study process compared to other types of professional development, and the value of collaborating and benefits of cross-grade level articulation.

Lesson Study as a Professional Development Activity Provided Consistency, Accountability, and a Safe Environment for Teachers

As the concluding activity for this project, the six teacher participants reflected on their participation and experience in this study during the focus group session. In order to reduce reactivity, a colleague from the Educational Leadership Program facilitated the focus group interview. She began by asking the group what they believed was the effect or benefit in participating in this kind of professional development. Some typical answers were that "it's strengthened everybody's skill in instruction" and student achievement increased. Teachers also shared that the impact of this lesson study project had spread "in an organic manner to the rest of the school."

Several important factors that teachers felt contributed to the effectiveness of these lesson study cycles were the consistency and follow-up by the facilitator, a sense of mutual accountability, and collaborating within a safe environment.

Consistency and follow-up. In a typical professional development program at Baldwin Academy, a range of topics are covered, from instructional strategies to compliance issues. Once a week, students are released an hour early to allow teachers to engage in mandated professional development. However, the time allotted for professional development is often truncated to address other school and staff related matters. Teachers commented on the fragmented nature of these weekly meetings, "Every professional development activities, we'd be getting things though we never follow them through," reported one teacher. She continued, "They'll say, bring

back this data and we're going to go back to it. And for some reason, it never always really happens." Teachers shared their disappointment about the way professional development is typically conducted, in and out of the school site. They also commented how other professional development activities lacked intensity in rigor or purpose.

However, with the lesson study, teachers felt that they were able to complete a process from beginning to end and observe the effectiveness of this professional development model evidenced by student work and student data. "I've never done it like this. This is the first time I've ever taken something and followed it all the way to the end," expressed one teacher. Another teacher stated, "There was follow up to it. That's the part I liked. There was follow up which was looking at student work, looking at what worked and what didn't work." One teacher summed up the common experience by the participants, comparing other professional development sessions to the lesson study:

> In other PDs (professional development), I don't think we have any other PDs that are as intense as this one. And it needed to be long term. We spent a lot of time to develop a thorough lesson plan and feedback. You were available for any corrections and we had each other to depend on if we ran into some problems or misconceptions. We did have each other to depend on and the process of going through it step by step.

Another teacher described her experience thusly:

> Here, the expectation is we create this lesson plan together, go back, do it, take those student works, come back next week and now we'll look through that and revise our lesson plan, go back and do it again, and come back. So there's follow through and through that process, we're seen marked growth in the students and in my own teaching.

By extending the project for two complete lesson study cycles, teachers found that these weekly meetings made a difference in their teaching and in their students' learning. Teachers stated that they were constantly learning something after each collaborative session: "After a long day, really, you're ready to go home. After the meeting, it seemed like I had actually learned something after each session."

Accountability. All the teachers agreed that the lesson study sessions held a high expectation of accountability, different from how they felt regarding their weekly grade level meetings. "When we sit with our grade level and plan… [the planning] doesn't quite happen this way because there are so many different fragments we need to address," shared one teacher. Another teacher reported that in comparison with other collaborative professional development activities,

> There's no accountability. You do it and that's it. That's all. This one, you're coming back, you show them your work, 'This is what I did,' and you say, 'This is what worked, this is what didn't work. Let's try it again.'

There was a shared sense of accountability and expectation to follow through the lesson study components. When this mutual agreement was broken or challenged, teachers held each other accountable,

> So somebody says, "Oh, I can't do that," and we tried to come up with, "Wait. Well, let's solve this." Don't complain about it, let's solve this, get it solved, get the issue done and talk about it and see what we can do about it.

There was an occasion when one teacher, Deborah, came into a session stating that she did not teach the planned lesson in her class because of behavior problems in her class. During that week, another teacher, Grace, spoke privately with her and offered her assistance to help

Deborah with her lesson. Grace later shared, "When I went through the process with [Deborah] in a different kind of environment, she was so happy. That's when she came back [to the lesson study session], because she was happy."

Safe environment. For teachers to comfortably share their ideas and acknowledge what was successful or unsuccessful during their lesson delivery, teachers reported that establishing and maintaining a safe environment was crucial. Three teachers consistently reported over the 10-week span how they felt that the lesson study environment was a safe space. When I asked one teacher if she felt her opinions, experiences, and voice were heard, she replied, "Yes, because I feel this is a safe environment." Because the lesson study was conducted with a small group of teachers, even Deborah, who was hesitant to be observed during her lesson delivery, shared that the "smaller setting" made her feel safe. The teachers agreed that "We felt safer because we were collaborating more. When you input yourself, it's like your baby."

However, for one teacher, certain factors impeded her security, namely the inconsistencies in attendance by one participant and her perception that some participants had an unequal sense of shared commitment. This teacher expressed,

> As a participant that went through the entire process, I didn't appreciate that people were dropping out. It made me feel like I was not secure in this group if someone else can drop out. That I can't always share exactly what I want to share.

Lesson Study was More Flexible Than Other Professional Development Activities

Teachers concurred that the lesson study's structure was more flexible and "freeing" than other professional development activities they have previously attended. When the lesson study first started, teachers initially brought their district-approved curriculum guides. However, I encouraged teachers to choose and incorporate any appropriate materials and resources in their

lessons, and not necessarily rely solely on the district's adopted curriculum. I also encouraged teachers to plan and implement varied activities if they felt that other activities would help students better understand the lesson objectives. The following discussion that ensued during the focus group session:

Sadie: In the beginning, we all came with our teacher's guides.

Grace: That's because we were uncomfortable anticipating the unknown.

Phyllis: And after a while, it's, "I want to use this, I want to use that. Okay, well she's going to use that."

Nancy: Third grade wants to use this.

Phyllis: So we start feeding off each other's ideas and, so, "Well, she did something so maybe I should do something different."

Destiny: And that speaks to what Grace was saying earlier, where in the lesson, we felt like we had more freedom. I guess we eventually felt like we had more freedom to adjust our curriculum per the needs of our students and our learning goals rather than just strict following the book. We're starting to release that idea that we have to follow the book. That's a really hard idea to release.

Teachers expressed a sense of relief during their interviews with statement such as, "We were actively involved in participating. And a lot of PDs are not like that. And you allowed us, as facilitator, for differentiation." Teachers also concurred that the lesson study process allowed for more freedom:

> We've been in programs where we have been structured, the program laying it out for you … [But] you have to teach according to the children's growth and their progress and

> their needs. So the way with [lesson study], we were able to tap into our students' weaknesses as opposed to a regular staff development where they tell you what to do how to do it, put up your rubrics, which has nothing to do with teaching children. That's just the difference. More freedom. You have a little more confidence when you plan your own lessons, you really understand what you're really doing and why you're doing it, why you're teaching a certain way.

Teachers stated that they were now focusing on providing their students with a standards-based instruction and not a curriculum-based instruction, and teaching according to specific student needs.

Teachers Valued the Collaboration and Benefited from Cross-Grade Level Articulation

The lesson study sessions were organized so that although three grade levels were participating in the study, the content and focus topics were applicable across the grade levels. Teachers consistently reported that they valued the collaboration with their colleagues and felt that they benefited from the cross-grade level articulation.

Collaboration. One of the main attributes of lesson study is the highly collaborative nature inherent in this professional development model. Rather than having a single presenter training participants, lesson study *involves* the participants and views them as experts. The structure is established for participants to share their knowledge, experience, and strategies when analyzing a problem and developing a lesson plan. "When we're told we should be planning and planning and planning, this exact point is what I think the planning should be like," recognized one teacher.

Teachers reported on the thoroughness of the collaboration process during the lesson study sessions. Some sentiments included: "I didn't think it was going to be this extensive nor

did I think we would be collaborating as intensively as we did, so I think I really now understand better about this whole lesson study," and "I didn't think [teacher collaborating] was going to be that fantastic but the teachers really worked together so everyone was okay watching everybody."

Two specific areas that were particularly influenced as a result of collaboration were the process of developing a lesson plan and the sharing of ideas among colleagues. Teachers commented that planning the lessons together brought together the expertise each individual teacher possessed.

> When they bring their background, they'll say, 'At one point we did this,' or 'I tried this before' and someone else will say, 'Oh, I tried that too but it went this way. Maybe we should try it another way.' I think just listening to what everyone has to bring to the table of what they know prior what we were doing and before we start planning, or a lesson that was similar, I think that helped.

Teachers were able to sift through ideas and strategies to develop a strong lesson plan. As facilitator, I probed teachers to validate and qualify *why* a certain strategy would be most effective. After a discussion, teachers reached consensus with the strategies they would implement in their lessons. One teacher stated that through collaborating with her colleagues,

> It really took it out of my own head and [moved] beyond what I've always done. Now I get to listen to what other people wanted to do. And I know that pretty quickly, the conversation is not about what the other person would do, but as a group, what we think we should do, which makes it a better lesson.

When asked how important teachers considered the collaboration was to the lesson study process, three teachers reported that the sharing of ideas allowed them to establish how the

"design of the lesson will make the teaching of the lesson successful." Through the "different sets of eyes," teachers considered a variety of ideas and strategies to implement in their lessons. One teacher noticed the following difference between planning individually and collaboratively:

> The different ideas that were thrown around would not normally come out when you are planning a lesson. Teachers are coming up with different strategies for teaching and looking at how students learn… The planning would happen all on our own. But having people around [helps] me get ideas from them.

Teachers were able to ask for support and receive assistance from their colleagues. One teacher reported, "They say what they are going to do for a lesson and maybe I can try that for mine. Or if I tell them this didn't work for me, then they say, 'Maybe you can try this and see if that'll work.'" Other teachers concurred, "Sometimes if you're not sure what to do with a lesson, I'll think, 'Oh I need to try that,'" "I was kind of like, I needed help. And usually when we collaborate, everybody gets new ideas from each other. It always helps me, always helps me with my instruction," and "I was able to ask questions that would help with my lesson."

Cross-grade level articulation. All six teachers acknowledged that engaging in the cross-grade level collaboration was valuable and "an added plus" during the lesson study process, as teachers rarely have an opportunity to meet and plan with other grade levels. At the beginning of each lesson study cycle, the teachers and I engaged in a thorough analysis of data from the LPAs (LPA 1 and LPA 2). Typically, teachers are only provided the data regarding how students at their respective grade levels performed, but the participants in this study were given the student performance data across all the three grade levels, with classroom names redacted. The cross-grade level format allowed teachers to collaborate with colleagues with whom they would otherwise not have an opportunity to engage in instructional planning. One

teacher commented, “Well I think it’s interesting to come together with colleagues to design lesson plans and this was a multilevel lesson collaboration, which is different. Usually because we’re on our own grade level.” A fourth grade teacher also reported,

> The best part for me was working with the grade level below and the grade level above because we don’t do it that often… I wish we did that more often instead of the beginning or the end of the year when you analyze your test data. Even throughout the year. That’s what I liked best.

Teachers also saw that the cross-grade level articulation allowed them to see the progression of standards from one grade to the next. As teachers were made aware of what skills students at each grade level were struggling to learn, they understood how they needed to adjust their instruction to prepare them for the following grade level. “You know where they’re weak in and what skills they need and you can adapt your lessons based upon that. You know where your kids need to go so you need to get ready to take them there,” explained one teacher.

Summary

Findings were broken down into four categories: the process of facilitating lesson study at a high-stakes accountability school, impacts to student learning, changes to teacher pedagogy, and the value of participating in lesson study. The participating teachers spent many hours of their personal time over 10 weeks after school engaging in rigorous dialogue focused on increasing student achievement. One teacher stated, “It’s about time we did something to where we can actually go back, review student work, make the teachers accountable; and that just wasn’t done.” When asked why they believed more teachers, especially given the school’s status as a PI 5+ school, did not choose to participate in this study, one teacher responded, “Because it’s extra work. That’s what it is. It’s extra work. We have to do more than what’s required

because what we're doing is not working." However, for the six teachers in grades three through five who did participate (out of a total staff of 14 teachers for these grades), the findings indicate that the goal for this project was achieved—pedagogical change with teachers at a high-stakes accountability school was made and student achievement increased.

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

Introduction

Schools that have failed to exit PI for more than 5 years are subject to high scrutiny by overseeing districts and other Local Education Agencies (LEAs; Brinson & Rhim, 2009; Mintrop & Sunderman, 2009; Pappano, 2010). This project sought to find what types of changes to pedagogy were made as a result of teachers participating in a facilitated and sustained professional development series through lesson study. The findings from this study add to the body of literature addressing the increased need for accountability in teacher professional development to sustain school improvement endeavors (Perry & Lewis, 2009; Rock & Wilson, 2005; Thibodeau, 2008).

My study implemented lesson study as the primary mode of professional development for a group of six teachers in the third through fifth grades at a school that has been identified as a PI site for over 10 years. I facilitated two lesson study cycles and examined the process of facilitating pedagogical change practices with teachers, the types of changes teachers made to their practices, the impact on student learning and student achievement, and what teachers valued from the lesson study process. During the lesson study sessions, teachers engaged in collaborative discussions focused on problem analysis and why students were having difficulty understanding certain language arts standards, analyzed data from the LPAs, and developed lesson plans. Teachers reflected on their practice through observing each other teach the lessons and analyzing student work. Data were collected throughout the duration of the project using the following methods: participant interviews, focus group session, observations, teacher and facilitator reflective journals, student work, and data from the LPAs.

The significant findings from this study indicate that the lesson studies facilitated changes to teacher pedagogy. Teachers reported changes in the following areas: building their

instructional capacity, focusing their planning for explicit instruction on standards, greater attention to student learning, perceiving themselves as facilitators of instruction and learning, increasing their confidence and motivation, and reflecting on their instructional practices. Further, the study found an impact on student learning, specifically in the targeted standards and student writing. Based on the quarterly LPAs, teachers saw growth in student achievement scores in the targeted standards and in their overall performance.

This chapter discusses my findings in relation to the literature regarding high-stakes accountability schools, professional development, and lesson study. I begin by highlighting the major findings and implications for high-stakes accountability schools. I then discuss the limitations to this study. Next, I discuss lingering questions and implications for future research. Finally, I conclude with my reflections on conducting this study and the impact I believe it will have if lesson study an be sustained at other high-stakes accountability schools.

Major Themes and Recommendations for Findings

The major themes in the findings include changes to teacher practice, how facilitating lesson study impacted teacher pedagogy, increases in student learning, and lesson study as a professional development model. These findings provide implications for high-stakes accountability school sites looking to make sustainable pedagogical changes that impact student learning.

Teachers Changed their Teaching Practices

Studies have shown that change sand sustaining change is difficult, particularly when change is forced and not collaboratively agreed upon (Wilms, 2008). Yet, when certain conditions are set in place, change can occur. Consistent with research regarding the impact lesson study has on teacher practices, this study found that teachers changed their teaching

practices through the lesson study process that resulted in growth in students' writing and assessment data (Ermeling, 2012; Fernandez, 2005; Wilms, 2003). By teachers consistently engaging in an instruction-focused collaboration, revisiting practice and reflecting on instruction, teachers' pedagogy was impacted and changed (Ermeling, 2012; Lewis et al., 2009; Stigler & Hieber, 1999). Saunders and Goldenberg (2005) state that "teachers' work—indeed, the work in which we all engage—cannot be seen in isolation" (p. 147). One of the benefits of lesson study is that the collaboration occurs with a network of teachers who are able to share best practices with each other, observe student learning collectively, and celebrate gains together. The findings regarding changes to teacher practices included growth in instructional capacity, focused planning, attention to student learning, shift of role into facilitators of learning, increased self efficacy, and reflection on practice. These improvements in teacher pedagogy could not have been achieved without the collaborative process of lesson study.

Small victories, big impact. Research has shown that when teachers engage in learning teams and their students begin to show progress, teachers move away from blaming the students from not understanding their instruction to persevering under a "you haven't taught it until they've learned" attitude (Gallimore & Ermeling, 2010. Initially when teachers began this project, they spent the first 2 weeks identifying a problem, analyzing reasons why that problem was occurring, and planning a lesson to address the problem. As they went through the first cycle of the lesson study, teachers found that in the 5 weeks, students' writing had improved and their work was "much better." Teachers reported that the concepts being taught were now being "transferred and applied to their writing," which showed evidence of learning and the effectiveness of teachers' instruction. Teachers were no longer blaming the students for their lack of understanding, and saw that as their planning and instruction improved, their students'

achievement and learning improved. These initial and small victories that were collectively experienced propelled and continued to motivate the teachers in participating and engaging in the lesson study process. One teacher exclaimed during her final exit interview, "I want results!" when she was asked whether she would want to continue in another lesson study in the future.

These small victories eventually accumulated into big results, indicated by the data in the final LPA. Every teacher who participated in this study increased her students' percentage of proficient and advanced scores. Teachers constructed meaning from their experience, attributing these significant gains in their students' growth in learning and achievement to their participation in the lesson study.

Reflecting on practice. The reflection process was critical in changing teachers' practices. Teachers were asked to engage in a reflection period after every lesson study session and articulate what they gained from the collaboration and what they saw in student learning. As teachers reflected, they were able to look at their instruction honestly and acknowledge where they needed additional support. For example, after the first inference lesson, one teacher reported,

> I need some work on my instruction. I should've picked a different question for the students to answer for the written paragraph. Another sentence stem probably would have been more effective. Examples of inference charted on chart paper would have helped also.

This teacher was able to recognize that her choice in questioning did not adequately facilitate the best writing from her students. Furthermore, she realized that she should have incorporated a visual aid through charting examples of inference and sentence stems for her students and to scaffold her instruction more explicitly. During the next lesson study session, this teacher shared

her experience with the other teachers and thus added a graphic organizer to chart the process of inferencing into the lesson. The reflective practice translated into changes in not only this one particular teacher's pedagogy, but also impacted the instructional practices for the other five teachers as well.

One of the surprising findings from this study was the shift in attitude among the teachers. When teachers initially started the project, some teachers exhibited some hesitance, particularly Deborah, who did not want to her lesson to be videotaped for the other participants to observe. However, after she went through her lesson, her attitude seemed to have shifted from reticence to acceptance. She shared in her final interview that, "Actually [the lesson study] was better than I expected. Everyone was collaborative and everyone brought their ideas to the table and everyone respected everyone's ideas." When she was asked how the lesson study changed her practice and impacted students' learning, she replied, "I saw a difference. [My students] actually were excited about it and [my lessons] flowed a little smoother than some of the lessons that I do." Consistent with research, the time teachers spent planning together and focusing solely on instruction made an impact on their efficacy as educators (Ermeling, 2010; Fernandez, 2005; Saunders et al., 2009).

Removing barriers. Researchers discuss some challenges to conducting lesson study, which include not being able to find the time for doing lesson study and American teachers being "too nervous and self-conscious to open their classrooms to their peers" (Chokshi & Fernandez, 2004, p. 521), preferring to keep "classroom practices private" (Lewis & Perry, 2009, p. 387). Lesson study brings instruction out in the open, which can be considered as a risk to many teachers (Fernandez, 2002; Hiebert et al., 2002).

Even during this study, one teacher expressed hesitation about being taped and observed, citing the discipline problems in her class as the reason for her reluctance. However, through probing and encouragement from her colleagues, this teacher agreed to be videotaped and came to view their observations as feedback about the quality of the instruction, rather than as evaluations of her performance of the teacher (Chokshi & Fernandez, 2004). This teacher eventually described the collaboration during the lesson study as a "fantastic" experience.

The collaborative nature of the lesson study facilitates a safe space where barriers that may have existed in the past are slowly removed. As teachers were able to build trust and a nonjudgmental attitude, focusing on the "teaching" and not on the "teacher," teachers were able to share honestly about what worked and did not work during their instruction.

Facilitating Lesson Study at a High-Stakes Accountability School

Facilitators advocate for process. Past research suggests the need for facilitators to guide the lesson study process and serve as advocates for process (Kratzer & Teplin, 2004; Perry & Lewis, 2009; Rock & Wilson, 2005). In this study, I served as the facilitator for the lesson studies. As I am the site's instructional coach, I was initially concerned about the balance of functioning as a facilitator in a collaborative teacher group and participating without stifling or interfering in the collaborative problem solving process (Chokshi & Fernandez, 2004). In the first lesson study cycle, I guided the process explicitly and ensured that teachers followed the agenda. I was also conscientious of time. During the second cycle, as the teachers became more familiar with the lesson study cycle itself, I did not have to guide the process as readily and directly as in the first cycle. Rather, I was able ask more probing questions to have teachers reflect on their decisions, explain why they wanted to use a certain strategy in the planning, and qualify their responses.

Participants shared their perceptions regarding my function as the facilitator in the focus group. They reported that I guided the process and ensured that participants received necessary materials and resources in a timely manner. Teachers received positive feedback from the facilitator and reported that there was a "high level of communication." When one teacher was asked whether she would participate again in a lesson study cycle, she responded,

> It depends on the facilitator. All facilitators are not the same so I wouldn't do it unless it was a certain facilitator. No really, if you have a good facilitator, you want to do it but if you have a facilitator that just, they *have* to do it and they're mandated to do it, it comes across as not as supportive. More punitive.

The quality of the facilitator makes a difference in the success of the lesson study process. Rock and Wilson (2005) discuss in their study that their participants viewed the lesson study facilitator's "support as critical to the success of lesson study" and "with appropriate support these participants were very eager to engage in the lesson study process" (p. 89). Therefore, as with the participants in any lesson study, the facilitator should be a trustworthy member of the group who believes in the process and can effectively engage every teacher.

Furthermore, for future rounds of lesson study, it would be beneficial if teacher leaders were set in place to function as facilitators as well. Teacher leaders would require training on the basics of how to effectively facilitate these lesson study sessions in terms of managing the logistics (i.e., agendas, securing location, times, etc.), guiding data analysis, incorporating questioning techniques (probing questions), and implementing strategies to ensure full collaboration from all participants.

"We" factor. When reviewing the transcripts from the lesson study sessions, I noticed that I frequently used the pronoun "we," "us," and "our" when clarifying decisions and in

seeking agreement. Some examples are: "What did we decide?" "Why do we think this is occurring?" "What is it that we can do to facilitate better inferencing?" and "It sounded like we weren't giving students enough experiences to inference." Rather than having the role of the facilitator simply guide the process, organize the resources, and support the observation, reflection, and debriefing sessions (Rock & Wilson, 2005), I took on the role of immersing myself into the process. Although I served the dual role of being their content expert and facilitator, I wanted the teachers to feel that I was part of this learning process as well.

Also, I wanted to share a sense of urgency with the teachers given the critical state that Baldwin Academy is in with the PSC process. Since the school has been identified as a high-stakes accountability, chronically low-performing school, it was important to me that the teachers felt the urgency of improving not only their practice but also student achievement. For schools in similar situations, the facilitator should share a common sense of urgency and commitment with the participants.

Lesson Study had an Impact on Student Learning

The findings from this study are consistent with the existing literature on lesson study, which asserts that when teachers collaborate and engage in reflective dialogue to improve instruction, students' learning also improves (Saunders et al., 2009; Saunders & Goldenberg, 2005). My findings related to student learning showed that teachers attributed their participation in the lesson study process to the growth in their students' learning. When asked whether she would participate in lesson study in the future, one teacher explained, "Now that I see results and now that my kids are improving…I need something that's going to work."

Student achievement improved. In the 10 weeks from January to March, teachers observed substantial growth in their students' achievement. Data from their students' LPAs

indicated significant growth, not only in the targeted standards from the lesson study, but also in students' overall proficiency on the assessment over time. At the beginning of the lesson study project, classroom data reported averages of 50% percent of correct responses on inference and main idea standards on the first LPA, which was taken in November, prior to the start of this study. By the second LPA, taken in February, the average percent of correct responses increased to 62% in inferencing and 55% in main idea. By the third LPA in April, the average percentage increased to 63% correct in questions on inferencing and 66% correct in questions on main idea. Regarding overall achievement on the LPAs, in November, only 25% of participants' students were performing at the proficient and advanced ranges. By April, 50% of participant teachers' students were in the proficient and advanced ranges.

Furthermore, when comparing the growth in achievement between the students of participating and non-participating teachers, students in the participating teachers' classrooms saw greater increase in scores falling in the proficient and advanced ranges as well as answers correct on the targeted standards. Though I had expected all the students in the participating teachers' classrooms to outperform the students from the non-participating classrooms, the difference was nonetheless surprising. By the third LPA, the average participants' students performing in the advanced and proficient range was 50%, a growth from 25% in the fall's LPA. However, in the non-participants' classrooms, the average percentage of students in the advanced and proficient range was at 16%, a growth from 12% in the fall. The difference between these two groups is profound and supports the notion that participating in lesson study and focusing on instruction has tremendous effects on student achievement. The significant difference in growth between the participants' and non-participants' students could be attributed to the fact that the participating teachers were planning instruction to address the specific targeted standards and

reteaching the developed lessons. These six teachers utilized resources and materials outside of the district's curriculum and collaborated on best practices to teach main idea and making inferences. Teachers devised data-driven and standards-based lesson plans for instruction rather than relying solely on the curriculum.

This increase in student achievement suggests significant implications of the effect of teachers participating in lesson study, especially for other high-stakes accountability school sites. Teachers repeatedly stated in multiple data sources, "At a school in this situation, I would have [lesson studies] be a must do" and that in "other schools, kids come with prior knowledge and background knowledge. And teachers, some of those other teachers don't have to do everything that we have to do. So we have to give it to them." Teachers observed the impact lesson study had on their students' learning, motivation, and achievement, and expressed their desire to continue lesson study in the future. The results from this study confirm what research suggests with lesson study being implemented with students who are "academically marginal" (Wilms, 2003).

Student writing improved. An evaluative writing component was embedded within each lesson. As teachers brought back their student work to analyze after each initial teaching and second reteaching, teachers consistently commented that their students' writing had improved. Whereas in the past, students in many classes were not producing not only quality writing but not much writing at all, teachers were finding their students producing writing pieces that were thorough and meeting the requirements in the rubric teachers had prepared. "I have kids that usually don't write and now they're writing from the text," reported one teacher. Some teachers even reported that students seemed more motivated to produce better work because they knew their teachers would be sharing those pieces with other teachers.

Lesson Study as a Professional Development Model

Research states that there is an intentional need for focused, sustainable, and consistent professional development at low-performing schools in order to make lasting changes to instruction and impact student achievement (Cotton, 1992;Duke, 2006; Malen et al., 1990; Mass Insight, 2010; Pappano, 2010; Salmonowicsz, 2010). With this lesson study project, teachers expressed that this model of professional development strengthened their individual and collective efficacy and built their instructional capacities. Unlike the weekly professional development meetings that the staff attends, which are fragmented in topics and require little accountability from the teachers, participants found that the lesson study process maintained high expectations embedded in the model. "Follow up and follow through is significantly different in this process as opposed to the regular grade level meeting," shared one teacher. Another teacher stated that it was "about time" that they engaged in professional development where they were accountable for their learning. Teachers appreciated bringing in their student work to share with others and analyzing their practice openly with each other. One teacher gave an example of this practice: "This is my proof and here are my graphic organizers. Here is my individual students' work. Here are my paragraphs. So that's what I liked."

One of the critical findings from previous research is that stable settings – "dedicated times and places for getting important work done" (Ermeling, 2012, p. 24) – lead to improvement in teaching and learning. Furthermore, well-planned and organized meetings lead to "increased coherence and focus" (Ermeling, 2012, p. 26). The implications for conducting professional development for similarly low-performing schools is to create a consistent professional development model like lesson study, where teachers can engage in small groups to intently focus on instruction in order to improve student learning and teacher pedagogy.

Lesson study would serve as an effective professional development model for low-performing schools that are under scrutiny from the district and state. The lesson studies were constantly revolved around student achievement data and focused on one target standard per cycle. This deliberate focus on one standard and refining the teaching practices to instruct in the most effective way possible profoundly impacted student learning . Teachers commented throughout the duration of the project that the lesson study brought them together to formulate engaging lessons, increasing both teacher confidence and student motivation. As teachers observed their students becoming more engaged during their lesson delivery, teachers also became more dedicated in their planning, resulting in increased student achievement and learning. With a committed group of teachers who believe in the lesson study process, teachers could continue to build their capacity as educators and begin to make observable and sustainable changes to their pedagogy, ultimately affecting student learning. This kind of concerted focus on instruction and collaboration may be one avenue for schools that have been struggling to exit PI.

Limitations

While this study provides data to suggest the positive impact of lesson study at high-stakes accountability school sites, there are several limitations to consider. The first limitation is the sample size. Given that the study was voluntary and required teachers to dedicate hours of their time after school for 10 weeks, six teachers from grades three through five (out of 14 possible teachers) participated in this study. Initially there were seven teachers, but one teacher decided to opt out of the study after the second week. I recognize that the findings may not be reflective of all teachers at other low-performing schools. However, in terms of cross-grade level collaboration, the participating teachers did not have a history of collaborating with each other outside of their grade level. Therefore, there may be some indication that the collaboration

and benefits may be similar if this study were to be conducted at other high-stakes accountability sites.

The study was also conducted at one low-performing, high-stakes accountability site in Los Angeles. The findings may differ had I added more sites to this study. However, because I conducted the project with one site and a small group of teachers, I was able to obtain detailed data and develop a trusting relationship with my participants. Also, the composition of the study participants involved all three grade level chairs from the third, fourth, and fifth grades. Given their role as grade level chairs, they may have been more inclined to participate and felt the need to represent their grade level.

The second limitation is the duration of the study. The study was conducted over two cycles, lasting 10 weeks. Ideally, lesson studies should occur throughout the year. If the study had began at the beginning of the year, it may have produced other detailed responses in terms of teacher capacity and student achievement.

The third limitation is the fact that student achievement growth could be attributed to other factors. I recognize that students do grow throughout the year due to the natural progression of learning, effects of maturity, becoming accustomed to the standards, gaining familiarity with the test, or other variables that are unknown to the researcher. However, when comparing the participating teachers' scores with the non-participating teachers' scores, the difference in the rate of growth suggests that lesson study significantly impacts not only teacher pedagogy but also student achievement and student learning. Furthermore, teachers believed and student work indicated that students' growth was affected as a result of their engagement in the lesson study process.

Finally, I recognize that my dual role as a coach at the site during school hours and as facilitator of the lesson study sessions may have caused some reactivity in the study's findings where teachers may have been overly positive in their statements during interviews. Also, because I was the primary researcher of this project, I was heavily invested in the project. I ensured that teachers received their materials several days before each planning session, prepared the journal prompts online, and supported the teachers throughout the week. Because of my prior relationship with the teachers, they may have felt more inclined to participate in the study and more willing to share their experiences and opinions, perhaps overstating their enthusiasm.

Lingering Questions and Implications for Future Study

When I first began this study, I wanted to determine the impact of conducting lesson study as a form of highly engaged professional development on changing teacher practices at a high-stakes accountability school site. The existing literature suggests the necessity of qualified and competent facilitators to guide the lesson study process. In this study, given the time constraints, I was able to only conduct two cycles of lesson study with a group of third through fifth grade teachers. A longitudinal study over the course of several years could further determine the long-term effects of facilitating lesson study at a high-stakes accountability school site in improving teacher pedagogy and student achievement.

In terms of leading and training teachers to facilitate future iterations of lesson study, it would be interesting to see the long-term effects on student achievement and teaching practices. Future research could give further insight to the effects of lesson study within the context of similar chronically low-performing school sites. What would the impact be if participation in lesson study was required from the entire teaching staff? How would student achievement and

teacher efficacy be affected if the lesson study process began at the beginning of the school year and was a recurring process throughout the school year?

Reflection and Conclusion

This study has allowed me to partake in a meaningful endeavor at a school site with a history of chronic low performance. Given the current state that Baldwin Academy is in, this study provided me the opportunity to work with a group of teachers who care deeply about their work, their students, and the community in which the school is located. Baldwin Academy's story is, unfortunately, not unique. There are other schools with similar histories, where the overall achievement of the students at the school has been below proficiency levels compared to schools located in more affluent areas. For years, teachers have used the students and their background as an excuse for their low performance. Yet, in this study, as teachers began to take responsibility for their role as educators, their perspective began to shift. Teachers began to see that they had the ability to impact students' learning, their instruction did matter, and how and what they taught made a difference in terms of whether students understood the lesson's objectives, regardless of their students' background.

Empowering teachers that what they do actually makes a difference in the lives of their students was an eye-opening experience for myself and for the teachers I worked with. Their transformation as educators was apparent in their attitude, speech, and behavior. Teachers who once only spoke to each other during grade level meetings were now meeting with each other before school, during their lunches and recesses, and after school to discuss instruction. Sitting with these teachers during their lunch breaks, our conversations revolved around instruction. Teachers were not trying to impress their "coach" or "researcher;" rather, they were discussing issues in earnest. They engaged in rigorous dialogue despite my being in the teacher's lounge.

Other teachers who were not involved in this study were brought into these conversations, inquiring about this lesson study project. They expressed interest in partaking in the next rounds of lesson study. The effect of the lesson study project was organically spreading throughout the school, garnering interest and curiosity. The participants in this study became the spokespeople for continuing lesson study at Baldwin Academy as they testified to the changes they observed in their students and their achievement scores.

> In Michael Fullan's *The Six Secrets of Change* (2008), Secret Two states,
>
> Purposeful peer interaction, or perhaps I should say *positive* purposeful peer interaction, works effectively under three conditions: (1) when the larger values of the organization and those of the individual and groups mesh; (2) when information and knowledge about effective practice are widely and openly shared; and (3) when monitoring mechanisms are in place to detect and address ineffective actions while also identifying and consolidating effective practices. (p.)

Lesson study, as a theory of action, activates Secret Two. Lesson study provides the opportunity and reason for teachers to collaborate and a system to address the urgency for change at such high-stakes accountability school sites. It allows for the sharing of best practices and, through the role of the facilitator, this system is monitored and managed. It provides schools, particularly those under scrutiny, with a professional development model that is consistent, accountable, and rigorous, which translates into increased collective efficacy and increased student achievement.

Schools such as Baldwin Academy are in need of committed and competent stewards of learning. Sergiovanni (1997) states that the "more school cares about students, the more students care about the matters of schooling" (p. 284). As teachers in this study began to hone their pedagogical practices, they began to care about their craft as educators and, in turn, care about

their students' learning. Consequently, the students, too, began to care about their learning, which was reflected in their remarkable growth in achievement. Stewardship is the ability to "place oneself in service to ideas and ideals and to others who are committed to their fulfillment" (Sergiovanni, 1997, p. 91). The process of conducting lesson study at high-stakes accountability schools goes beyond improving failing schools. Rather, it is about equipping teachers to adequately provide students with instruction that is rigorous, engaging, and creative, and to foster an equitable, socially just educational experience for all students.

AFTERWORD

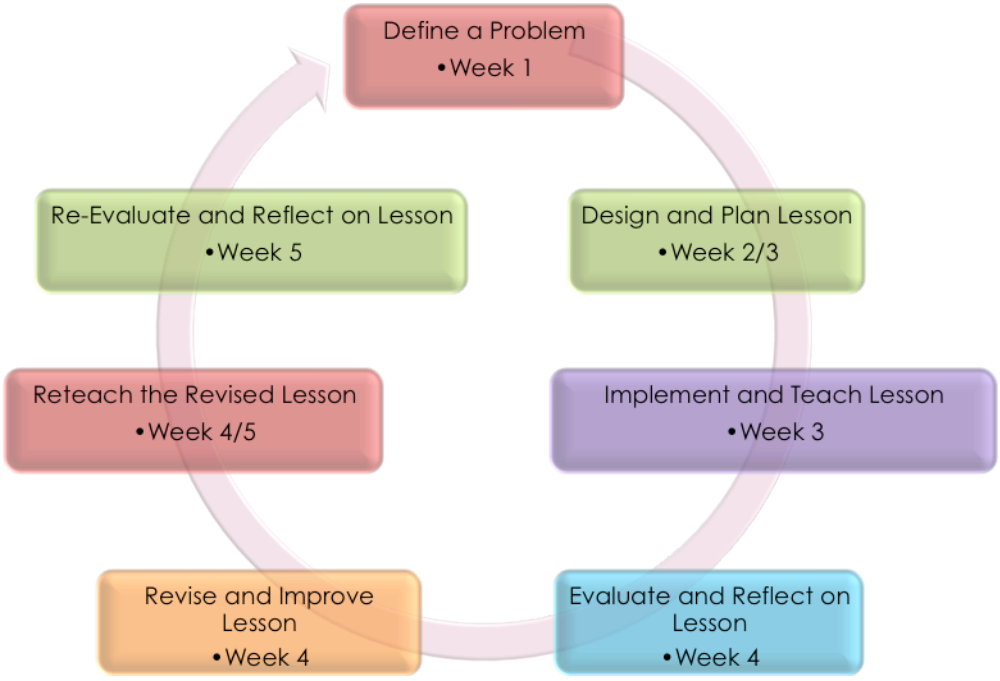
Shortly after this study concluded, the teachers who participated in the lesson study sessions were eager to share their results with the rest of the staff at Baldwin Academy. During a professional development meeting in March, I had presented briefly on the impact of this study with the participating teachers. Four teachers shared their experiences regarding what occurred during the collaboration process, what they gained from their experience, and the impact on student learning. The principal at Baldwin Academy asked every grade level to conduct at least one cycle of lesson study before the annual California Standards Assessment, using data to determine on which standard to focus. The principal also asked me to facilitate lesson studies with three grade levels and monitor their progress. Because of the testimonies from the participating teachers, this project spread organically to the rest of the school site.

As Baldwin Academy enters its third year in the PSC process, they hope to exit PI in the near future. Lesson study has already been scheduled to begin as soon as school commences in August and will be considered as one of the professional development initiatives for the upcoming school year. I will be training teachers over the summer to guide them in how to facilitate lesson study cycles within their grade levels so as to sustain this process for the long-term.

LIST OF APPENDICES

Appendix A: Timeline

Lesson Study Cycle:



Cycle 1 | January – February:

- Begin discussion on lesson study structure and format
- Creating Norms (Meeting Norms, Communication, Lesson Study Protocol Materials)
- Overview of project timeline (11 weeks)
- Receive updated information on lesson study practices
- Identify whole group critical areas for students in grades 3 – 5 (problem identification)
- Begin looking at a unit in the new reading curriculum aligned to identified problem
- Provide professional development based on identified problem/goal: i.e. Bloom's Taxonomy and questioning techniques
- Lesson Study Cycle
- Teacher interviews
- 4 Classroom / Lesson Observations (2 observations during weeks 3/4; 2 observations during week 4/5)

Cycle 2 | February – March:

- Student Data Analysis
- Lesson Study Cycle
- 4 Classroom / Lesson Observations (2 observations during weeks 3/4; 2 observations during week 4/5)
- Teacher Exit Interviews
- Focus Group

Appendix B: Study Recruitment Letter

Dear 3rd, 4th, and 5th Grade Teachers,

In efforts to continue the progress made over the past year with student achievement, you are invited to participate in a professional development research project to build upon your instructional skills and collaborate with fellow colleagues in a series of lesson study development sessions.

As a graduate student at UCLA's Educational Leadership Program, I am studying how to address low student achievement in English Language Arts at a Program Improvement 5+ school through the implementation of facilitated lesson study cycles. Through the collaborative effort of teachers working together, I believe that your participation in this research study will empower your role as instructional leaders and professionals while promoting student achievement growth.

Should you choose to participate in this study, you will be engaging in rigorous dialogue and collaboration with your colleagues to improve the educational outcomes of all students and improve the design and delivery of instruction that maximizes student learning. They results of this study will benefit future iterations of lesson study conducted at other high-accountability school sites and be shared with the district's Office of Data and Accountability.

Participants will be asked to meet for 11 weeks, once a week after school, for sixty to ninety minutes to collaborate in the lesson study cycles beginning January to March 2012. Two interviews will take place throughout the duration of the project as well as one focus group interview session. Interviews will last no more than thirty to forty-five minutes.

Please be assured that all names and identities will be kept confidential, should you choose to be in this study.

I thank you in advance for your participation in this research study.

Best,

Alice Lee

Appendix C: Teacher Participant Consent Form

University of California, Los Angeles

CONSENT TO PARTICIPATE IN RESEARCH

Turning Around Failing Schools: Facilitating Pedagogical Change Processes at a High Stakes Accountability School

You are asked to participate in a research study conducted by Alice Tae Lee, Ed. D. candidate, sponsored by Dr. Durkin and Dr. Howard from the Graduate School of Education and Information Studies, at the University of California, Los Angeles. You were selected as a possible participant in this study because you have expressed interest in participating in a series of lesson study cycles and building your instructional capacity at your school site. Your participation in this research study is voluntary.

Why is this study being done?

This study aims to address the problem of chronic low student achievement in language arts at a Program Improvement 5+ school by implementing facilitated lesson study cycles. This study is being done to analyze the process of teacher collaboration, the strategies teachers decide to implement in their lesson studies, and the impacts to student achievement. This study will empower teachers and build their instructional capacity, promoting both professional and student achievement growth.

What will happen if I take part in this research study?

If you volunteer to participate in this study, the researcher will ask you to do the following:

1) Participate with colleagues in the third through fifth grades in lesson study cycles once a week, for 11 weeks with each meeting lasting about sixty to ninety minutes.
2) Participate in two interviews with the primary researcher lasting no more than thirty minutes each.
3) Participate in one focus group interview at the conclusion of the lesson study cycles to reflect on the process and project. The focus group will last about thirty to forty-five minutes.
4) Permission for the primary researcher to conduct one classroom observation of a lesson developed through the lesson study cycle for no more than thirty minutes.
5) Permission to be audio recorded during lesson study development sessions.
6) Permission to be video recorded during classroom observations; all video recordings will be destroyed immediately after teachers debrief the lesson.

How long will I be in the research study?

Participation for you as a teacher will last 11 weeks, in five-week clusters beginning January 2012 to March 2012.

Are there any potential risks or discomforts that I can expect from this study?

There are no potential risks to participating in this study.

Are there any potential benefits if I participate?

As a teacher participating in this study, you will be engaging in rigorous dialogue and collaboration with your colleagues to improve the educational outcomes across all or selected subgroups of students and improve the design and delivery of instruction that promote learning. The results of the study will also benefit future iterations of lesson study conducted at high-accountability school sites and guide the facilitation process of these lesson study cycles.

Will I receive any payment if I participate in this study?

As a participant in this study, you are agreeing to meet after school on your own time and without payment for your participation.

Will information about me and my participation be kept confidential?

Any information that is obtained in connection with this study and that can identify you will remain confidential. It will be disclosed only with your permission or as required by law. All video and audio recordings will be used for transcription purposes only. Confidentiality will be maintained by means of protecting your name, the name of your school and the name of all other teachers and students with codes. This study is designed to empower and build the instructional capacity of teachers and therefore all activities will be kept in the strictest of confidence. All data collected will be password protected on computers and also on hard drives that only the researcher has access to at all times.

What are my rights if I take part in this study?

You may withdraw your consent at any time and discontinue participation without penalty or loss of benefits to which you were otherwise entitled.

You can choose whether or not you want to be in this study. If you volunteer to be in this study, you may leave at any time without consequences of any kind. You are not waiving any of your legal rights if you choose to be in this research study. You may refuse to answer any questions during the interviews that you do not want to answer and still remain in the study.

Who can answer questions I might have about this study?

If you have any questions, comments or concerns about the research, you can talk to one of the researchers. Please contact:

Principal Investigator: Alice Lee at 310-938-0315 and altaelee@gmail.com
Dissertation Co-Chair: Diane Durkin, Ph. D. 310-825-0614 at durkin@humnet.ucla.edu
Dissertation Co-Chair: Tyrone Howard, Ph.D. 310-267-4824 at thoward@gseis.ucla.edu
UCLA GSE&IS Moore Hall, Box 951521, 405 Hilgard Avenue, Los Angeles, CA 90095

If you wish to ask questions about your rights as a research participant or if you wish to voice any problems or concerns you may have about the study to someone other than the researchers, please call the Office of the Human Research Protection Program at (310) 825-7122 or write to Office of the Human Research Protection Program, UCLA, 11000 Kinross Avenue, Suite 102, Box 951694, Los Angeles, CA 90095-1694.

SIGNATURE OF STUDY PARTICIPANT
I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

Name of Participant

Signature of Participant | Date

SIGNATURE OF PERSON OBTAINING CONSENT

In my judgment the participant is voluntarily and knowingly giving informed consent and possesses the legal capacity to give informed consent to participate in this research study.

Alice T. Lee
Name of Person Obtaining Consent | Contact Number

Signature of Person Obtaining Consent | Date

Appendix D: Lesson Study Development Session Norms

Developed collaboratively during the introduction/orientation meeting:

- Please be prompt to each meeting to start and end on time
- Please come prepared with materials needed
- Limit multi-tasking
- Attendance is mandatory
- All cellphones off or on silenced
- Bring laptops
- Nonjudgmental discussion of classroom and lesson delivery
- Open with ideas
- Avoid sidebar conversations
- Use “we” rather than “you”
- Use student data and evidence when determining lesson goals, planning lessons, and reflecting on lessons

Appendix E: Facilitator Guidelines

Logistics

- Secure a room for all meetings, interviews, focus group sessions
- Inform participants of meetings (time, place, agenda, goals, etc.) and distribute to members 2-3 days before the meetings
- Record and keep notes from all meetings
- Distribute student data

During Lesson Study Sessions

- Time management
- Manage meeting norms
- Task management: Keep participants focused on the goal and agenda
    - Keep sidebar conversations at a minimum
- Help group resolve differences
- Ensure that all participants contribute to the discussion
    - Encourage quieter members of the group to participate
- Be succinct and thoughtful of contributions
- Keep the discussion moving with probing questions
- Use open ended questions; pause after questions; rephrase questions
- Ask for examples and support for opinions
- Keep focus on improving student learning by improving instruction
- Summarize the meeting contents at the end of the session
- Be conscious of role management (between content-expert and facilitator) and the amount of participating during teacher collaboration
- Next steps: Develop action items after each meeting

Appendix F: Lesson Plan Design Template

Date: **Grade:**

Topic:

Goal:

Lesson Objectives *(Specific lesson content and skill for mastery. What will students learn and do by the end of the lesson?)***:**

Standard:

Rationale:

Materials / Preparation:

Vocabulary:

Cooperative Learning / Differentiated Instruction:

Lesson Sequence:

	Teacher / Student Activities	**Evaluation Methods**
Introduction / Opening Activity (Accessing Prior Knowledge)		
Whole Group Instruction		
Guided Practice		
Student Application		
Closing		

Student Work / Evidence to Collect *(How will we document student learning? Verbal? Observation? Written? How will we know if* ***all*** *students understood the lesson and not just the ones who responded orally?)***:**

Evaluation *(How will be measure mastery? Rubric?)***:**

Appendix G: Sample Lesson Plan – Inference (Lesson Study Cycle 1)

Date: Week of January 23, 2012 Grades: 3 4 5

Topic: Inference

Goal: *Students will be able to make an inference about the story/main story element and support it using prior knowledge and concrete textual evidence.*

Lesson Objectives *(Specific lesson content and skill for mastery. What will students learn and do by the end of the lesson?)***:**
{3rd}: lesson objective is to infer character traits using clues from the story
{4th}: students will be able to determine cause and effect and relate to judgments and actions from the events in the text
{5th}: draw inferences, conclusions, or generalizations about text and support them with textual evidence and prior knowledge

Standard:
{3rd}
R2.2 – Ask questions and support answers by connecting prior knowledge with literal information found in, and inferred from, the text.

{4th}
RC2.6 – Distinguish between cause and effect and between fact and opinion in expository text.

{5th}
R2.4 – Draw inferences, conclusions, or generalizations about text and support them with textual evidence and prior knowledge.
R2.5 – Distinguish facts, supported inferences, and opinions in text.

Rationale: Third grade reading comprehension scores, specifically standard 2.2, is low (46% average based on Literacy Periodic Assessment 1).

Materials / Preparation:
{3rd} Treasures Unit 3 Week 2 lessons and Character Web graphic organizer
{4th} cause and effect (making judgments flow chart)
{5th} clues and inference t-chart table

Vocabulary: Infer, evidence, prior knowledge, text, textual
Action, judgment, inference, prediction, cause, effect

Cooperative Learning / Differentiated Instruction: Think-pair-share; Character map on paired reading selection… independent practice; during independent practice, students will do paired work

Lesson Sequence:

	Teacher / Student Activities	Evaluation Methods
Introduction / Opening Activity (Accessing Prior Knowledge)	1. Teachers will act out a scenario (parent conference with student report card) and students will have to use inference to describe the situation / Charades 2. Student writes down inferences on a card using a sentence frame: *I infer that ____ because I see _____.* *I can infer that _____.* <u>Sample questions</u> • What do you think will happen next? Why do you think that? • What clues do you have? • What is happening? How do you know? • Do you think…? • What is your evidence?	Collect inference card. Teachers will analyze the depth of student responses for understanding and use of inference
Whole Group Instruction	1. Review the definition of inference with examples (academic definition) via Powerpoint 2. Review inference related vocabulary (inference, judgments, cause, effect) 3. Use the cards students wrote and discuss examples from the sentence frames -{3rd} Character analysis with character web <u>Sample questions:</u> • What is your textual evidence? • What is the evidence from the book/text?	Character Web
Guided Practice	1. Read the story and complete the graphic organizer as they read 2. Read story whole group and students complete individually the graphic organizer on their own 3. Teacher also completes the graphic organizer on the projector 3rd: whole group and completely guided 4th: partially whole group / partially teacher guided 5th: partially whole group / partially teacher guided & teacher writes responses	
Student Application	• {3rd} students will fill in a chart with partner using a graphic organizer and generate a paragraph independently using a sentence frame or guide to assist students (from character web chart) - I infer that ___ because I see__	Collect Character Web / cause-and-effect grid and paragraphs

	- My evidences are ___ • {4th} students will complete a cause and effect graphic organizer and then generate a paragraph independently - Using Critical Thinking (p.349; #4) • {5th} Paragraph from the chart (t-chart) Grouping strategies: partner pair, small group	
Closing	Quickly recap the lesson Share the graphic organizer using the sentence frames Summarize the learning: Inference means ____ Use inference when… Thumbs up / down (informal observation)	Thumbs up/down

Student Work / Evidence to Collect *(How will we document student learning? Verbal? Observation? Written? How will we know if **all** students understood the lesson and not just the ones who responded orally?)***:**

- {3rd} Character Webs
- {4th} Cause and Effect Grids
- {5th} T-charts
- {3rd, 4th, 5th} Independently written paragraphs using the graphic organizers

Evaluation *(How will be measure mastery? Rubric?)***:**

4- Students will write at least 1 paragraph or more that shows in depth inferences with at least 3 supporting details using academic vocabulary (i.e. infer, based on, evidence, etc.)

3- Students will write a paragraph that shows inferences with limited (2-3) supporting details using academic vocabulary (i.e. infer, based on, evidence, etc.)

2- Students will attempt to write one paragraph on inference with at least 1 supporting detail and may or may not use academic vocabulary

1- Students attempts to write one paragraph, however, does not make an inference.

Appendix H: Teacher Journal Reflection Questions

First Session

1. How did you come to participate in this project?
2. What are your expectations for the next several months?
3. What do you hope to learn or gain through participation in lesson study?
4. What do you believe is your role in your students' learning?
5. How do you think your instruction affects students' learning?

During Lesson Development

1. What did you learn from today's planning and/or reflection?
2. What was valuable to you during today's session? Why was this valuable?
3. What was your experience in collaborating with your colleagues to develop this lesson?
4. Please describe what, if any, you want to improve or develop in your instructional practices.

Student Work Reflection

1. How did we focus on the students' work?
2. What did the student work reveal about your teaching practices?
3. What kinds of instruction supports high quality student work? How do you know?
4. How can I support student growth more effectively?
5. What questions about teaching and assessment did looking at students' work raise for you?
6. Are there things you would like to try in your classroom as a result of looking at your students' work?

After Lessons Delivered

1. What did you learn from today's reflection and/or evaluation?
2. Think about what happened in the lesson. Was the goal of the lesson clear to the teachers and the students?
3. Were the goals of the lessons achieved? How do you know? What is your evidence?
4. How does the student work show evidence of the goals achieved?
5. How, if at all, did this lesson study session help you analyze student work?
6. What was successful during this lesson study cycle?
7. What were some challenges during this lesson study cycle?
8. How did the facilitator / content expert help the group?
9. In what ways could the facilitator have been more helpful during this lesson study cycle?
10. What parts of the lesson study cycle helped you reflect on instruction?
11. What were some benefits of collaborating with your colleagues?
12. What did you learn from planning and teaching the lesson?

Final Lesson Study Cycle

1. How has your instruction changed since you started the lesson study process?
2. Is there anything you do now that you didn't do before prior to starting the lesson study? If so, what is it/ are they?
3. How has student achievement changed since you started the lesson study process?
4. How important do you think teacher collaboration is in this lesson study process? Why?
5. Was there any moment during the lesson study process where you felt uncomfortable? Why? What was it?
6. Would you participate in a lesson study process again? Why or why not?

Appendix I: Facilitator Journal Reflection Questions

1. What were some successes from the session's meeting?
2. What were some challenges from the session's meeting?
3. What did you expect from the meeting? Were they met? What happened differently?
4. How did you facilitate the agenda and keep the meeting moving?
5. How were you able to help the group keep focused on the instructional goals? What are they and how?
6. How did you ensure that all teachers were engaged and participating?
7. How did you probe the group with questions to help teachers delve deeper into the instructional content? What was the response?
8. How could this session have gone more smoothly?
9. How, if at all, did you use student work to have teachers reflect on their practice to improve instruction?
10. How often did you interrupt, intervene, or participate in the discussion?
11. How, if at all, did you refer back to professional development sessions to remind teachers to incorporate strategies into their lessons?
12. How did you manage your role as facilitator and content-expert? Were there any challenges in managing the two roles?
13. What is your action step for the next session?

Appendix J: Teacher Interview Protocol

Opening

1. Please tell me about yourself and your role at this school.
    a. How long have you been teaching?
    b. What grades have you taught and what grade are you teaching?
    c. How long have you taught at this site?
2. How did you become involved in this project?
    a. What motivated you to participate in this study?
3. What are your expectations in participating in this project?
    a. How is it different, if at all, from what you expected?
4. What do you see your role as when it comes to student learning?

Collaboration

5. Do you feel like your opinions, experience, and voice is heard during the lesson study development sessions?

Lesson Study Process

6. How closely were you able to execute the lesson as planned?
7. What went well during the planning and lesson delivery stages?
8. What do you wish went differently during the planning and/or lesson delivery stages?
9. What changes, if any, to your own instructional practices did you make through the lesson study process?
10. How did your participation in the program affect the lesson study process?

Students

11. Were your students able to grasp the objective of the lesson taught?
    a. How do you know?

12. What kind of impact on student learning has occurred, if any, as a result of the lesson study process?
    a. How do you know?

Closing

13. What did you like about this experience, if anything?
14. What did you dislike, if anything?
15. Any suggestions for the next cycle?
16. Any last questions or comments?

Appendix K: Teacher Exit Interview Protocol

1. What were your expectations in participating in this project?
2. How is it different, if at all, from what you expected?
3. What have you learned, if anything, from participating in this project?
4. What do you think is the effect of participating in this kind of professional development at a high-stakes accountability school?
5. How has participating in the lesson study process been different from other professional development activities you have been a part of?
6. How, if at all, has your perspective on your impact (as a teacher) on students' learning changed?
7. What changes, if any, to your own instructional practices did you make through the lesson study process?
8. How important do you think teacher collaboration is in this lesson study process? Why?
9. What were the benefits, if any, of collaborating with your colleagues?
10. What were some challenges, if any, from collaborating with your colleagues?
11. What were the benefits, if any, of the cross-grade level collaboration?
12. Do you feel like your opinions, experience, and voice was heard during the lesson study development sessions?
13. Did you follow the lessons as planned? If not, why?
14. How did your participation affect the lesson study process?
15. How did analyzing student data and student work affect your teaching practices?
16. How important do you think teacher collaboration is in this lesson study process? Why?

17. What kind of impact on student learning has occurred, if any, as a result of the lesson study process? How do you know?
18. How do you see your role in impacting students' learning?
19. What do you do differently that you didn't do before participating in this project?
20. What did you like about this experience, if anything?
21. What did you dislike, if anything?
22. If you could change anything from this lesson study project, what would it be? Why?
23. Would you participate in a lesson study process again? Why or why not?
24. Any last questions or comments?

Appendix L: Focus Group Interview Protocol

Opening / General Questions

1. Why did you become involved in this project?
2. What were the goals for this project?
3. Did you have any expectations from participating in this project?
    a. Were those expectations met? How?
4. Given the unique circumstance the school is currently in with Public School Choice, what do you believe is the effect or benefit in participating in this kind of professional development through lesson study?
5. How has participating in the lesson study process been different from other professional development activities you have been a part of?
6. What did you learn, if anything, from participating in the lesson study process?
7. What changes, if any, did you make to your teaching practices as a result of the lesson study process?

Students

8. How did analyzing student data help you focus your lesson study focus?
9. What kind of student learning resulted as a result of your participation in the lesson study?
10. How did analyzing student work, if at all, help you determine next steps for the lesson study process?
11. What does student work or student data reveal as the impact on their learning as a result of the lesson study process?

Facilitator Role

12. How did the facilitator / content-expert guide the lesson study process?

13. How did the facilitator engage participation from all teachers involved in the project?
14. How did the sessions focus on the instructional goals?
15. How did the facilitator probe the group to delve deeper into instructional content or reflect on the process?
16. How did the facilitator / content-expert provide support throughout the lesson study process?
17. Did the facilitator help the group reflect on practice?
    a. How? What are some examples?
18. Was there ever a time where there was a disagreement during the lesson development sessions? If so, how were the disagreements resolve or managed?

Closing Questions

19. What do you know now that you didn't know before participating in this project?
20. What did you like about this experience, if anything?
21. What did you dislike, if anything?
22. If you could change, edit, add, or revise any part of this lesson study process, what would it be and why?
23. Any last questions or comments?

Appendix M: Observation Protocol for Classroom Observations

Observation Protocol for Classroom Observations

Specific and guided observation protocol; please support your statements with evidence

<table>
<tr><td colspan="3">Did the teacher follow the lesson plan? What is the evidence?</td></tr>
<tr><td colspan="2">Is the teacher calling on the same student/s?</td><td>Did the teacher implement wait time? How?</td></tr>
<tr><td>Student talk:</td><td colspan="2">How often?

Are they using academic vocabulary? What are some examples?

Did they get opportunities to talk?

What was the nature of their talk?</td></tr>
<tr><td>Student talk in small groups:</td><td colspan="2">What are they talking about?

Are they on task? How do you know?</td></tr>
<tr><td colspan="3">Suggestions for lesson revision</td></tr>
</table>

Appendix N: Student Work Protocol
Adapted from the Thompson-Grove (2000) and Bythe, Allen, and Powell (1999).

Part 1 (First teach)

1. What do you see?
2. What is the student working on?
3. In what ways does this work meet or fail to meet the targeted standards / goals?
4. What do the students' responses indicate about the effectiveness of the prompt or assignment? How might the assignment be improved?
5. What kinds of instruction support high quality student performances?
6. What does the work tell us about how well the student understands the topic of the assignment?
7. How can I support growth more effectively?
8. What did you find interesting or surprising from this student's work?

Part 2 (Reteach)

1. What is different from this round's student work?
2. How does this work reveal growth over time?
3. Has anything changed? How do you know?
4. What did you find interesting or surprising from this student's work?

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