Pepperdine University

Graduate School of Education and Psychology

THE USE OF TWO PROFESSIONAL LEARNING COMMUNITY PRACTICES IN ELEMENTARY CLASSROOMS AND THE ENGLISH LANGUAGE ARTS ACHIEVEMENT OF CALIFORNIA'S MOST AT-RISK STUDENT SUBGROUPS IN A SOUTHERN CALIFORNIA SCHOOL DISTRICT

A dissertation presented in partial satisfaction

of the requirements for the degree of

Doctor of Education in Educational Leadership, Administration, and Policy

by

Carrie Lynn Mitchell

March, 2007

UMI Number: 3256104

Copyright 2007 by
Mitchell, Carrie Lynn

All rights reserved.

INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

UMI®

UMI Microform 3256104
Copyright 2007 by ProQuest Information and Learning Company.
All rights reserved. This microform edition is protected against unauthorized copying under Title 17, United States Code.

ProQuest Information and Learning Company
300 North Zeeb Road
P.O. Box 1346
Ann Arbor, MI 48106-1346

© Copyright by Carrie Lynn Mitchell (2007)

All Rights Reserved

This dissertation, written by

Carrie Lynn Mitchell

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

January 8, 2007

Robert C. Paull, Ph.D., Chairperson

Doug Leigh, Ph.D., Member

Delores B. Lindsey, Ph.D., Member

June Schmieder-Ramirez, Ph.D.
Associate Dean

Margaret J. Weber, Ph.D.
Dean

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

VITA

Carrie Lynn Mitchell

ACADEMIC PREPARATION

2007 Ed.D., Pepperdine University, California
Educational Leadership, Administration, and Policy

2000 M.A., Pepperdine University, California
Educational Administration

1996 B.A., University of South Florida, Sarasota, Florida
Elementary Education

PROFESSIONAL EXPERIENCE

Garden Grove Unified School District, Garden Grove, California (2002 to Present)

Elementary School Principal, Post Elementary School (K-6) – Enrollment approximately 550.

Lawndale Elementary School District, Lawndale, California (2000 to 2002)

Assistant Principal, F. D. Roosevelt - Kit Carson Elementary School (K-6) – Enrollment approximately 1,000.

Long Beach Unified School District, Long Beach, California (1997 to 2000)

Elementary Teacher, Burbank Elementary School (K-5) – Enrollment approximately 950.

Manatee County School District, Bradenton, Florida (1996 to 1997)

Elementary Teacher, Orange Ridge - Bullock Elementary School (K-5) – Enrollment approximately 850.

ABSTRACT

This study examines the impact of 2 professional learning community (PLC) classroom practices on the English Language Arts achievement of California's most at-risk subgroups between selected higher- and lower-performing elementary schools in a southern California school district. The conclusions from this study agree with the body of research, suggesting that Higher Performing schools frequently monitor student achievement and use data to recognize, intervene, and adjust instruction.

PLC practices were presented through the lens of the National Center for Educational Accountability's Best Practice Framework. This study focused on 2 classroom practices: Monitoring: Compilation, Analysis, And Use of Data, and Recognition, Intervention, and Adjustment.

Five elementary schools were selected for participation in this study. The schools are demographically equivalent (65% or more English Language Learners, Socio-Economically Disadvantaged, and Hispanic/Latino), but have disparate levels of sustained high student achievement results in English Language Arts on the California Standards Test. Three schools were Higher Performing, and two were Lower Performing.

The survey was administered to 92 teachers and 8 administrators. Data from the survey responses were compared with participants' school type, Type of Educator, and demographic variables, and were tabulated using standard summary statistics.

General findings demonstrate a significant difference in the level to which Higher Performing Schools monitor student learning and recognize, intervene, and adjust

compared to Lower Performing Schools. Overall, teachers and administrators agreed that student learning is monitored, but a strong difference was found based on school designation as Higher or Lower Performing. Generally, teachers versus administrators reported substantially different levels of classroom use of Recognition, Intervention, and Adjustment, but no difference was noted based on school designation. Little or no relationship was found between either practice and experience level or gender of the practitioner.

Implications of these findings underscore the need to identify and implement PLC best practices that have demonstrated effectiveness for California's most at-risk subgroups in English Language Arts. Districts and schools must ensure periodic formative and summative standards-based assessments are in place. Practitioners must have the capacity to closely monitor results for at-risk students, and appropriately provide recognition, intervention, and adjustment so that all students master English Language Arts standards.

CHAPTER 1: FOUNDATIONS OF THE STUDY

California Public School Accountability

With the passage of the Public School Accountability Act of 1999 (PSAA), the state of California began holding schools accountable for the academic achievement of their students. The PSAA developed a statewide accountability system, at the center of which is the Academic Performance Index (API). The purpose of the API is to measure student academic performance and the growth of schools within a numeric index that ranges from a low of 200 to a high of 1000. A school's score on the API is an indicator of the school's performance level, based on the percentage of students performing at given levels on the state-wide tests (California Department of Education [CDE], 2005b). The PSAA requires that the California Department of Education (CDE) annually calculate APIs for all California public schools and publish school rankings based on these indices. Further, the PSAA also requires the establishment of a minimum 5% annual API growth target for each school as well as an overall statewide API performance target of 800 for all schools (CDE, 2003).

The No Child Left Behind Act of 2001 (NCLB) is federal legislation that established a new definition of Adequate Yearly Progress (AYP) for the state of California, local educational agencies (LEAs), and all public schools, by mandating that 100% of all students score proficient or above in English Language Arts (ELA) and Mathematics by the year 2014 (United States Department of Education [USDE], 2002). In August 2003, the state of California modified its accountability system to meet the Title I funding conditions of NCLB, which mandates a minimum percentage of students

and numerically significant subgroups (NSS) of students who must perform at or above the proficient level on the state testing system. Moreover, Annual Measurable Objectives (AMOs) were developed for schools serving grades 2-8 based on the California Standards Tests (CSTs) in ELA and Math. Beginning in 2002–03, an elementary school would meet its AMO if 13.6% of all students school-wide and in each NSS scored proficient or above in ELA and 16.0% scored proficient or above in math. By 2004–05, schools were to have reached the next step: 24.4% of all students school-wide and in each NSS must be proficient or above in ELA, and 26.5% in math. In 2007–08, a school will meet its AMO if 35.2% of all students school-wide and in each NSS are proficient or above in ELA and 37.0% in Math. The AMO increases by specified levels each year until 100% of students test proficient or above in both subjects by 2013–14.

The transition of the emphasis of California's accountability system from API to AYP raised the bar for California's elementary schools because benchmarks for academic success were notably increased. Under the API system, California held schools accountable for NSSs based on ethnicity and poverty. Under NCLB, beginning in 2004-05, schools were additionally held accountable for students with disabilities and English Language Learners (ELLs).

In order to meet AYP goals, schools and LEAs must meet all components of the following four annual requirements in both ELA and Math:

1. Participation Rate: A minimum 95% of the school-wide population (SL) and NSSs must participate in the state testing program.

2. Percent Proficient: Minimum percentages of the SL and each NSS must receive scores that are proficient or above. For the 2004-05 school year, 24.4% of both SL and NSSs must be proficient or above in ELA, and 26.5% of both SL and NSSs must be proficient or above in Math.
3. API as Additional Indicator: To comply with NCLB regulations for an additional indicator of AYP, the state of California retained the API. For the 2004-05 school year, schools must either show growth of one API point or have a minimum API score of 590.
4. Graduation Rate: To meet graduation rate criteria for the 2005 AYP, schools must either have a 2005 graduation rate of 82.9%, or show improvement in the graduation rate from 2004 to 2005 by at least 0.1%, or show improvement in the average two-year graduation rate by at least 0.2%. This requirement does not apply to elementary or middle schools, and will not be discussed here. (CDE, 2005b)

Depending on the type of school or LEA, the current AYP structure allows for up to 46 different criteria that schools and LEAs must meet in order to make AYP targets (CDE, 2005b). If a California school or LEA fails to meet even one of their criteria, they do not make the AYP goal for the year.

Should a school that receives Title I, Part A, Basic, funds fail to meet AYP criteria for 2 consecutive years in specific areas, the school will be identified for Program Improvement (PI) (CDE, 2005b). Once a school has been labeled PI, the state of California requires a strict sequence of actions for school improvement, corrective action,

and restructuring to be taken by the school and LEA in order to improve student achievement (CDE, 2005b). A school will be removed from PI only if AYP goals are met for 2 consecutive years.

California Assembly Bill 312 (Chapter 1020, Statutes of 2002) established a Statewide System of School Support (S4) designed to support the requirements of NCLB through "intensive and sustained support and improvement for local education agencies and schools receiving Title I funds" that enter into PI status (CDE, 2006a, ¶ 1). According to AB 312, once a school is identified for PI, the LEA must provide the school with technical assistance consistent with School Assistance and Intervention Teams (SAIT) process and goals. The CDE recommends that the Academic Program Survey (APS) is completed by any school that is in PI. "The Academic Program Survey is a tool designed to help a school determine how well it is implementing the nine components considered to be crucial to an effective academic program," and include the following (CDE, 2005c, ¶ 1).

- Instructional program
- Instructional time
- Principals' instructional training
- Sufficiency of credentialed teachers and teacher professional development
- Student academic achievement monitoring system
- Ongoing instructional assistance and support for teachers
- Teacher collaboration by grade level

- Lesson pacing schedule
- Fiscal support

Because of the significant overlap of the nine Essential Program Components (EPCs) with the available research of high-performing schools, a more detailed description of the EPCs is embedded in the literature review in Chapter 2 of this manuscript.

The 2004-05 hike from 13.6% to 24.4% proficient or above school-wide and for NSSs in ELA, and from 16.0% to 26.5% in Math proved challenging for many California schools. Based on a review of public state-wide results of the CST for all elementary schools in California, this researcher found that 35.17% (n = 1814 schools) of the 5158 elementary schools with CST test scores reported by the CDE did not meet all AYP criteria for 04-05, and hence failed to make their AMO (CDE, 2005a).

The fact that more than a third of all California elementary schools did not make AMO in 2004-05 is alarming. Yet, the alarm is compounded by the reason those schools did not make the goal. Looking specifically at the 1814 California elementary schools that failed to make AMO, this researcher found that 94.83% (n = 1723 schools) did not make AMO because they did not reach the bar of 24.4% of the school-wide population and all NSSs scoring proficient or above in ELA. In other words, 33.40% of all elementary schools in California failed to make the state's AMO because of their student achievement results on the ELA portion of the CST.

A closer look at the 1723 schools whose NSSs failed to meet the AMO for ELA in 2004-05 shows that subgroups of ELLs, Socio-Economically Disadvantaged (SED),

and Hispanic/Latino students failed in the greatest percentages. The ELL subgroup did not meet AMO in 80.96% of the schools, the SED subgroup did not meet AMO in 63.15% of the schools, and the Hispanic/Latino subgroup did not meet AMO in 61.11% of the schools (CDE, 2005a).

A Call for Professional Learning Communities

With the added accountability of NCLB "...society is reshaping the mission of education. Schools are now expected not only to offer education, but to ensure learning" (Darling-Hammond, 1996, p. 5). Title I schools are pressured to make adequate yearly student achievement improvement (USDE, 2002). However, as Darling-Hammond (1996) reminds, "regulations cannot transform schools" (p. 5). "There is no one cookie-cutter approach to school reform, no packaged program that can be adopted off the shelf" and result in sustained student achievement improvement (Darling-Hammond, 1997, p. 150).

According to recent research, schools with demonstrated sustained improvements in student achievement share common features that can serve as a springboard for schools seeking better teacher and student performance. These include

> a collective set of goals, commitments, and practices enacted throughout the school; small continual learning groups for students and teachers, shared governance coupled with teaching teams, time for teachers to collaborate and learn together, and a rich array of learning opportunities for all members of the school community. (Darling-Hammond, 1997, p. 150)

Elmore (2002) suggests that school improvement "means engaging in learning new practices that work, based on external evidence and benchmarks of success, across multiple schools and classrooms, in a specific area of academic content and pedagogy, resulting in continuous improvement of students' academic performance over time" (Elmore, 2002, p. 13).

The educational accountability demanded by NCLB has changed the rhetoric in board rooms, district offices, faculty meetings, and classrooms across the country. Educators are now confronted with their responsibility to ensure that each and every child makes adequate progress each year. Only the kind of culture shift described by Darling-Hammond (1997) will result in the growth in student achievement that our children deserve and our government demands.

> Behind the scenes in schools that have successfully restructured are new kinds of relationships and conversations among teachers, principals, and other staff, supported by new organizational structures that allow all these individuals to work together in new ways very different from those they once used. The subtle effects of these supports can be sensed in a school that privileges learning for students and teachers. (Darling-Hammond, 1997, p. 148)

Elmore (2002) suggests that the practice of school improvement is fundamentally and simultaneously changing three things: "(a) the values and beliefs of people in schools about what is worth doing and what it is possible to do; (b) the structural conditions under which the work is done; and (c) the ways in which people learn to do the work" (p. 30).

Discussed in depth in Chapter 2, these ideas describe professional learning communities (PLCs), which champion a collaborative approach to ensuring educational success for all students.

"The PLC concept represents more than just a series of practices – it rests upon a set of beliefs, assumptions, and expectations regarding school" (DuFour, Eaker, & DuFour, 2005, p. 11). DuFour and his colleagues argue that true school transformation will require more than changes in the policies, programs, and procedures of a school. "Substantive and lasting change will ultimately require a transformation of culture – the beliefs, assumptions, expectations, and habits that constitute the norm for the people throughout the organization" (DuFour et al., 2005, p. 11). Plainly stated, "If the PLC model is to take root in school, it must supplant the deeply entrenched traditional assumptions that have guided schools for over a century" (DuFour et al., 2005, p. 15).

Schools with high levels of sustained improvements in student achievement have not only developed structures to support the PLC model, but have also successfully transformed their school cultures. These schools intentionally align their core assumptions and beliefs around a declaration of the student results they expect to generate, continually generate evidence of growth toward their vision (DuFour & Eaker, 1998; Eaker, DuFour, & Burnette, 2002).

Ample research has been conducted to describe the qualities that are present in high achieving schools that function as PLCs. Researchers have gained consensus about seven essential disciplines present within PLCs: personal mastery, mental models, unity of purpose, supportive conditions, team learning, systems thinking, and leadership. The

National Center for Educational Accountability (NCEA) has developed a Best Practices Framework which describes and evidences their research of more than 300 high achieving school systems across the United States. Comparing high-achieving schools to average-achieving schools, NCEA found that high-achieving school systems consistently and concurrently utilize specific practices within five themes at district, school, and classroom levels: Curriculum and Academic Goals; Staff Selection, Leadership, and Capacity Building; Instructional Programs, Practices, and Arrangements; Monitoring: Compilation, Analysis and Use of Data; and Recognition, Intervention, and Adjustments (National Center for Educational Accountability [NCEA], n.d.-c). For the purpose of this manuscript, the essential disciplines of professional learning communities will be presented through the lens of NCEA's Best Practices Framework.

Garden Grove Unified School District

According to the Garden Grove Unified School District's website, the GGUSD was established in July of 1965. It encompasses 28 square miles, including most of Garden Grove and sections of six neighboring cities. The District's 2005-06 budget was $450 million, the largest enterprise in the city of Garden Grove. With over 49,600 students, GGUSD is the third largest of 28 public school districts in Orange County, twelfth largest of 989 public school districts in California, and the 88th largest of 14,383 public school districts in the United States. The District "employs more than 5,000 staff members and operates 70 schools: 47 elementary, 10 intermediate, 7 high schools, 2 continuation schools, 2 adult education centers, and 2 special education schools" (Garden Grove Unified School District, 2005).

According to the CDE, of the 37,277 GGUSD students in grades 2 through 11 who participated in the CST in the spring of 2005, the greatest numerically significant subgroup in GGUSD is the students who are SED (n = 23,539) (Policy and Evaluation Division [PED], 2006d). The largest ethnic/racial subgroup in GGUSD is Hispanic/Latino (n = 19,250). The second largest is Asian (n = 10,726), and third is White (not of Hispanic origin) (n = 5,973) (PED, 2006d). Four ethnic/racial subgroups make up a small percentage of the district's student population, but are numerically significant for the purposes of calculating API and AYP: Filipino (n = 458), Pacific Islander (n = 391), African American (not of Hispanic origin) (n = 365), and American Indian or Alaska Native (n = 107) (PED, 2006d). With the 2005-2006 addition of the ELL and Students with Disabilities (SD) subgroups to the list of subgroups for which all California school must demonstrate annual improvement, ELLs will be GGUSD's second largest subgroup (n = 20,353), and SD will be the District's sixth largest subgroup (n = 3,619) (PED, 2006c).

The first base API calculated for LEAs in California was in 2002. At that time, GGUSD's base API was 680. By the 2004-05 school year, GGUSD's API grew 60 points to 740. Each of the district's NSSs listed above demonstrated annual increases in API (PED, 2004b, 2005b, 2006d).

Since the inception of the California API as a state-wide system of educational accountability in 1999, nearly all GGUSD elementary schools made great strides to reach and maintain the statewide API Score goal of 800 (PED, 2006a). In the same time period, all GGUSD elementary schools demonstrated comparable API improvement for

their NSSs (PED, 2001a, 2001b, 2003, 2004a, 2005a, 2005c, 2006a, 2006b). Nationwide recognition for this achievement came in 2004 when GGUSD won The Broad Prize for Urban Education for "overall improvement in student achievement while at the same time reducing achievement gaps across income and ethnic groups," (The Broad Foundation, ¶ 1).

However, in spite of the fact that GGUSD won The Broad Prize for Urban Education in 2004, GGUSD elementary schools had varying degrees of success with students in the subgroups most at-risk of not meeting AMO in ELA in 2004-05. A close look at the demographic make-up of GGUSD's 47 elementary schools reveals a total of 13 schools whose student populations consists of 65% or more of each of the subgroups most at-risk of failing to meet AMO in ELA: ELL, SED, and Hispanic/Latino. Of those 13 elementary schools, 3 made their 2004-05 AMO in ELA for all 3 of those subgroups and demonstrated annual improvements in school-wide student achievement as measured by API by posting comparable improvement for all NSSs for each of the 6 school years from 1999-2005. Those 3 schools, HP-1, HP-2, and HP-3 Elementary Schools, were chosen for this study based on this demonstrated high level of sustained student achievement growth for the subgroups of California elementary students most at-risk of failing to meet AMO in ELA. Throughout this study, those 3 schools will be referred to as Higher Performing Schools, or HP Schools.

In order to distinguish the presence of the practices of PLCs in the 3 schools that demonstrated higher levels of sustained achievement for ELL, SED, and Hispanic/Latino students, 2 other GGUSD elementary schools were selected for contrast. These Lower

Performing schools, or LP Schools, LP-1 and LP-2, share the same demographic make-up (more than 65% of each of the subgroups most at-risk of failing to meet AMO in ELA), but failed to meet the state's AMO of 24.4% proficient or above in ELA. Additionally, these schools failed to meet both their school-wide API targets and to make comparable improvement for their NSSs more than 4 of the 6 school years from 1999-2005.

Statement of the Problem

A third (33.40%) of all California elementary schools failed to meet the state's 2004-05 AMO in ELA, which requires that 24.4% of all students, both school-wide and in NSSs, score proficient or above on the ELA portion of the CST. Of that 33.40%, the ELL subgroup did not meet AMO in 80.96% of the schools, the SED subgroup did not meet AMO in 63.15% of the schools, and the Hispanic/Latino subgroup did not meet AMO in 61.11% of the schools (CDE, 2005a).

As a result of the 2004-05 testing cycle, 17% (n = 8) of GGUSD's 47 elementary schools failed to make their AMO of 24.4% proficient or above in ELA in one or more of the California's most at-risk subgroups. Looking ahead to the 2007-08 increase to 35.2% of all students and NSSs who must be proficient or above in ELA, the 2004-05 data suggests a bleak forecast. Of the 43 GGUSD elementary schools for whom the ELL, SED, and Hispanic/Latino subgroups are numerically significant, 58% (n = 25) did not meet the 2007-08 AMO for ELL, 51% (n = 22) did not meet the 2007-08 AMO for SED, and 81% (n = 35) did not yet meet the 2007-08 AMO for Hispanic/Latino (CDE, 2005a).

All children deserve to meet or exceed standards in ELA, and NCLB mandates that all children will do so by the end of the 2013-2014 school year (USDE, 2002). In order to meet that mandate, California school leaders must identify and implement best practices employed in schools whose classrooms demonstrate high levels of sustained student achievement growth for the subgroups of California elementary students most at-risk of failing to meet AMO in ELA: ELL, SED, and Hispanic/Latino.

Purpose of the Study

The purpose of this study was to determine the extent of differences, as reported by teachers versus site administrators, in the presence of two PLC practices within elementary classrooms among selected GGUSD elementary schools. The 5 schools selected for the study have demographically equivalent student populations and demonstrated either higher versus lower levels of sustained student achievement growth for the subgroups of California elementary students most at-risk of failing to meet AMO in ELA (ELL, SED, and Hispanic/Latino).

Research Questions

The following questions guided the study:

1. What, if any, are the differences in the classroom PLC practice Monitoring: Compilation, Analysis, and Use of Data reported by teachers versus site administrators, based on both their school's designation as a Higher Performing School or a Lower Performing School, as well as select demographic characteristics of respondents?

2. What, if any, are the differences in the classroom PLC practice Recognition, Intervention, and Adjustment reported by teachers versus site administrators, based on both their school's designation as a Higher Performing School or a Lower Performing School, as well as select demographic characteristics of respondents?

Significance of the Study

According to Fullan (2005b), in the relatively short time that PLCs have been researched, educators have "an increasingly clear picture of the nature and importance of professional learning communities in schools" (p. 209). In fact, the professional literature abounds with information about creating PLCs in schools. Yet, less is known about how PLCs are sustained over time. Fullan (2005b) shares this concern for sustainment. In his view, creating and maintaining PLCs may be "largely a matter of luck or serendipity" or dependent on a particular leader or group (p. 212). He hypothesizes that when the tenure of that leader or group expires, the culture of the PLC will also fade, and the system will return to equilibrium, the state which Schein (1985) agrees is what "all human systems attempt to maintain" (p. 298).

Yet, despite changes in leadership and faculty, the 3 GGUSD HP Schools selected for this study demonstrated sustained improvements in student achievement school-wide and for the NSSs most at-risk of failing to meet federal Annual Measurable Objectives in ELA (SED, and Hispanic/Latino) for each of the 6 academic years from 1999-2005. Additionally, when the state of California initiated the ELL subgroup in the 2004-05

school year, that subgroup met the AMO of 24.4% proficient in ELA in these 3 HP Schools.

Statewide, the academic performance of these same subgroups on the 2004-05 CST resulted in 33.40% of all California elementary schools failing to attain the AMO in ELA (CDE, 2005a). There is little time for schools currently who missed the 2004-05 AMO, or who are involved with PI, to catch up before the AMO jumps to 35.2% in 2007-08.

As a result of the 2004-05 testing cycle, 8 of 47 GGUSD elementary schools failed to reach the AMO in ELA for one or more of the California's most at-risk subgroups. Should those schools fail to meet their AMO for the same subgroup for a second year in a row, they will begin Year 1 of PI in 2006-07 (CDE, 2005b).

Looking ahead to the 2007-08 AMO increase to 35.2% of all students and NSSs who must be proficient or above in ELA on the CST, the 2004-05 GGUSD elementary school student achievement data suggests there is much work to be done to ensure student success. Of the 43 GGUSD elementary schools for whom the ELL, SED, and Hispanic/Latino subgroups are numerically significant, as a result of the 2004-05 CST testing, 58% (n = 25) did not yet meet the 2007-08 AMO for ELL, 51% (n = 22) did not yet meet the 2007-08 AMO for SED, and 81% (n = 35) did not yet meet the 2007-08 AMO for Hispanic/Latino (CDE, 2005a). This large percentage of GGUSD elementary schools are at-risk for being identified for PI should they fail to meet the 2007-08 AMO targets school-wide or in their NSSs.

The significance of this study rests in what it reveals about the classroom practices of Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment that have supported California's and GGUSD's most at-risk subgroups to become proficient or above with grade-level standards as measured by the CST. Results of this study may help other GGUSD elementary schools with these NSSs to avoid or exit PI status by suggesting a change in classroom practices to align with those of a PLC. In addition, this study adds to the growing body of research that suggests schools must continually engage in essential practices that define a PLC in order to sustain improvements in student achievement.

Limitations of the Study

This scope of this study is limited to elementary schools in the GGUSD who receive Title I funding, and whose school populations contain NSSs of ELL, SED, and Hispanic/Latino students. Although great care was taken to review existing literature from across the United States to gain a context for the theoretical base, selecting participating schools from GGUSD was geographically necessary given financial and time constraints. In addition, the researcher sought to contribute to the success of the school and district in which she currently serves as an elementary principal by understanding the classroom practices that lead to greater levels of sustained student achievement for all students.

The research techniques used in this study follow a quantitative approach that is both comparative and relational using data that is cross-sectional in time, namely October-November 2006. As such, the study is limited in terms of its participants. Data

from the 1999-2005 administrations of the CST were used to select schools for participation in this study; however, the survey of classroom PLC practices includes teachers and site administrators only from the 2006-07 school year who were employed at the school during the 2005-06 school year. Therefore, teachers and site administrators who historically played a role in the school's student achievement growth may not be included in the survey, and those individuals who are new to the school or district, who have contributed little or nothing to the current student achievement status, may be included.

Because of their low decile scores on the CST when compared with other schools in California, the LP Elementary Schools were the recipient of specific, targeted intervention by the GGUSD beginning in the 2005-06 school year. As a proactive measure intended to bring about improved student performance on the CST and other student achievement measures, GGUSD made special arrangements with the teachers' union, to provide teachers in these schools with weekly collaboration periods, the opportunity to transfer to another GGUSD elementary school before the beginning of the 2005-06 school year, and an increase in the instructional minutes for students. The daily instructional minutes for Kindergarten were increased by 30 minutes to a total of 230, and daily instructional minutes for Grades 1-3 were increased by 35 minutes for a total of 320 minutes of daily instructional time. Teachers and administrators received in-depth training with the district-adopted Language Arts base program. In addition, the principals of these schools meet with an outside consultant on a regular basis to focus on student achievement data in order to inform their instructional leadership decisions. While these

changes and opportunities were made for 5 other GGUSD elementary schools experiencing a similar level of poor student performance on the CST, they were not provided for the other 40 elementary schools, including the 3 HP Schools identified for this study. Because of their impact on teacher and administrator perceptions of their use of data to inform instructional decisions, these interventions limit the results of this study.

An additional limitation of the study is the students whose CST scores result in the determination of whether a school meets its AMO in ELA, makes AYP, or meets California's API growth targets. Each year, students in grades 2 through 6 in GGUSD participate in the state CST testing. However, as the years progress, students move through this grade-span such that those who were 2nd graders in 1999 have now moved on to intermediate school and are no longer included in the elementary school's data reports. While this limitation is most relevant to the interpretation of the state-reported student achievement data (AYP and API), it is important to note that the students in the schools selected for this study have not remained constant, which may account for variations in the growth student achievement results.

Definition of Terms

The following terms are defined from the existing literature reviewed in Chapter 2, and are used consistently throughout this study.

1. Elementary School: schools that serve any configuration of grades Kindergarten through Grade 6.
2. Learning Organization: "an organization that is continually expanding its capacity to create its future" (Senge, 1990, p. 14).

3. Professional Learning Community (PLC): a school that functions as a learning organization whose professional practices are reflective of those described in the NCEA Best Practice Framework and who continually engage in the seven essential disciplines of PLCs: personal mastery, mental models, unity of purpose, supportive conditions, team learning, systems thinking, and leadership.
4. Numerically Significant Subgroup (NSS): "A subgroup is defined as numerically significant for percent proficient if it has 100 or more students with valid scores OR 50 or more students with valid scores who make up at least 15 percent of the total valid scores" (CDE, 2005e, ¶ 11). The subgroups for AYP include ethnic/racial subgroups, SED students, ELLs, and Students with Disabilities.
5. Academic Performance Index (API): The cornerstone of California's Public Schools Accountability Act of 1999 (PSAA), the API is measures the academic performance and growth of all public schools with a numeric index (or scale) that ranges from a low of 200 to a high of 1000. A school's score on the API is an indicator of a school's performance level. The statewide API performance target for all schools is 800. A school's growth is measured by how well it is moving toward or past the goal of 800. Beginning in the 2004-05, "the API also is used as an additional indicator for federal Adequate Yearly Progress (AYP) requirements" (CDE, 2005d, ¶ 2).

6. Adequate Yearly Progress (AYP): NCLB requires that each state determine whether or not public schools and LEAs are making AYP. AYP criteria include four areas: participation rate, percent proficient (also referred to as Annual Measurable Objectives or AMOs), API as an additional indicator for AYP, and graduation rate. Each of these four areas has specific requirements, and a school or LEA must meet each requirement in all four areas in order to make AYP (CDE, 2005e; USDE, 2002).
7. Annual Measurable Objective (AMO): The AMO refers only to the percent proficient criteria for the determination for AYP for a school or LEA. To reach the NCLB mandate for all students to perform at or above the proficient level in ELA and mathematics by 2014, the state of California determined AMOs to quantify the percentage of students (both SL and NSSs) who must be proficient or better each year (CDE, 2005b). For elementary schools, beginning in 2002–03, the AMO was 13.6% for ELA and 16.0% in math. By 2004–05, the AMO for elementary schools was 24.4% in ELA, and 26.5% in math. In 2007–08, the elementary school AMO reaches 35.2% in ELA and 37.0% in Math. AMOs increase by specified levels each year until 100% of students test proficient or above in both subjects by 2013–14.
8. Comparable Improvement: An element of API, comparable improvement "requires that each numerically significant subgroup must meet or exceed 80 percent of the [previous testing year's] school-wide growth target" (CDE, 2003, ¶ 45).

9. Higher Performing (HP) Schools: For the purpose of this study, HP Schools are elementary schools in GGUSD whose student populations consists of 65% or more of each of the subgroups most at-risk of failing to meet AMO in ELA: ELL, SED, and Hispanic/Latino. HP Schools made their 2004-05 AMO in ELA for all 3 of those subgroups and demonstrated annual improvements in school-wide student achievement as measured by API by posting comparable improvement for all NSSs for each of the 6 school years from 1999-2005.
10. Lower Performing (LP) Schools: For the purpose of this study, LP Schools are elementary schools in GGUSD whose student bodies consists of 65% or more of each of the subgroups most at-risk of failing to meet AMO in ELA: ELL, SED, and Hispanic/Latino. LP Schools did not make their 2004-05 AMO in ELA for any of those subgroups and demonstrated annual improvements in school-wide student achievement as measured by API by posting comparable improvement for all NSSs for only 3 or 4 of the 6 school years from 1999-2005.

Organization of the Study

The first chapter of this manuscript describes the foundations for the study. It includes a description of California public school accountability, and a discussion of how well California public elementary schools faired toward the state's 2004-05 AMO of 24.4% of all students and NSSs achieving the level of proficient or above on the CST of ELA. Chapter 1 begins to build the case for classroom use of the practices of a PLC as a means to ensure high levels of sustained improvement in student achievement. Further,

Chapter 1 contains a description of GGUSD, the school district selected for this study, and how GGUSD's elementary schools performed on the CST from 1999 through 2005. Chapter 1 also declares the purpose and significance of this study.

The second chapter of this manuscript reviews the current literature of PLCs, and has been divided into two distinct parts. First, a brief history of the evolution of the concept of PLCs is introduced. Secondly, a literature review of the key practices of a PLC is presented through the lens of the Best Practices Framework, based on the NCEA's research of high-performing schools throughout the United States and in California.

The third chapter describes the methods used by the researcher in this study. This includes a restatement of the research questions, a description of the research design, and definition and description of the population, census, and analysis unit. Next, the discussion of human subjects includes a description of consent, risk minimization, and confidentiality. Further, the characteristics to be measured by the study and data collection procedures are reviewed. Finally, the instrument for the study is identified and described, including a discussion of reliability and validity, and the analytical technique used is presented.

The fourth chapter reviews the statistical analysis of the data and presents the findings of the study. Included in Chapter 4 is a discussion of the analyses as they relate to the research questions, as well as additional findings.

The fifth chapter includes the conclusions and implications of the findings. Also included in Chapter 5 are recommendations for future research, and recommendations for policymakers and practitioners.

CHAPTER 2: REVIEW OF LITERATURE

Introduction

The purpose of this literature review is to present a brief history of the evolution of the concept of PLCs, and to review the key practices of a PLC through the lens of the Best Practices Framework, based on the NCEA's research of high-performing schools throughout the United States and in California.

With the passage of the PSAA of 1999, the state of California began holding schools accountable for the academic achievement of their students. The PSAA developed a statewide accountability system, at the center of which is the API. The purpose of the API is to measure student academic performance and the growth of schools within a numeric index that ranges from a low of 200 to a high of 1000. A school's score on the API is an indicator of the school's performance level, based on the percentage of students performing at a given level on the state-wide testing (CDE, 2005b). The PSAA requires that the CDE annually calculate APIs for all California public schools and publish school rankings based on these indices. Further, the PSAA also requires the establishment of a minimum 5% annual API growth target for each school as well as an overall statewide API performance target of 800 for all schools (CDE, 2003).

NCLB is federal legislation that established a new definition of adequate yearly progress for the state of California, LEAs, and all public schools, by mandating that 100% of all students score proficient or above in ELA and Mathematics by the year 2014. In August 2003, the state of California modified its accountability system to meet the

Title I funding conditions of NCLB, which mandates a minimum percentage of students and NSSs who must perform at or above the proficient level on the state testing system. Moreover, AMOs were developed for schools serving grades 2-8 based on the CST in ELA and Math. Beginning in 2002–03, an elementary school would meet its AMO if 13.6% of all students school-wide and in each NSS scored proficient or above in ELA and 16.0% scored proficient or above in math. By 2004–05, schools were to have reached the next step: 24.4% of all students school-wide and in each NSS must be proficient or above in ELA, and 26.5% in math. In 2007–08, a school will meet its AMO if 35.2% of all students school-wide and in each NSS are proficient or above in ELA and 37.0% in Math. The AMO increases by specified levels each year until 100% of students test proficient or above in both subjects by 2013–14.

With the added accountability of NCLB "society is reshaping the mission of education. Schools are now expected not only to offer education, but to ensure learning" (Darling-Hammond, 1996, p. 5). Title I schools are pressured to make adequate yearly student achievement improvement (USDE, 2002). However, "regulations cannot transform schools" (Darling-Hammond, 1996, p. 5). "There is no one cookie-cutter approach to school reform, no packaged program that can be adopted off the shelf" and result in sustained student achievement improvement (Darling-Hammond, 1997, p. 150). According to recent research, schools with demonstrated sustained improvements in student achievement share common features that can serve as a springboard for schools seeking better teacher and student performance. These include

> a collective set of goals, commitments, and practices enacted throughout the school; small continual learning groups for students and teachers, shared governance coupled with teaching teams, time for teachers to collaborate and learn together, and a rich array of learning opportunities for all members of the school community. (Darling-Hammond, 1997, p. 150)

Research suggests that school improvement "means engaging in learning new practices that work, based on external evidence and benchmarks of success, across multiple schools and classrooms, in a specific area of academic content and pedagogy, resulting in continuous improvement of students' academic performance over time" (Elmore, 2002, p. 13).

The importance of schools as dynamic, self-renewing organizations is not a new concept. Working with the Atlanta Area Teacher Education Service from the late 1940s through the mid 1950s, John Goodlad collaborated with six school districts and six institutions of higher learning to recognize and meet the in-service education needs of teachers. In this capacity, he visited many schools in the southeastern region of the United States, and noticed distinct differences in school cultures. Goodlad began to develop a hunch about the relationship between school cultures, the professional development needs of the teachers, and the achievement of the students. He formulated a working hypothesis about the ideal school culture where learning is the focus for both students and teachers, which, as he noted in 1975, was a bit ahead of its time (Goodlad, 1975). His 1955 article in Educational Leadership advanced his concept of a "single school," as "a dynamic self-renewing place" (Goodlad, 1975) in which the principal,

teachers, pupils, parents, and community links work together as a key unit for educational change. He noted the importance of schools to develop a "continuing propensity for and ability to change" (Goodlad, 1955, p. 5).

The Equal Educational Opportunity Study (Coleman et al., 1966) was commissioned directly after the U.S. Civil Rights Act of 1964 to investigate the racial and social factors that may impact student achievement. Results of the study asserted that schools do not make a difference in the educational achievement of children: "If one wanted to know about the achievement of children, one needed to look at the homes from which they came, not in the schools in which they learned" (Lezotte, 2005, p. 177). In response to this report, educational researchers uncovered schools where minority and disadvantaged students were mastering the curriculum, suggesting that indeed schools do impact student academic achievement. This led to the Effective Schools movement, which identified seven Correlates of Effective Schools: instructional leadership, clear and focused mission, safe and orderly environment, climate of high expectations for success, frequent monitoring of student progress, positive home-school relations, and opportunity to learn and time on task (Correlates of Effective Schools, 1996). Lezotte (2005) suggested that the Correlates identified in the 1970s remained remarkably stable in various studies, levels of schooling, and within different countries. Additionally, after analyzing 35 years of his own research, Robert Marzano concluded that school not only have a significant impact on student achievement, but that "schools that are highly effective produce results that almost entirely overcome the effect of student backgrounds" (Marzano, 2003, p. 7).

The publication of A Nation at Risk (National Commission on Excellence in Education, 1983) launched the next movement in American education. Responding to the dire condition of our nation's substandard education programs, "within two years of the report, more than 300 state and national task forces had investigated the conditions of public schools in America" (DuFour & Eaker, 1998, p. 3). The resulting movement--the Excellence Movement--pointed educators in the direction of simply doing more. Schools were encouraged to require students to earn more credits before graduating, to give students more homework, to add more days to the school year, require students to take more tests. In short, the movement called on teachers to intensify existing practices, but fell short of offering new ideas.

The Restructuring Movement followed, beginning with Goals 2000, a result of President George H. Bush's 1989 summit with all of the nation's governors (USDE, 1994). Goals 2000 outlined six national goals for student achievement and school safety, to which Congress later added two further goals relating to professional development of educators and the advancement of partnerships between schools and their communities.

In 1991, Newmann stated that the time had come for a shift to communities of learning. He suggested that,

> society in general, and education in particular, could benefit substantially from efforts to transform impersonal, fragmented bureaucratic organizations into places where participants share goals and pursue a common agenda of activities through collaborative work that involves stable, personalized contact over a long term. (Newmann, 1991c, p. 5)

Newmann pioneered the efforts to promote learning communities. Schmoker (2005) reviewed the work of Senge, Hord, DuFour, Eaker, Sparks, Sergiovanni, and Lezotte, each involved with creating learning communities within schools, and suggests that their thoughts bear "concurrence ... that is both stunning and underappreciated" (p. xii). The evolving definitions and essential characteristics of a PLC are presented in the first section of this chapter.

In Part II of this chapter, the literature supporting seven essential characteristics of a PLC will be viewed through the lens of the NCEA Best Practice Framework. This Framework displays the results of NCEA's investigation of the practices of consistently high-performing schools systems across the United States and in California. The NCEA's "method for identifying best practice is to work backwards from demonstrated high student achievement and to describe what these schools are doing to foster high-performance from their students" (NCEA, n.d.-b).

Evolution of the Concept of the Professional Learning Community

During the Effective Schools movement of the 1980s, Rosenholtz (1991) brought issues of teachers' workplace to the conversation about teacher and school quality. Results of her study of elementary schools in eight Tennessee school districts suggested that "effective schools" shared five characteristics: a high degree of consensus about shared goals; collaboration among faculty and administrators; a learning-enriched setting; technically nonroutine cultures; and high levels of teacher commitment to advance the school. In short, "the successful school is a nonroutine technical culture where teaching

professionals are asked to make reflection ... the master of action" (Rosenholtz, 1991, p. 214).

Confirming Rosenholtz's (1991) findings, McLaughlin and Talbert (1993) suggested that when teachers were afforded opportunities for collaborative inquiry and learning, they were able to develop a shared body of knowledge to guide the professional practice of their school community. The efforts of teachers who regularly engage in authentic joint work focused on unambiguous common learning goals, earns big dividends in the form of higher quality solutions, increased teacher confidence, and notable gains in student achievement (Little, 1990).

At the beginning of the Restructuring Movement, in 1991, Newmann (1991b) began a 5-year research program through the Center for Organization and Restructuring of Schools. In his quest "to develop new knowledge on how organizational features of school can be changed to improve education for students," Newman established a framework for restructured schools (1991b, p. 1). He developed the Criteria for Restructuring Schools, an instrument designed to measure the degree to which restructuring impacted student achievement (Newmann, 1991a). While he found a correlation between the extensiveness of implementation of new ideas and the degree to which a school has successfully restructured, Newmann also determined that the degree of implementation was secondary to the foundation built by schools seeking to restructure. The schools most successful with restructuring were those that employed the practices of "clarifying the educational ends it seeks, assessing its unique needs, and analyzing how it must change to serve the ends" (Newmann, 1991c, p. 3). The research

he and his team sought to accomplish promoted six valued outcomes or qualities of schooling: authentic student achievement, educational equity, empowerment, communities of learning, reflective dialogue, and accountability (Newmann, 1991c).

At the end of their 5 year study, Newmann and Wehlage's (1995) report, Successful School Restructuring, was the first to demonstrate "explicit evidence on the relationship between professional community and student performance" (Fullan, 1999, p. 31). The authors of this study used standardized student achievement data and other authentic performance based assessment to find that students in schools with a high professional community performed better in math, science, and social studies. Newmann and Wehlage (1995) argued that these professional communities helped students to achieve more because their "teachers pursue a clear purpose for all students' learning, engage in collaborative activity to achieve the purpose ... [and] take collaborative responsibility for student learning" (p. 30). In addition, the researchers found that the collaborative relationship of the educators affected the level of classroom authentic pedagogy and the level of social support for students, which both in turn affected student performance (Newmann & Wehlage, 1995).

Similarly, Darling-Hammond (1996) cited the transformation of teaching roles in schools resulted from shared decision making and time for teachers to work together to plan instruction and to share feedback from observing in one another's classrooms. She viewed "teaching as collegial work and as an intellectual activity" (Darling-Hammond, 1996, p. 7).

In The Fifth Discipline, Senge (1990) defined what he called the learning organization as "an organization that is continually expanding its capacity to create its future" (Senge, 1990, p. 14). In his body of work, he developed five key disciplines used by individuals or groups to stay focused on the learning tasks of their organizations: personal mastery, shared vision, mental models, team learning, and systems thinking (Senge, 1990, 2000).

Sergiovanni (1996) defined communities as

> collections of individuals who are bonded together by natural will and who are together bound to a set of shared ideas and ideals. This bonding and binding is tight enough to transform them from a collection of "I's" into a collective "we." As a "we," members are part of a tightly knit web of meaningful relationships. This "we" usually shares a common place and over time comes to share common sentiments and traditions that are sustaining. (p. 48)

In 1987, DuFour and Eaker developed their concept of Excellent Schools as those that clearly envision what they are working to accomplish; guide day-to-day operations by a few shared core values; have principals who are effective leaders and attentive managers of climate; have a curriculum that reflects the values of the school and provides a focus; promote excellence in teaching; monitor what the school says is important; celebrate evidence of their core values with ceremonies and rituals; and "sustain their commitment to improvement through systematic self-renewal" (DuFour & Eaker, 1987, p. xix-xxiv). By 1998, their conceptualization of Excellent Schools developed into the notion of the PLC, which they defined as a school where "educators create an

environment that fosters mutual cooperation, emotional support, and personal growth as they work together to achieve what they cannot accomplish alone" (DuFour & Eaker, 1998, p. xii). DuFour and Eaker define the characteristics of a PLC as the following: shared mission, vision, and values; collective inquiry, collaborative teams; action orientation and experimentation; continuous improvement; and results orientation (DuFour & Eaker, 1998; DuFour et al., 2005; Eaker et al., 2002). They outline four central questions to guide the formation of all aspects of school: (a) what is it we want all students to learn? (b) How will we know when each student has mastered the essential learning? (c) How will we respond when a student experiences initial difficulty in learning? (d) How will we deepen the learning for students who have already mastered essential knowledge and skills? (DuFour & Eaker, 1998; DuFour et al., 2005; Eaker et al., 2002)

Hord (1997) defines a PLC as "a school in which the professionals (administrators and teachers) continuously seek and share learning to increase their effectiveness for students, and act on what they learn" (p. 1). She adds that the PLC is characterized by five dimensions: "shared and supportive leadership, shared values and vision, collective learning and application of learning, supportive conditions, and shared personal practice" (Hord, 2000, p. 1). According to Sparks (2002), "a professional learning team whose members accept a collective responsibility for the academic achievement of all students..., who meet regularly to learn, plan, and support one another in the process of continuous improvement" are a PLC engaging in on-going high quality professional development (p. 1-4).

Clearly the definitions and characteristics by these authors are similar. Based on careful review of the relevant literature, for the purpose of this research the essential characteristics of professional learning communities are

1. Personal Mastery
2. Mental Models
3. Unity of Purpose
4. Supportive Conditions, Structures and Collegial Relationships
5. Team Learning (Focus on Learning, Focus on Collaborative Culture, and Focus on Results)
6. Systems Thinking
7. Leadership

The Best Practices Framework

For the purpose of this research, the identified seven essential characteristics of a PLC (personal mastery, mental models, unity of purpose, supportive conditions, team learning, systems thinking, and leadership) will be viewed through the lens of the NCEA's Best Practice Framework (n.d.-c). This Framework displays the results of NCEA's investigation of the practices of more than 300 consistently high-performing school systems across the United States. The NCEA's method for identifying best practices was to describe what schools with demonstrated high student achievement are doing to foster high-performance from their students (NCEA, n.d.-b).

The Best Practices Framework provides an organizational schema to examine the practices of consistently high-performing school systems in a variety of settings.

> By providing a template through which multiple national and state studies present their results, The Framework helps focus educators on the practices and strategies that are found in high-performing school systems rather than on any single school's method of enacting a practice. (NCEA, n.d.-c, ¶ 3) (Appendix A)

The four parts of the Best Practices Framework are The Supports, The Themes, The School System Levels, and The Practices.

This literature review of PLCs is presented through the lens of these four parts of The Best Practices Framework, and notes the findings of the Just for the Kids' California Best Practice Study, which based its research on NCEA's Best Practice Framework. In its first year, Just for the Kids studied best practices of 10 high-performing California elementary schools and 5 average-performing schools as a control group. In addition to the national criteria found by the NCEA, the California study adds the following 3 research elements which focus on the particular needs of California schools "(a) a focus on English Language Learners; (b) a deeper understanding of the sequencing of the best practices (coherence); and (c) sustainability of educational reform efforts" (Just for the Kids [JFTK], 2004a, ¶ 2).

The Supports

Overall, the NCEA Best Practice Framework describes the practices of consistently high-performing school systems throughout the United States, and identifies the general principles common across the studied schools in each area. However, the way in which these principles are implemented in a particular district or school depends on a number of contextual factors. In the Best Practices Framework, these factors are

called underlying Supports (NCEA, n.d.-c). Interestingly, in their comparison of practices in consistently high-performing schools to average-performing schools throughout the United States, NCEA found that these supports were not critical factors in increasing student achievement. That is to say, while the Supports were not necessarily present to a certain degree in order for the students to reach consistently high levels of achievement, they are "considerations or factors to be understood so that the practices can be enacted successfully" (NCEA, n.d.-c, ¶ 3).

The Support layers include (a) Core Beliefs about Teaching and Learning, (b) Resource Allocation, and (c) Local Influences, Relationships, and Communication. There is significant overlap between the Support layers and literature related to best practices of professional learning communities, as will be discussed below.

Core Beliefs about Teaching and Learning

Apart from the work that educators do is the set of assumptions and beliefs from which they operate. Senge illustrates this distinction by recounting an old joke: "It is difficult to know what fish talk about, but you can be sure it is not water..... This 'water' [is] our culturally embedded assumptions and habitual ways of operating" (Senge, 2000, p. 27). Similarly, the structure of a school's work takes place within the "water," or unique culture of each individual schoolhouse. This school-wide "culture is founded upon assumptions, beliefs, values, and habits that constitute the norms for that organization – norms that shape how its people think, feel, and act" (DuFour & Eaker, 1998, p. 131). According to DuFour and his associates, the most critical consideration for a PLC to successfully take root within a school is the degree to which the culture has

adapted its assumptions, beliefs, values, and habits of the PLC such that they become the new norm for the organization (DuFour, 2005). Schlechty (1997) suggests that such an organizational transformation is difficult because it

> requires the adoption of new ways of life, new organizational forms, and the modification or abandonment of cherished values, meanings, and beliefs. Technological change that goes to the core of an enterprise requires not only changes in the means of doing the job; it also requires change in the culture in which work is embedded and the structures that govern the way work is done and life is conducted. (p. 33)

"The very base of Support for The Framework reflects the school system's core beliefs about teaching and learning. These beliefs become apparent in every practice through the assumptions made by school leaders and educators at all school system levels" (NCEA, n.d.-c, ¶ 4). The beliefs of the educators are implied in courses of study offered for students, the academic objectives set by the school and district, assessment tools, and recognition and intervention programs. Core beliefs about teaching and learning begin at the most personal level within every member of a school, and, in a PLC, require a high degree of personal mastery, highly developed mental models, and strongly held unity of purpose.

Personal mastery. Senge (2000) defines personal mastery as "a set of practices that support people--children and adults--in keeping their dreams whole while cultivating an awareness of the current reality around them" (p. 59). Goleman, Boyatzis, and McKee (2002) suggested leaders with a secure grasp on personal mastery are emotionally

intelligent; they can "handle themselves and their relationships" (p. 6). The first of five discoveries of self-directed learning outlined in Primal Leadership is the identification of the ideal self, for this is where leadership begins (Goleman et al., 2002). Discovering one's passions, defining a personal vision, shaping guiding principals, and knowing oneself are valuable exercises for those interested in leading and working within learning communities (Goleman et al., 2002). The second discovery is of the real self which requires taking "inventory of your talents and skills – the person you actually are" (Goleman et al., 2002, p. 128). The authors suggest that the discovery of one's real self can be surprising, as "the slow, invisible creep of compromise and complacency" can develop deep differences between the ideal and real selves (Goleman et al., 2002, p. 130).

Senge (2000) asserted that the very dissonance between the ideal and real selves, the personal vision for a desired future state compared with an assessment of current reality, drives individuals to make deliberate choices to create their future. To make the best choices, Goleman and his colleagues (2002) suggest that leaders get to the truth and gain access to their blind spots by seeking negative feedback from peers, subordinates, and superiors, and develop a road map to plan for personal growth. "Gaining access to [one's] image" (Krisco, 1997, p. 118), accessing one's real self, requires "being present without resistance to the way things are" (Zander & Zander, 2000, p. 100). Only then can educators see how their practice serves and disserves their students, and take action to better serve them.

Once enrolled in a moral purpose, Fritz (1989) suggests that individuals are better able to make fundamental choices, which allow powerful school leaders to "take action

consistent with the moral journey" (Fullan, 2003, p. 63). In a learning community, Fullan (1999) suggested, leaders skillfully combine moral purpose with change strategies in order to promote greater attachment to the school while simultaneously achieving greater academic results for students. In a manuscript created for Microsoft's Partners in Learning Initiative, Fullan (2004) describes eight key drivers for change, the first which is to engage peoples' moral purpose and involves a "commitment to raising the bar and closing the gap in student achievement" (Fullan, 2004, p. 3). Writing with Fullan, Michael Barber (2005), chief adviser to British Prime Minister Tony Blair on the delivery of public services, suggests the central moral purpose of education "consists of constantly improving student achievement and ensuring that achievement gaps, wherever they exist are narrowed. In short, it's about raising the bar and narrowing the gap" (p. 32).

Mental models. Individuals and groups who have developed a high level of personal mastery operate from the discipline of mental models (Senge, 2000). Zander and Zander (2000) suggested that customary social and business practices are "built on certain assumptions--shared understandings that have evolved from older beliefs and conditions" (p. 4). Although conditions may have changed since those practices began, their continued use tends to corroborate old beliefs (Zander & Zander, 2000). "The core task of the discipline of mental models is bringing [those] tacit assumptions and attitudes to the surface so people can explore and talk about their differences and misunderstandings with minimal defenses" (Senge, 2000, p. 67). Mental models influence organizations in deep and meaningful ways. In fact, left unexamined, mental models can sabotage any effort to improve an organization. Human beings artfully

subconsciously avoid confronting notions that disconfirm existing beliefs, which makes growth and change exceedingly difficult. Argyris (1990) asserts that, without the discipline of mental models, human beings' skilled incompetence ultimately causes unintended organizational consequences like stagnant or unsustainable student achievement results.

In Sparks' view, "schools are limited to a large extent by habits of behavior and thought--fundamental choices, mental models, and 'big assumptions'--that limit possibility and invention" (Sparks, 2002, p. 11-5). Eaker et al. (2002) and others who study learning communities warn that "altering beliefs, expectations, and habits that have gone largely unexamined for many years is a complex, mess, and challenging task" (p. 133).

And yet, leaders of learning communities learn to overcome these hurdles, face the challenges of shaping school culture, and embed elements of structure into the emerging culture (DuFour & Eaker, 1998). Learning communities have the capacity to be guided by their primary purpose to create "new mental models that serve [them] better" (Senge, 2000, p. 68), develop "new theories ... that fit better the context of schools, and fit better what schools are trying to accomplish" (Sergiovanni, 1996, p. 3), and "invent a ... framework of meaning that enhances quality of life" (Zander & Zander, 2000, p. 12).

Unity of purpose. A PLC develops what McLaughlin (1994) calls "unity of purpose" where members build a collective agreement for responsibility for all students,

and share a common understanding of purpose and values. Any organization that wants to improve its effectiveness must first determine their collective purpose (Drucker, 1992).

The third discipline of a learning community outlined by Senge (2000), and supported by DuFour and Eaker (1998) and others (Fritz, 1996; Kruse, Louis, & Byrk, 1994) is shared vision, which Senge (2000) describes as "the set of tools and techniques for bringing together... disparate aspirations into alignment around the things people have in common – in this case, their connection to school" (p. 72). To build such a vision, people from throughout the school community work together to define their core purpose by defining why the organization exists (DuFour & Eaker, 1998). They determine what the people in the community want the organization to become, and develop images of the future they wish to co-create. By articulating how the organization will realize its vision, the group develops core values that will guide their behavior. Finally, members of a PLC outline priorities, benchmark goals they hope to achieve along the way, and a timeline for action steps to move the organization into action around its core purpose (Eaker et al., 2002). Such work focuses the learning community on a mutual purpose and nourishes a sense of commitment (Eaker et al., 2002; Senge, 2000).

Sergiovanni described a similar process, beginning with "what we know about teaching and learning and what we want to accomplish for children and parents" (p. 38). This is Covey's (1989) practice of "beginning with the end in mind." In California, the state-adopted standards tell educators exactly what students are to know and be able to do by each grade-level and subject. Similarly, the desired outcome is defined by the federal AMO. For example, in 2004-05 24.4% of all students school-wide and in NSSs are to be

proficient or above in ELA, and 26.5% in math. With this vision as a framework, "we then design outward, seeking to create forms of organizational structure, curriculum, and teaching and learning that fit the functions" (Sergiovanni, 1996, p. 38).

Interestingly, as Quinn (1996) noted, having a vision for a school does not necessarily mean that there is a plan. Creating that kind of change demands a comprehensive learning process. "Acting on a vision that exceeds our resources is a test of our vision, faith, and integrity" (Quinn, 1996, p. 84-85). Kruse and her colleagues (1994) describe leaders a keepers of the vision. As such, Barber and Fullan (2005) encourage leaders to communicate the vision and provide opportunities to contribute to it. "It's not just question of explaining the big picture; it's a matter of actively and constantly seeking feedback, where necessary refining the strategy, and making the big picture come alive on the ground" (Barber & Fullan, 2005, p. 34).

Resource Allocation

In the more than 300 high-performing schools studied by NCEA, researchers found that sustained high levels of student achievement were accomplished with greatly varied budgets. "How a district or school allocates funds and seeks additional funds seems to be more important than having a particular amount of funds to expend" (NCEA, n.d.-c, ¶ 4). The NCEA found that consistently high-performing schools tightly aligned their resource allocation to the school's learning goals.

The state of California has identified nine EPCs that are considered "crucial to an effective academic program" (CDE, 2005c, ¶ 1). The objectives of EPC 9 calls for school and district funds to be "used appropriately to support the reading/language arts

[and mathematics] program goals in the school plan" (CDE, n.d.-a, p. 9). In other words, schools and districts should spend available monies to support the intended learning outcomes for students.

In addition to funds, time for learning is a precious resource which is strategically managed carefully protected in a PLC (Marzano, 2003). To maximize learning opportunities for students, California's EPC 2 specifically outlines the number of uninterrupted minutes of instructional times per subject area (including reading/language arts, math, and intervention classes) per school level (CDE, n.d.-a, p. 2). Also to maximize learning opportunities for students, teachers' time must also be carefully managed in order to provide at least "monthly collaboration by grade level" as addressed in EPC 7 (CDE, n.d.-a, p. 7). The significance of the use of time in high-performing schools will be further discussed in the context of the Instructional Programs, Practices, and Arrangements theme.

Local Influences, Relationships, and Communication

In their study of over 300 consistently high-performing schools throughout the United States, NCEA found the level of involvement of the wider community (e.g. school board, parents, community members, labor unions, and business partnerships) affected the way any particular practice may look in a school or district, however, there was no discernable relationship between their involvement and student achievement. "The business of teaching and learning remains the same ... regardless of the level of community involvement that a school or district enjoys" (NCEA, n.d.-c, ¶ 5).

"This Support also describes relationships and communication within the school community – between the school system levels. The flow of information and responsibility between these levels also helps to establish a contextual basis for the practices a school or district enacts" (NCEA, n.d.-c, ¶ 4). This notion of relationship is noted widely in the literature as a critical component of a PLC.

According to Senge (2000), "in any human endeavor, the quality of relationships determines outcome" (p. 391). In fact, Barth (2001) found that "the relationship among the adults in the schoolhouse has more impact on the quality and character of the school--and on the accomplishment of youngsters--than any other factor" (Barth, 2001, p. 105). For the school to be a true community of learners, collegial relationships must be cultivated both inside and outside of the school (Hord, 2000). While the notion of team learning will be fully addressed with the Curriculum and Academic Goals theme, it is important here to clarify that the structures must be in place for the collaboration to be successful.

"Isolationism is the enemy of improvement" (Schmoker, 2005b, p.141). With EPC 7 (CDE, n.d.-a, p. 7), the state of California recognizes the importance of teacher collaboration as "crucial to an effective learning program" (CDE, 2005c, ¶ 1). Within school buildings, the shift from teacher isolationism to collaboration will require years of deliberate work and practice. The nature of PLCs requires a diverse group of individuals to come together for a common purpose, and to benefit teachers' learning (Hord & Cowan, 1999, p. 44). Fullan (2004) and Elmore (2002) agree that collaboration is difficult for teachers because it requires working together in a new way. In the absence

of a careful plan to focus on concrete, constructive goal-oriented action, collaboration meetings can devolve into trite complaining sessions, and "can kill enthusiasm and a sense of purpose" (Schmoker, 1997, p. 143).

In a PLC, collaborative members "recognize the value of dissonance inside and outside the organization" (Fullan, 1999, p. 27). The diversity of school personnel and experimentation with new ways of communicating provoke and contain anxiety and disagreement. "Heterogeneous cultures risk greater conflict, but they also contain stronger seeds of breakthrough" (Fullan, 1999, p. 22) and so groups must learn how to use conflict to inspire growth. Conflict and diversity are positively associated with creative breakthroughs under turbulent conditions (Fullan, 1999). "Working through the discomfort of each other's presence, learning from dissonance, and forging new, more complex agreements and capabilities is a new requirement for living on the edge of chaos" (Fullan, 1999, p. 23).

Fullan (2004) asserted that, to move the system forward, learning organizations must build the capacity for individuals to participate in collaborative practice. DuFour and Eaker (1998) insisted that in a PLC, "school personnel are trained and supported to become collaborative" (p. 125). Capacity building must "transfer improvements in the daily cultures of how people need to work in new ways" so that they new ways become the norm – the "way we do things around here" (Fullan, 2004, p. 4). A review of the literature around capacity building is presented in the first theme, Staff Selection, Leadership, and Capacity Building.

At the very basest level in a healthy school, "Teachers enjoy friendly and supportive relations with one another" (Hoy & Tarter, 1997, p. 1). Beyond that, what distinguishes collegial relations in a PLC are "respect, trust, norms of continuous critical inquiry and improvement, and positive, caring relationships among students, teachers, and administrators" (Hord, 2000, p. 10). DuFour and Eaker (1998) add that effective teams "share beliefs and attitudes; have high levels of trust that result in open communication, mutual respect, and willingness to participate; and believe that each person has the authority to make important decisions and take responsibility for decisions made" (p. 120). As true professionals, educators in a PLC accept responsibility for their work together and work in teams for the explicit purpose of advancing the school's mission and achieving student achievement results (DuFour & Eaker, 1998).

The School System Levels

NCEA's Best Practice Framework is organized to include the 3 levels of every school system, the District, School, and Classroom. While the primary concern of this research study relates to the practices at the classroom level, it is critical to understand that "different levels of the school system must be involved to differing degrees to reach maximum effectiveness in the specific theme area" (NCEA, n.d.-c, ¶ 7). Since the achievement goals of NCLB require sustained student achievement growth for all public school children, the relationships of the school system levels is significantly important.

> The interconnectedness of all parts of the educational enterprise means classrooms, school, and the school district are tied together in a web of

> relationships where decisions and actions in any particular part affect other parts and the system as a whole. (Sparks, 2002, p. 4-3)

A review of the literature around systems thinking, a key component of a PLC, is presented under The Practices.

The Themes

From the analysis of documents, interviews, and observations from 4 years of study in over 300 school systems across the nation, the NCEA determined five Organizing Themes which provide structure for studying the practices of high-performing school systems. "The themes provide the broad overview to connect practices across different school system levels and represent the major content areas in which practices of high-performing school systems differ from their average-performing counterparts" (NCEA, n.d.-c, ¶ 2). The five themes identified by NCEA are

1. Curriculum and Academic Goals
2. Staff Selection, Leadership, and Capacity Building
3. Instructional Programs, Practices, and Arrangements
4. Monitoring: Compilation, Analysis, and Use of Data
5. Recognition, Intervention, and Adjustment

The discussion that follows includes a review of the literature of professional learning communities as it applies to each of these five themes.

Curriculum and Academic Goals

The theme Curriculum and Academic Goals focuses on ensuring that the intended learning outcomes, the California State Standards, match the implemented and attained

curriculum (Marzano, 2003). It addresses the first critical question of a PLC: What is it that we expect all students to know and be able to do by grade and subject? (DuFour, 2005; DuFour & Eaker, 1998; Eaker et al., 2002). "High-performing school systems have clear academic targets from kindergarten through twelfth grade. Principals and teachers understand the learning goals and understand that these goals are for all students and are non-negotiable" (NCEA, n.d.-c, ¶ 9).

In California, the state-adopted standards tell educators exactly what students are to know and be able to do by grade and subject. These standards are the basis of the curriculum designed by publishers and approved by the California State Board of Education, as well as the content measured by the CST administered to all children in grades 2-11. The desired outcome is as clear as the standards, and is defined by the federal AMO: by 2004-05, 24.4% of all students school-wide and in NSSs are to be proficient or above in ELA, and 26.5% in math.

The Best Practices Framework demonstrates that from the district level, through the school level, and into the classroom, faithful implementation of the standards-based, research-proven base program supports learning goals for all children. "Crucial to an effective learning program" (CDE, 2005c, ¶ 1), EPC 8 requires California school districts to support curricular and academic goals by providing an annual lesson pacing schedule for use with the adopted curriculum "in order for all teachers to know when each lesson is expected to be taught and in what sequence to ensure content coverage" (CDE, n.d.-a, p. 8). And, in order for educators to powerfully deliver standards-based instruction to their students, they must first be knowledgeable about the standards addressed at their grade-

level. In effective schools, "each of the teachers in the school has a clear understanding of what the essential learner objectives are, grade by grade and course by course" (DuFour, DuFour, Eaker, & Karhanek, 2004, p. 22).

As described earlier with the Supports, a clearly articulated vision for a school is fundamental to its realization (Barber & Fullan, 2005; Covey, 1989; DuFour & Eaker, 1998; Fritz, 1996; Kruse et al., 1994; Marzano, 2003; Quinn, 1996; Senge, 2000; Sergiovanni, 1996; York-Barr, 2001). "Under a vision, goals are treated as markers thrown out ahead of time to define the territory" (Zander & Zander, 2000, p. 170). Goals written in PLCs must be strategic and specific, measurable, attainable, results-oriented, and time-bound (DuFour & Eaker, 1998; Eaker et al., 2002). Schmoker (1997) suggests schools create no more than two meaningful and simple goals, at least one of which should be based on student learning. To monitor growth toward these goals, effective schools implement an assessment system that provides specific, timely, formative feedback for teachers and students (Marzano, 2003). This is discussed more fully in the Monitoring: Compilation, Analysis, and Use of Data theme.

In PLCs, educators embed the norm of reflective practice in their work, and, as such, adult learning is the first priority (Eaker et al., 2002; York-Barr, 2001). Discussing her successful experiences with the learning community model, Lucianne Carmichael said, "Teachers are the first learners if they are to improve their practice, and if students subsequently will become more successful learners" (as cited in Hord & Cowan, 1999, p. 44). Barth (2001) asserted that, "ultimately there are two kinds of schools: learning-enriched schools and learning-impoverished schools," (p. 23). He continued,

> I've yet to see a school where the learning curves of the youngsters are off the chart upward while the learning curves of the adults are off the chart downward, or a school where the learning curves of the adults were a step upward and those of the students were not. Teachers and students go hand in hand as learners or they don't go at all. (Barth, 2001, p. 23)

This "learning agenda ... focuses on the possibility of change that will eventually lead to better performance at work" both for students and for educators (Goleman et al., 2002, p. 141). While building the capacity of educators to focus on student learning is discussed in the Staff Selection, Leadership, and Capacity Building theme, it is important to note here that maintaining a school-wide focus on the achievement results of standards-based teaching and learning is a key element of a PLC.

A critical discipline in which learning organizations engage is team learning. This may be the single element that separates learning communities from any other type of organization because learning is at the core (Senge, 2000; York-Barr, 2001). Team learning is defined as "a discipline of practices designed, over time, to get the people of a team thinking and acting together," using their various individual perspectives and differences, and learning "to be effective in concert" (Senge, 2000, p. 73). Indeed, a group highly skilled at team learning can "mobilize their energies and actions to achieve common goals and [draw] forth intelligence greater than the sum of individuals (Senge, 2000, p. 7-8). In PLCs, competence "has shifted from individual teacher expertise toward professional community expertise – teachers jointly defining goals and taking responsibility for all students' progress, engaging in ongoing inquiry and

experimentation, and assuming leadership in school development" (Anderson, Rolheiser, & Gordon, 1998, Feb., p. 59). Reducing isolationism and opening up individual practice to direct observation, analysis, and criticism are hallmarks of large-scale improvement in schools (Elmore, 2004).

"The basic structure of a PLC is composed of collaborative teams whose members work interdependently to achieve common goals. The team is the engine that drives the PLC" (DuFour et al., 2004, p. 3). Among the leading contemporary proponents of professional learning communities in schools, DuFour, Eaker, and DuFour outline the essential elements of team learning (DuFour & Eaker, 1998; Eaker et al., 2002). They underscore the importance of "developing a critical mass of teachers who are prepared to function as change agents" by focusing on collaboration (DuFour & Eaker, 1998, p.106). "Creating a collaborative environment has been described as 'the single most important factor' for successful school improvement and the 'first order of business' for those seeking to enhance the effectiveness of their school" (Eastwood & Louis as cited in DuFour & Eaker, 1998, p. 117). The main priorities for leaders in professional learning communities are focusing on learning, collaborative culture, and results (Eaker et al., 2002, p. 34).

At the classroom level, students must also understand that they are working toward mastery of specific California grade-level standards, and that the work they do helps them to reach proficiency. Schlechty (2002) emphasizes the importance for students to be actively engaged in their own learning: "Authentically engaged students see meaning in what they're doing" (Schlechty, 2002, p. 10). The ability to see meaning serves to keep

the school's primary purpose in the forefront of all school decisions from the classroom and throughout the school.

To authentically engage students in their schoolwork, teachers in PLCs must "communicate clear and consistent messages about the objectives and methods of learning" (Newmann, 1994, p. 1). Clear, objective standards for successful student achievement must be "communicated to students, parents, teachers, and other district stakeholders" (Reeves, 2000, p. 26). In addition, to maximize student learning, teachers must communicate "clear and appropriate learning targets with students from the beginning of the learning" (Stiggins, 2005, p. 67). Teachers must also design and provide student work that is product-focused, has clearly defined and compelling assessment criteria, and allows students to "fall short of standards on initial tries without suffering adverse consequences" with multiple opportunities to develop success (Schlechty, 1997, p. 170).

Just for the Kids' California Best Practice Study based its research on the NCEA Framework and, in its 1st year, studied best practices of 10 high-performing California elementary schools and 5 average-performing schools as a control group (JFTK, 2004a). In the theme of Curriculum and Academic Goals, teachers in the classrooms of high-performing California elementary schools engaged in the practice of "Base teaching on standards, aligned curriculum and agreed upon adaptation" (JFTK, 2004a, ¶ 3). Nationally, the Critical Attributes of this classroom practice were identified by NCEA as

1. Based on the district curriculum, teachers know what is to be taught and learned at their grade and in each subject. They understand that what all

students are to learn is non-negotiable, but that the strategies and methodology (the how) to achieve that goal are. Teachers, therefore, know exactly what students need to learn, where to focus strategies, and what to work on with colleagues.

2. Teachers know what is to be taught and learned in any given subject at grades before and after their own as well as how this learning is part of a pre-K-12 continuum. They understand that mastering the given curriculum at their grade and subject is essential if the students are to reach an agreed-upon and known end goal in Grade 12.
3. Teachers plan instruction from the district curriculum, not from a textbook or other materials.
4. Teachers understand connections between academic objectives across subjects.
5. Teachers know how the objectives will be assessed at the district and state levels and have strong knowledge of the depth of conceptual understanding that students should attain. This knowledge ensures that classroom variables, and not socio-economic related variables, are the predictors of student achievement.
6. Teaching results in students being prepared for the next grade or subject (NCEA, n.d.-g)

In California, on target classroom actions consistent with the Critical Attributes of the practice of "Base teaching on standards, aligned curriculum and agreed upon adaptation" (JFTK, 2004a, ¶ 3) resemble the following

- Teachers base teaching on standards, aligned curriculum and supplemental materials. Teachers set improvement goals for individual students and for their classrooms.
- Teachers use state and district standards to plan curriculum and ensure that students understand the goal of each lesson and where they need to improve.
- Teachers set explicit, measurable goals for themselves and their students. Teachers identify lower performing students and set and monitor progress toward these students meeting standards.
- Teachers use data to identify student needs and continuously differentiate and adapt instruction based on data analysis to ensure all students reach grade level standards.
- Teachers share curriculum and collaborate regularly; achieving improvement goals is seen as a collective, collaborative activity and time and resources are allocated to support it.
- Teachers participate in regular, ongoing professional development that includes both access to research based curriculum and strategies and time with colleagues to work on implementation. (JFTK, 2004b)

Staff Selection, Leadership, and Capacity Building

"Once the academic goals of the system are clear, the leaders and teachers must be selected and developed to make these goals a reality for every learner in the system" (NCEA, n.d.-c, ¶ 12). According to The Framework, the district practice of this theme is recruiting, developing, and supporting strong, highly qualified instructional leaders and teachers. At the school level, leaders and staff are selected, developed, and supported based on analysis of student learning. Further, at the classroom level, teachers collaborate to increase professional and practical knowledge in order to improve instructional quality and student achievement results for all students (NCEA, n.d.-c). It is critical to note that, in professional learning communities, the district, school, and classroom practices of Staff Selection, Leadership, and Capacity Building are singularly focused on the theme Curriculum and Academic Goals.

Staff selection. "Producing and sustaining a vital public school system ... cannot [be done] without a dedicated, highly competent teaching force--teachers in numbers, working together for the betterment of the schools" (Fullan, 2003, p. 5). Choosing the right teachers to serve in schools, and getting the wrong teachers out of schools illustrates the concept First Who ... Then What, forwarded by Jim Collins (2001). In Good to Great, Collins (2001) identified six core factors that contributed to the sustained financial success of companies. Utilizing concept of First Who ... Then What, good to great companies "first got the right people on the bus, the wrong people off the bus, and the right people in the right seats – and then they figured out where to drive it" (Collins, 2001, p.75). Building the capacity of educators to deepen curricular knowledge and

improve professional judgment is discussed under Capacity Building in a subsequent section. Here, the importance of staff selection relates primarily to competence. California EPC 4 emphasizes the need for all teachers to be fully credentialed and for teachers of all grade levels and programs to be provided California's AB 466 Professional Development Program through an approved provider, featuring the district's adopted base program and/or intervention programs specific to each teacher's grade and/or program (CDE, n.d.-a).

Leadership. Quoted by Lezotte (2004), Ron Edmonds is said to have opined, "there may be schools out there that have strong instructional leaders, but are not yet effective; however, we have never yet found an effective school that did not have a strong instructional leader as the principal" (p. 4). Simply put, the principal as a strong instructional leader is a necessary but not sufficient component of a PLC. Schmoker (1997) observed, "There has been a virtual one-to-one correspondence between leadership and measurable success" (p. 145).

In order to provide instructional leadership to their teachers, administrators of high-performing schools possess a working knowledge of the base program. In fact, with EPC 3, the state of California emphasized the importance for school administrators to have an understanding of the district adopted reading/language arts and math programs (CDE, n.d.-a) as an element "crucial to an effective learning program" (CDE, 2005c, ¶ 1). According to California Assembly Bill 75 (Chapter 697, Statutes of 2001), Instructional Leadership Training in elementary base programs includes 40 hours of training and 40 hours of practicum with the district's adopted core programs (CDE, n.d.-a).

A PLC is a school with high leadership capacity and a principal who is capable of collaborative and inclusive leading, maintaining a school-wide focus on both student and adult learning, sharing decision making, expecting and creating high student achievement (Lambert, 1998). Schools with high leadership capacity have skillful leaders in their principals, teachers, parents, and students; a shared vision resulting in program coherence; an inquiry-based use of information to inform decisions and practice; broad involvement, collaboration, and collective responsibility reflected in roles and actions; reflective practice that leads consistently to innovation; and high or steadily improving student achievement (Lambert, 2003, p. 6-7).

"In PLCs, administrators are viewed as leaders of leaders. Teachers are viewed as transformational leaders" (Eaker et al., 2002, p. 22). Transformational leadership is viewed by Eaker and his colleagues (2002) as an individual's capacity to change the lives of those around them. Eaker and others assert that, in a school whose central purpose is learning, teachers are in the best position to "transform students' lives, motivate and inspire students, and get students to do things they never thought they could do" (Eaker et al., 2002, p. 23). The PLC concept operates from the assumption that leadership should be shared throughout a school, and leadership potential is developed among all staff members. "Principals of PLCs regard themselves as leaders of leaders rather than leaders of followers" (DuFour et al., 2005, p. 23). Embracing a belief that people can lead from any chair, the true power of a school principal in a PLC "derives from his ability to make other people powerful" (Zander & Zander, 2000, p. 68) and to "consistently produce extraordinary results" (Krisco, 1997, p. 130).

To successfully lead PLCs, the National Association of Elementary School Principals outlines six specific standards for what principals should know and be able to do.

1. Lead schools in a way that places student and adult learning at the center;
2. Set high expectations and standards for the academic and social development of all students and the performance of adults;
3. Demand content and instruction that ensure student achievement of agreed-upon academic standards;
4. Create a culture of continuous learning for adults tied to student learning and other school goals;
5. Use multiple sources of data as diagnostic tools to assess, identify, and apply instructional improvement; and
6. Actively engage the community to create shared responsibility for student and school success. (National Association of Elementary School Principals (U.S.), 2002, p. 6-7).

These six standards are reflected in the essential elements of PLC and in the Themes of NCEA's Best Practice Framework presented throughout this literature review, and are the context in which principals provide "the guidance and direction for instructional improvement" (Elmore, 2004, p. 57).

Capacity building. "High levels of student learning require high levels of staff competence" (York-Barr, 2001, p. 8). Barber and Fullan (2005) stress the importance of school and classroom leaders to learn in context through professional development as a

means for increasing teaching effectiveness that result in student achievement gains. Schools that value on-going professional development as opportunities to learn (Lambert, 2003; Marzano, 2003) understand that "improvement is based on doing things differently, ... doing things differently means changing what and how we do, [which] ultimately means learning to do differently" (Hord & Cowan, 1999, p. 45). Capacity building includes transferring new learning into new action such that new ways become the norm (Fullan, 2004). Schools that value learning also pursue integrity in their choices for professional development, choosing learning opportunities consistent with the school's core values (Reeves, 2000). Two types of ongoing professional development techniques stand out as being most powerful in changing professional practice: engaging teachers in reflective practice and collegial coaching (Byrk, Camburn, & Louis, 1994; DuFour et al., 2004; DuFour et al., 2005; Eaker et al., 2002; Elmore, 2004; Fullan, 2005b; Hord, 2000; Kruse et al., 1994; Lambert, 2003; Newmann & Wehlage, 1995; Schlechty, 2005; Schmoker, 2005a; Sparks, 2005; York-Barr, 2001). These exercises serve to reinvigorate educators, giving them "access to passion" that fuels their momentum to contribute to their schools (Zander & Zander, 2000, p. 119).

Reflective practice is defined by York-Barr (2001) as "an inquiry approach to teaching that involves a personal commitment to continuous learning and improvement" (p. 3). It requires an individual or group to purposefully pause in order to gain an open perspective and to employ higher-level thinking processes (York-Barr, 2001). "If educators do not reflect on and learn from their practice, they are likely to continue doing what they have been doing" and, hence, continue to get the results they have always

gotten (York-Barr, 2001, p. 9). In 10 years of teaching, for example, lies the possibility that an educator continues to improve by reflecting on his professional practice. Alternatively, without reflection, the educator may repeat the same year of teaching without learning. The State of California recognizes the importance of setting aside time for reflective practice with EPC 7, which calls for regularly scheduled teacher grade-level collaboration periods. (CDE, 2005c, n.d.-a).

Collegial coaching has been found to be an element "crucial to an effective learning program" (CDE, 2005c, ¶ 1) by the state of California (CDE, n.d.-a). EPC 6 is "on-going instructional assistance and support for teachers" in both reading/language arts and in math (CDE, n.d.-a, p. 6). This support may take the form of instructional coaches and content experts "who are knowledgeable about the adopted program, and who work inside the classroom to support teachers and deepen their knowledge about the content and delivery of instruction, and specialists who have experience coaching teachers and who are knowledgeable about the adopted program" (CDE, n.d.-a, p. 6).

Just for the Kids' California Best Practice Study based its research on the NCEA Framework and, in its 1st year, studied best practices of 10 high-performing California elementary schools and 5 average-performing schools as a control group (JFTK, 2004a). In the theme of Staff Selection, Leadership and Capacity Building, teachers in the classrooms of high-performing California elementary schools engaged in the practice of "Collaborate to increase knowledge and improve instructional quality for all students" (JFTK, 2004f, ¶ 2). Nationally, the Critical Attributes of this classroom practice were identified by NCEA as

1. Collaborative team meetings are regular and frequent. Teachers meet at least weekly, often daily, in horizontal (grade-level) teams. These teams share collective responsibility for all students' success.
2. Grade-level (horizontal) teams discuss curricular and instructional issues, including lesson planning, instructional strategies, and student learning needs. These teams take solution-centered approaches to learning needs; and inquiry, reflection, and problem-solving behaviors on the part of team members are highly valued.
3. Grade-level teams provide strong support for new teachers and teachers new to the school.
4. Teachers participate in vertical teams of teachers in grades above and below theirs
5. Vertical and horizontal teams study student work examples and student performance data.
6. Collaboration leads to greater consistency in learning across grades. (NCEA, n.d.-d)

In California, on target classroom actions consistent with the Critical Attributes of the practice of "Collaborate to increase knowledge and improve instructional quality for all students" (JFTK, 2004f, ¶ 2) are

- Teachers meet regularly with colleagues to learn how to improve teaching and learning from a variety of sources-both within and from outside the school and district.

- Teachers take on a variety of formal and informal roles as instructional leaders.
- Teachers participate in a data-based learning community that continually examines practice together.
- Teachers focus on becoming more skilled in using a rich menu of curriculum and instructional strategies to help more students meet standards.
- Teachers pay particular attention to learning and using new strategies to help ELLs, students living in poverty, and students of color learn.
- Teachers use resources available to them to differentiate instructional practices in ways that accelerate the learning of underperforming students and groups of students (JFTK, 2004f).

Instructional Programs, Practices, and Arrangements

The Instructional Programs, Practices, and Arrangements theme "focuses on the 'things' that high-performing school systems use – the arrangement of time, the instructional resources and materials, technology, etc. Strong instructional leaders and highly qualified teachers need evidence-based tools and resources to reach high standards with every learner" (NCEA, n.d.-c, ¶ 1). The practices of California school districts demonstrating on-target evidence of this theme are the provision of research-based instructional programs and practices for all classrooms in all schools. At the school and classroom levels, the practices include the use of research-based Instructional Programs, Practices, and Arrangements. Again, as noted frequently in this manuscript, decisions of program, practice, and arrangements center around a singular focus: the results a school

wants for its students. In California's Title I schools, the desired result is meeting its AMO.

Programs and practices. High-Performing districts, schools, and classrooms select and faithfully implement research-based instructional programs and practices that support learning toward specific curricular and academic goals. In the state of California, the State Board of Education has adopted only research-based instructional programs that are aligned to California grade-level and content standards. The goal, then, is for districts, schools, and classrooms to implement the State Board-adopted base programs in reading/language arts and math in the same manner in which research has proven them to be effective. EPC 1 requires districts and schools to provide the most recent State Board-adopted instructional programs in reading/language arts, reading/language arts intervention, and math, and to document the programs' "daily use in every classroom with materials for every student" (CDE, n.d.-a, p. 1).

Arrangements. Professional learning communities are always characterized by a collaborative culture in which time is carefully and strategically managed (Eaker et al., 2002). To maximize learning opportunities for students, California's EPC 2 specifically outlines the number of uninterrupted minutes of instructional times per subject area (including reading/language arts, math, and intervention classes) per school level (CDE, n.d.-a).

"In order for students to learn well in school, so, too, must the community of educators around them" (York-Barr, 2001, p. 17). In order to maximize learning opportunities for students, teachers' time must also be carefully managed in order to

provide at least "monthly collaboration by grade level" as addressed in EPC 7 (CDE, n.d.-a, p. 7). Hord (1997, 2000) and Hord & Boyd (1995) stressed that effective use of time is a crucial physical structure of a PLC. Kruse et al. (1994) agreed that teachers need "substantial and regularly scheduled blocks of time ... to conduct ongoing self-examination and self-renewal" (p. 5). Reeves (2000) states that "transformational staff development occurs weekly or more frequently" (p. 218), and DuFour and his colleague insist that time for collaboration "must be built into the school day" (DuFour & Eaker, 1998, p. 121). Once collaboration is established, school leaders must establish structures for teaming and communication (Fiszer, 2004). The discussion of the Monitoring: Compilation, Analysis, and Use of Data theme describes the collaborative use of curriculum-embedded assessment data as a purposeful discussion tool in a PLC.

Just for the Kids' California Best Practice Study based its research on the NCEA Framework and, in its 1st year, studied best practices of 10 high-performing California elementary schools and 5 average-performing schools as a control group (JFTK, 2004a). In the theme of Instructional Programs, Practice and Arrangements, teachers in the classrooms of high-performing California elementary schools engaged in the practice of "Use effective and research based programs, practices and arrangements" (JFTK, 2004c, ¶ 1). Nationally, the Critical Attributes of this classroom practice were identified by NCEA as

1. Teachers embrace the use of district-selected instructional resources knowing that they were selected based on evidence that they were effective with similar student populations or, when available, on scientifically based research.

2. Teachers provide continual feedback relative to use of the selected instructional resources. Additional needs for professional development or supplemental materials are articulated and special notes related to experiences in the delivery of the program are captured for future use.
3. Supplemental instructional resources (beyond those provided at both the district and school levels) are selected based on demonstrated student learning needs in the classroom and on their relationship to curricular objectives. Teachers always share both the reasons they sought the additional materials and the materials themselves. If effective (based on student performance), the materials will be integrated into those provided for teaching the given objective
4. Teachers intentionally choose instructional practices and strategies supported by evidence of effectiveness and continually review their practices based on student performance.
5. Instructional time is guarded to focus on core academic objectives. Teachers are careful to pace instruction to ensure that students master the material prior to being assessed
6. Flexible student arrangements provide individualized and small group instruction as much as possible (NCEA, n.d.-a)

In California, on target classroom actions consistent with the Critical Attributes of the practice of "Use effective and research based programs, practices and arrangements" (JFTK, 2004c, ¶ 1) resemble the following

- Teachers build their lessons on research-based programs, practices and arrangements, and tailor them to meet the identified needs of their students.
- Teachers use standards aligned curriculum and pacing and differentiate instruction within this common framework.
- Teachers use and supplement district-adopted programs and arrangements in consistent and effective ways to differentiate instruction for accelerated and below benchmark learners (JFTK, 2004c)

Monitoring: Compilation, Analysis, and Use of Data

As discussed earlier with the theme Curriculum and Academic Goals, effective schools clearly identify the intended learning goals by grade-level and course (Marzano, 2003). Then, after "ensuring that the schools are equipped with the staff and the tools to successfully deliver the [intended] curriculum, the school system then asks and answers" (NCEA, n.d.-c, ¶ 11) the second key question of a PLC: How are we going to know if students learned what we said they would learn? (DuFour & Eaker, 1998; Eaker et al., 2002).

Marzano (2003) insists upon the use of timely and specific feedback about how students are performing relative to the agreed-upon course standards. "Unless a school employs assessments that are specific to the curriculum actually taught, it cannot accurately determine how well its students are learning" (Marzano, 2003, p. 38).

PLCs monitor their progress toward defined goals by analyzing student achievement data (Reeves, 2000; Rosenholtz, 1991; Schmoker, 1997). "Cultures of evaluation must be coupled with cultures of learning in order to sort out promising from

not-so-promising ideas and especially to deepen the meaning of what is learned" (Fullan, 2004, p. 10). Fullan suggested that "developing cultures for evaluation" is a critical driver of actions within a PLC (Fullan, 2004).

As already discussed, PLCs are driven by the results they want (DuFour & Eaker, 1998; Eaker et al., 2002). Procedures, processes, policies, and programs are designed around those desired results. A PLC outlines priorities, benchmark goals they hope to achieve along the way, and a timeline for action steps to move the organization into action around its core purpose (Eaker et al., 2002). It serves then, that PLCs would measure success "on the basis of results rather than [on their] intentions" to create those results (Eaker et al., 2002, p. 43). To this end, instead of attempting to control and regulate the processes of education, schools should be held more accountable for student outcomes (Newmann, 1991c). As Lezotte (2006) states,

> In the effective school, pupil progress over the essential objectives are measured frequently, monitored frequently, and the results of those assessments are used to improve the individual student behaviors and performances, as well as to improve the curriculum as a whole. (p. 6)

California high-performing districts "develop user-friendly student assessment and data monitoring systems to track school, teacher, and student performance" (JFTK, 2004a, ¶ 3). With EPC 5, the state of California recognized the importance of a student achievement monitoring systems (CDE, n.d.-a) as an element "crucial to an effective learning program" (CDE, 2005c, ¶ 1). The state determined that districts and schools with effective learning programs frequently utilize an assessment and monitoring system

(like curriculum-embedded tests every 6 to 8 weeks) to inform teachers and principals about student progress and effectiveness of instruction. School leaders then use this data to make decisions that will improve instruction and student achievement (CDE, n.d.-a).

At the school and classroom levels, the timely data from curriculum-embedded assessments is used to monitor teaching and learning, and to inform instructional decisions (JFTK, 2004a). Also "crucial to an effective academic program" (CDE, 2005c, ¶ 1,) is EPC 7 which calls for regularly scheduled teacher grade-level collaboration to plan and discuss lesson delivery "based on curriculum-embedded assessment data" (CDE, n.d.-a, p. 7). With their focus on desired results, educators in a PLC engage in metareflection (Senge, 2000), or double-loop learning (Argyris, 1990), where student achievement data are filtered through the school's governing purpose and values to determine the effectiveness of their teaching and to design next-steps. Because non-PLCs most often use single-loop learning to focus on solving problems, look for errors and initiate corrective measures, educators do not consider why problems exist in the first place (Argyris, 1990). However, with their "collective focus on student learning," educators in a PLC "assume that all students can learn at reasonably high levels and that teachers can help them" (Kruse et al., 1994, p. 4). Engaging in inquiry and being open to personal change may lead collaborative teachers to more appropriate strategies for intervention.

Beyond "openness to improvement" (McLaughlin, 1994, p. 36), Reeves (2000) asserts that teachers must take new learning a step further by diligently applying their lessons learned in the classroom. Diligence, he says, "is not about good intentions nor

about inspiration nor about popularity. It is about action" (Reeves, 2000, p. 63). The learning gleaned from this type of examination is only visible if the organization and the individual members within the organization have the capacity to engage in double-loop learning, and the diligence to apply new learning. This is why the discipline of mental models (Senge, 2000) is of vital importance when building capacity. Organizations that have identified their core commitments have "strong system of beliefs and values ... can become the prime direction source" (Schlechty, 2002, p. 109).

"School systems must clearly articulate standards for student learning, teaching, leadership, and staff development and then establish accountability and incentive systems related to those standards" (Sparks, 2002, p. 5-1). Accountability systems "must answer at least four common sense questions" according to Reeves (2000). They should (a) give students and parents information about individual student achievement and information about school performance; (b) give information about ways to help students learn; (c) help to determine school effectiveness; and (d) have integrity--that is, they should measure what the organization values and be faithful to action toward the results they want to achieve.

> In addition, classroom assessment significantly supports student learning when clear and appropriate learning targets [are communicated] with students from the beginning of the learning; ... accuracy of classroom assessments of those targets [are increased]; students have continuous access to descriptive feedback; and continuously [involve students] in classroom assessment, record keeping, and communication processes. (Stiggins, 2005, p. 67)

"Schools that operate as professional learning communities use formative assessments on a frequent basis to ask, 'Are the students learning and what steps must we take to address the needs of those who have not learned?'" (DuFour et al., 2004, p. 24).

Building on the work of Stiggins (2001, 2005), Stiggins, Arter, Chappuis, and Chappuis (2004) and Wiggins (1998), Barber and Fullan (2005) insist on intelligent accountability, the distinction between assessments of learning, and assessments for learning. Summative assessment, or assessment of learning, "involves transparent, external accountability to the public and to government as the public's agency" (Barber & Fullan, 2005, p. 34). Formative assessment, or assessment for learning, concerns the use of student learning data as a strategy for directly improving teaching and learning (Barber & Fullan, 2005, p. 34). Reeves (2000) makes a similar distinction between system-wide indicators of educational performance as "non-negotiables that must be measured" and reported to stakeholders, and "school-based indicators," or "antecedents to excellence" that help schools to refocus their strategies on student achievement of specific learning outcomes (p. 115-116). Both types of assessments are used constructively and purposefully in PLCs (Barber & Fullan, 2005; Reeves, 2000, 2005; Stiggins, 2001, 2005; Stiggins et al., 2004; Wiggins, 1998).

Just for the Kids' California Best Practice Study based its research on the NCEA Framework and, in its 1st year, studied best practices of 10 high-performing California elementary schools and 5 average-performing schools as a control group (JFTK, 2004a). In the theme of Monitoring: Compilation, Analysis, and Use of Data, teachers in the classrooms of high-performing California elementary schools engaged in the practice of

"Monitor student learning at regular intervals and use this data to inform instruction" (JFTK, 2004d, ¶ 1). Nationally, the Critical Attributes of this classroom practice were identified by NCEA as

1. Teachers examine and use district benchmark and state assessment results to direct instructional decisions. Classroom assessments are supplemental to and aligned with these assessments.
2. Classroom assessment is ongoing and richly varied to monitor student learning of district curriculum. Assessment tasks require students to demonstrate a command of basic skills as well as more complex thinking since that prior knowledge is a prerequisite to effective learning. Performance data includes observation of student behavior, engagement, daily work, participation, and homework. These data ensure that what has been taught has been learned.
3. Teachers study prior student performance data to understand the needs of students entering their classes.
4. Students performing below grade level are monitored even more frequently. Students who demonstrate early mastery of a given academic objective are given more challenging assignments and opportunities.
5. Specific student progress is shared with the principal and parents in writing, by phone, and in conferences. Teacher grades and feedback are highly predictive of student's ability to demonstrate mastery on district and state assessments. (NCEA, n.d.-e)

In California, on target classroom actions consistent with the Critical Attributes of the practice of "Monitor student learning at regular intervals and use this data to inform instruction" (JFTK, 2004d, ¶ 1) resemble the following

- Teachers monitor student performance, formally and/or informally at regular intervals.
- Teachers use common assessments to monitor student progress, adjust their teaching, and identify effective strategies to share with colleagues.
- Through regular meetings with students, teachers hold students accountable and support students to reach goals. Students often know their own strengths and weaknesses as revealed by assessments and can articulate their own goals and strategies for improvement.
- Teachers collect data, differentiate instruction and then reevaluate students quickly to determine if new practices bring about desired results.
- Teachers adopt and supplement the state, district and school assessments with their own on-going assessments to ensure frequent review of their students' performance. (JFTK, 2004d)

Recognition, Intervention, and Adjustment

DuFour et al. (2005), DuFour & Eaker (1998), and Eaker et al. (2002) outline central questions to guide the formation of all aspects of school structure: (a) what is it we want all students to learn? (b) How will we know when each student has mastered the essential learning? (c) How will we respond when a student experiences initial difficulty in learning? (DuFour et al., 2005, p. 15). In a PLC, the most important questions involve

what happens after the monitoring of student achievement. PLCs have timely, systematic, school-wide responses to support students who experience initial difficulty learning. This response is based on intervention rather than remediation, is systematic and timely, and is compulsory (DuFour, 2005; DuFour et al., 2004; Marzano, 2003). The NCEA found that high-performing school systems in California utilize "pyramids of intervention that provide immediate and intense intervention at multiple levels when learning is interrupted" (NCEA, n.d.-c, ¶ 10).

With the focus on desired student results and a careful analysis of assessments data that indicate how students and the school system are working toward the result, educators make adjustments to better reach the target goal. At the district level, the practice of the theme Recognition, Intervention and Adjustment is action based on the performance of the school leader, teachers, and students. Similarly, school practices are actions determined by performance of teacher and students, and classroom practices are determined by student performance (JFTK, 2004a).

Recognition. Because learning communities value experimentation and entrepreneurship (Sergiovanni, 1996), they demonstrate the need for organizations to "amplify positive deviance" (Sparks, 2002, p. 14-3) and "celebrate the outlaws" whose results exceed typical outcomes (Havener, n.d., p. 1). Learning organizations must then "create intentional processes for reproduction of [those] successes" (Elmore, 2004, p. 33).

Recognition also comes in the form of celebrations, ceremonies, rituals, and stories, which help to foster the culture of a learning community (DuFour & Eaker, 1998). For both teachers and students, public recognition has a positive effect on those

who receive it, recognition reinforces the values that are shared by the school and signals what is important, it provides a real-life example of what is valued at the school, and it fuels momentum toward the fulfillment of the school's shared vision (DuFour & Eaker, 1998).

Intervention. Intervention programs are "crucial to an effective academic program" (CDE, 2005c, ¶ 1). EPC 1.2 requires that the school and district provide "the most recent State Board-adopted reading/language arts intervention program [and that it is] documented to be in daily use in every reading intervention classroom, with materials for every participating student" (CDE, n.d.-a, p. 1). In addition, with EPC 2, the state of California specifies the number of additional instructional minutes to be provided to students involved in the intervention reading program (CDE, n.d.-a).

DuFour and his colleagues (2004) assert that classroom teachers in traditional schools are left to reckon with the question of how to deal with a student who does not learn, despite the teacher's best efforts. "The support a student will (or will not) receive will depend on the practice of his or her teacher" (DuFour et al., 2004, p. 7). However, in a PLC, this question is not left to the individual teacher. Instead, a school-wide system of interventions "provides all students with additional time and support when they experience initial difficulty in their learning" (DuFour et al., 2004, p. 7). Four elements of a PLC's response to learning difficulty are (a) a focus on intervention instead of remediation, (b) a closely monitored systematic school-wide response, (c) a quick identification of a student's learning difficulty and timely response, and (d) a requirement instead of an invitation for students to receive extra help (DuFour et al., 2004).

Adjustment. At the school and classroom levels, timely data from curriculum-embedded assessments and student responses to interventions are used to monitor teaching and learning, and to inform instructional decisions (JFTK, 2004a). "Crucial to an effective academic program" (CDE, 2005c, ¶ 1) is EPC 7 which calls for regularly scheduled teacher grade-level collaboration to plan and discuss lesson delivery "based on curriculum-embedded assessment data" (CDE, n.d.-a, p. 7). With their focus on desired results, educators in a PLC engage in metareflection (Senge, 2000), or double-loop learning (Argyris, 1990) where student achievement data are filtered through the school's governing purpose (to meet the AMO) and values to determine the effectiveness of their teaching and to design next-steps, including additional adjustment in the professional response to a student who is experiencing initial difficulty learning.

Just for the Kids' California Best Practice Study based its research on the NCEA Framework and, in its 1st year, studied best practices of 10 high-performing California elementary schools and 5 average-performing schools as a control group (JFTK, 2004a). In the theme of Recognition, Intervention, and Adjustments, teachers in the classrooms of high-performing California elementary schools engaged in the practice of "Recognize, intervene or adjust based on student performance" (JFTK, 2004e, ¶ 1). Nationally, the Critical Attributes of this classroom practice were identified by NCEA as

1. Learning is not a variable. Resources, time, and strategies for learning will vary to ensure all students in the classroom meet stated academic goals.
2. Student performance data, augmented by daily student monitoring, are used to recognize student success and to determine when and what interventions are

needed. Extended opportunities are available for students who demonstrate early mastery of the curriculum. These interventions and extensions are continually reviewed within the collaborative planning team.

3. Proven, practical intervention practices and strategies (e.g., reteaching, flexible grouping, paraprofessional support, etc.) have been identified and developed to serve as first-level responses to learning difficulties. If learning difficulties are common across a particular concept or objective, additional resources are identified, and the difficulty is discussed within the teacher's collaborative planning group.
4. Classroom-selected instructional resources, practices, and arrangements are continually evaluated and/or adjusted in terms of student achievement results.
5. Interventions begin early in the school year (within the first 3 weeks of school opening).
6. Teachers are quick to ask for assistance when classroom-level interventions are not sufficient to address learning needs of any given student. Communication with teacher collaborative teams and the principal are strong and constant relative to student learning concerns.
7. Intervention effectiveness is continually measured. (NCEA, n.d.-f)

In California, on target classroom actions consistent with the Critical Attributes of the practice of "Recognize, intervene or adjust based on student performance" (JFTK, 2004e, ¶ 1) resemble the following

- Teachers have in place formal and informal opportunities to recognize students for emotional, social, intellectual and ethical growth and achievements.
- Teachers hold themselves accountable to identify and address inadequate student performance and provide students with pressure and support to improve.
- Teachers provide necessary support to students (often in collaboration with colleagues, school and district expert staff and parents) so they can continually track their students receiving intervention towards redesignation.
- Teachers acquire facility with a menu of intervention programs equipping them to adjust as called for in order to better meet the range of diverse students' needs.
- Teachers engage in student intervention quickly and they reassess students regularly towards redesignation.
- Teachers turn to other resources for help such as a reading specialist when in-class intervention is unsuccessful.
- Teachers provide interventions on the clock rather than as volunteer service. (JFTK, 2004e)

The Practices

The primary contents of The Framework are the Practices. Referring to Appendix A, the contents of each box are "elements of the school system that were found to distinguish the activities of high-performing schools from average-performing ones"

(NCEA, n.d.-c, ¶ 5). In some instances, elements of the practices were found in some average-performing schools, but the degree to which the practice is developed and institutionalized leads to differences in the degree to which in student achievement improvements were sustained over time.

The Practices are organized by Theme and by School System Level at which they are enacted, both of which were presented in earlier sections of this chapter (NCEA, n.d.-c) (Appendix A). As the practices are in action at various school levels in each Organizing Themes, it is important to remember the big picture that helps to make sense of the individual pieces. NCEA uses a jigsaw puzzle analogy to conceptualize the idea:

> knowing how any particular piece fits into the finished puzzle is often determined by studying the entire picture. In the absence of a big picture for a school system, each practice stands alone. And yet, the way these practices relate to, interact, or reinforce one another is equally important. Therefore, the interconnectedness of practices is critical within the larger organizational structure of The Framework. (NCEA, n.d.-c, ¶ 2)

The relationship of The Framework's Practices to the relevant research about PLCs as well as descriptions of the Critical Attributes and on target actions of each classroom practice, was included in the literature review of The Themes. In this section, the discussion of The Practices will review the literature related to systems thinking, the concept of interconnected relationships between professional practices at various organizational levels, which is a key component of PLCs.

Members of PLCs understand that human communities are living systems, and they recognize that the system "exert[s] a powerful influence on the performance of schools and individual teachers" (Sparks, 2002, p. 4-3). The thinking and behavior of educators within a PLC exemplify a shift of emphasis from part to whole, and a deeper recognition of the interconnected relationship between classrooms, schools, districts, and community (Capra, 1994).

Systems thinking emerged in several disciplines simultaneously during the first half of the twentieth century (Capra, 1994). Capra noted that the fields of biology, psychology, ecology and physics all came to abandon mechanistic and reductionist views of understanding the whole by reducing it to its parts. Rather, they came to view the world as a complex web of relationships between the various parts of a unified whole (Capra, 1994; York-Barr, 2001). Such is the view of a PLC.

Senge (2000) agreed that a living system has the capacity to re-create itself. According to Senge (2000) some scientists believe that living systems are distinctly characterized by unpredictable self-organization, cognition, interdependency. Living systems "gradually grow and evolve, form new relationships and have innate goals to exist and to re-create themselves" (Senge, 2000, p. 53). He posed the question that motivates his and others' research: "What would happen if school was organized around an appreciation of living systems rather than machines?" (Senge, 2000, p. 54).

Attempting to view the interdependent connections in a PLC, "it's hard to see all of the interplay because the network of relationships is so dense" (Moore, 2002, p. 27). Yet, behaviors of the various elements of the system affect other parts, and their "innate

tendencies ... lead to [either] growth or stability over time" (Senge, 2000, p. 8). A critical understanding of a PLC is an orientation toward learning, a compulsion to choose growth over stability. Moore (2002) distinguished this drive for learning as potential, which she defined as "hidden doorways of opportunity that contain the means to fulfillment" (p. 25).

"All the components of any system ... exist for one reason – to enable the system to accomplish its purpose," to achieve its desired results (Havener, 1999, p. 73). A PLC stays focused on its primary purpose, returning again and again to its core mission, vision, values, and goals to provide the background for dialogue and growth for all learners, and to create the results it wants for its organization.

Capra (1994) stated that systems are relationships and networks within networks at different levels. "At each level, we have systems that are integrated wholes while at the same time they are parts of integrated wholes" (Capra, 1994, p. 6). "The interconnectedness of all parts of the educational enterprise means classrooms, schools, and the school district are tied together in a web of relationships where decisions and actions in any particular part affect other parts and the system as a whole" (Sparks, 2002, p. 4-3).

While the NCEA's Best Practices Framework identifies practices that take place in concert within and between the district, school, and classroom levels, for the purpose of this study only classroom practices are considered. The Just for the Kids' California Best Practice Study, which based its research on the NCEA Framework, studied, in its 1st year, the best practices of 10 high-performing California elementary schools and 5

average-performing schools as a control group. In addition to the national criteria found by the NCEA, the California study adds the following 3 research elements which focus on the particular needs of California schools: "(a) a focus on English Language Learners; (b) a deeper understanding of the sequencing of the best practices (coherence); and (c) sustainability of educational reform efforts" (JFTK, 2004a, ¶ 2).

Summary

This literature review presented a brief history of the evolution of the concept of professional learning communities, and reviewed the key practices of a PLC through the lens of the Best Practices Framework, based on the NCEA's research of high-performing schools throughout the United States and in California.

CHAPTER 3: METHODS

Introduction

The purpose of this chapter is to discuss the nature of this quantitative study on the extent of differences in the presence of two PLC practices within elementary classrooms among selected GGUSD elementary schools that demonstrated either high versus low levels of sustained student achievement growth in ELA for ELL, SED, and Hispanic/Latino students for the 6 academic years spanning 1999-2005. This chapter presents the methodology used during the research phase of this study, a discussion of the research design and methods, definition and description of the population/census/analysis unit, and a discussion of consent, risk minimization, and confidentiality of human subjects. In addition, the characteristics measured by the study and data collection procedures are reviewed, and the instrument for the study is identified and described, including a discussion of scoring, data reduction and analysis, and validity and reliability, and the analytical techniques.

As discussed in depth in Chapter 1, the state of California began holding schools accountable for the academic achievement of their students with the API with the passage of the PSAA of 1999. In 2003, the state of California modified the accountability system to include the Title I funding conditions of NCLB. In order to reach the NCLB mandate for 100% of all students, both school-wide and in NSSs, to score proficient or above in ELA and Math by the year 2014, the state created AMOs for student performance on the CST as benchmarks by which schools and districts can measure improvement in student achievement over time. According to the state's plan, by 2004–05, all California

elementary schools were to demonstrate that 24.4% of all students school-wide and in each NSS were proficient or above in ELA on the CST, and 26.5% in Mathematics.

Based on a review of public state-wide results of the CST for all elementary schools in California, this researcher found that 33.40% (n = 1723) of the 5158 elementary schools with CST test scores reported by the CDE failed to make the state's AMO in ELA because of the performance of the ELL, SED, and Hispanic/Latino subgroups (CDE, 2005a). Specifically, the ELL subgroup did not meet AMO in 80.96% of the elementary schools who failed to make their AMO in ELA; the SED subgroup did not meet AMO in 63.15% of the schools; and the Hispanic/Latino subgroup did not meet AMO in 61.11% of the schools (CDE, 2005a).

The ELL, SED, and Hispanic/Latino subgroups make up a majority of the students served in the GGUSD. According to the CDE, of the 37,277 GGUSD students in grades 2 through 11 who participated in the CST in the spring of 2005, the largest NSS in GGUSD is the SED subgroup (n = 23,539) (PED, 2006d). The second largest NSS is the ELL subgroup (n = 20,353) (PED, 2006c), and the third-largest NSS is the largest ethnic/racial subgroup in GGUSD, Hispanic/Latino (n = 19,250) (PED, 2006d). A reason GGUSD was selected for this study is because of its demonstrated results in sustaining high levels of student achievement for these most at-risk subgroups. Thorough descriptions of the GGUSD and its student achievement results are provided in Chapter 1. However, to create a context for the research methods presented in this chapter, the achievement of GGUSD elementary schools is briefly described here.

Nearly all GGUSD elementary schools have made great strides to reach and maintain the statewide API Score goal of 800 since its inception in 1999 (PED, 2006a). In the same time period, all GGUSD elementary schools demonstrated comparable API improvement for their NSS (PED, 2001a, 2001b, 2003, 2004a, 2005a, 2005c, 2006a, 2006b). Nationwide recognition for this achievement came in 2004 when GGUSD won The Broad Prize for Urban Education for "overall improvement in student achievement while at the same time reducing achievement gaps across income and ethnic groups," (The Broad Foundation, ¶ 1).

However, although GGUSD won the Broad Prize for Urban Education, since 1999, groups of GGUSD elementary schools demonstrated varying degrees of success sustaining academic success for students in the subgroups most at-risk of not meeting AMO in ELA (PED, 2001a, 2001b, 2003, 2004a, 2005b, 2005c, 2006b). Disparate levels of sustained student achievement are noted in the 13 GGUSD elementary schools whose student populations consist of 65% or more ELL, SED, and Hispanic/Latino. Three of these schools, HP-1, HP-2, and HP-3 Elementary Schools made their 2004-05 AMO in ELA for all 3 of those subgroups and met API growth targets for each of the 6 school years from 1999-2005, and posted comparable API improvement for all NSSs each of those 6 years (CDE, 2005f; PED, 2001a, 2001b, 2003, 2004a, 2005b, 2005c, 2006b). Throughout this study, those 3 schools will be referred to as Higher Performing Schools, or HP Schools. Two other schools with the same demographic make-up, LP-1 and LP-2 Elementary Schools, failed to meet the state's AMO in ELA for 2004-05, and failed meet both their school-wide API targets and comparable improvement API targets for their

NSSs more than 4 of the 6 school years from 1999-2005 (CDE, 2005f; PED, 2001a, 2001b, 2003, 2004a, 2005b, 2005c, 2006b). Throughout this study, these 2 schools will be referred to as Lower Performing Schools, or LP Schools.

NCLB mandates that all children meet or exceed standards in ELA by the end of the 2013-2014 school year (USDE, 2002). In order to meet that mandate, California school leaders must identify and implement best practices employed in schools whose classrooms have demonstrated high levels of sustained student achievement growth for the subgroups of California elementary students most at-risk of failing to meet AMO in ELA.

The purpose of this study was to determine the extent of differences, as reported by teachers versus site administrators, in the presence of two PLC practices within elementary classrooms among selected GGUSD elementary schools. The 5 schools selected for the study serve demographically equivalent student populations and demonstrated either higher versus lower levels of sustained student achievement growth for the subgroups of California elementary students most at-risk of failing to meet AMO in ELA (ELL, SED, and Hispanic/Latino) from 1999 through 2005.

This chapter describes the research methodology used in this study. Discussion of the research design and methods includes a restatement of the purpose and research questions, review of the research design, and definition and description of the population/census/analysis unit. Next, the discussion of human subjects includes a description of consent, risk minimization, and confidentiality. Further, the characteristics to be measured by the study and data collection procedures are reviewed. The instrument

for the study is then identified and described, including a discussion of scoring, data reduction and analysis, and validity and reliability. Finally, the proposed analytical techniques are presented.

Restatement of Purpose and Research Questions

The purpose of this study was to determine the extent of differences, as reported by teachers versus site administrators, in the presence of two PLC practices within elementary classrooms among selected GGUSD elementary schools. The 5 schools selected for the study serve demographically equivalent student populations and demonstrated either higher versus lower levels of sustained student achievement growth for the subgroups of California elementary students most at-risk of failing to meet AMO in ELA (ELL, SED, and Hispanic/Latino) from 1999 through 2005. Specifically, the key PLC classroom practices examined in this study are Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment.

These are 2 of 5 Organizing Themes identified by the NCEA in the Best Practices Framework to describe specific practices high-achieving school systems consistently and simultaneously utilize at district, school, and classroom levels (NCEA, n.d.-c). Although each of these Organizing Themes are presented with a review of the relevant literature in Chapter 2, it is important here to note that, at the classroom level, the Organizing Theme of Monitoring: Compilation, Analysis, and Use of Data is the practice of using timely data from curriculum-embedded assessments to monitor teaching and learning, and to inform instructional decisions (JFTK, 2004a). At the classroom level, the practice of the

theme Recognition, Intervention and Adjustment is purposeful action toward a targeted goal based on the student academic performance (JFTK, 2004a).

The following research questions guided the study

1. What, if any, are the differences in the classroom PLC practice Monitoring: Compilation, Analysis, and Use of Data reported by teachers versus site administrators, based on both their school's designation as a Higher Performing School or a Lower Performing School, as well as select demographic characteristics of respondents?
2. What, if any, are the differences in the classroom PLC practice Recognition, Intervention, and Adjustment reported by teachers versus site administrators, based on both their school's designation as a Higher Performing School or a Lower Performing School, as well as select demographic characteristics of respondents?

Research Design

The research techniques used for this study follow a quantitative approach that is both comparative and relational using data that is cross-sectional in time, namely October-November 2006. The groups were selected without random sampling and represented a census of all eligible teachers and site administrators in the 5 elementary schools selected for this study. A census of the 119 eligible teachers and 9 eligible site administrators in the identified HP Schools and LP Schools comprise the total of all eligible participants in this study: 71 teachers and 5 site administrators in the HP Schools, and 48 teachers and 4 administrators in the LP Schools. A survey was administered to all

groups in order to provide an indication of the degree to which each group reports the PLC classroom practices of Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment.

While the instrument proposed for this study is discussed later in greater detail in the Instrument section, it is important to note here the two major motivations for proposing the inclusion of only 2 of the 5 Organizing Themes in this research endeavor. The first reason relates to the likely degree of measured difference between the implementation of classroom practices of particular Organizing Themes in HP Schools versus LP Schools in GGUSD. The second reason relates specifically to the format of the NCEA Best Practice Framework Self-Audit. Both are discussed in the following paragraphs.

Taken together, all five of the Organizing Themes, as well as the Supports, have a synergistic result on student achievement rooted in their implementation of specific practices at the classroom, school, and district levels. However, 3 of the 5 Organizing Themes of NCEA's Best Practice Framework were not selected for study in this research proposal because they are less likely than the selected themes to indicate significant differences in classroom practice to draw conclusions that would imply improvements of professional practice. Based on this researcher's experience as an elementary school principal in the GGUSD, two of the Organizing Themes, Curriculum and Academic Goals and Instructional Programs, Practices, and Arrangements, are largely determined by the District for use throughout all elementary schools. GGUSD utilizes a collaborative process to study curriculum, adopt standards-based academic goals, select

instructional programs and practices, and recommend instructional arrangements for all elementary schools within the District. While execution of these elements may vary slightly among schools or between individual classrooms, the District employs a wide variety of strategies, including capacity building through professional development and collaboration, to maintain a clear focus on and expectation of their faithful and full implementation. Because of the observed consistency throughout the elementary schools in GGUSD, this researcher did not believe that a measured difference in the presence of classroom practices of the Organizing Themes Curriculum and Academic Goals and Instructional Programs, Practices, and Arrangements was likely to be sufficient for GGUSD, or other schools or districts seeking to improve student achievement through the use of classroom practices of a PLC, to draw conclusions that would imply improvements of professional practice.

Additionally, the Organizing Theme of Staff Selection, Leadership, and Capacity Building was also not selected for use in this research proposal. At the classroom level, the practice of this theme includes teacher collaboration to increase professional and practical knowledge in order to improve instructional quality and student achievement results for all students (NCEA, n.d.-c). Because of their low decile scores on the CST when compared with other schools in California, LP-1 and LP-2 Elementary Schools, received specific, targeted intervention by the GGUSD in the 2005-06 school year. As a proactive measure intended to bring about improved student performance on the CST and other student achievement measures, the District made special arrangements with the Garden Grove Education Association (the teachers' union) to provide teachers in these

schools with a variety of innovations, including weekly collaboration periods. While this opportunity was provided for 5 additional GGUSD elementary schools experiencing a similar level of poor student performance on the CST, the interventions were not provided for the other 40 elementary schools, including the 3 HP Schools identified for this study. Without implying that teachers in HP Schools do not find time for collaboration, the absence of a dedicated weekly collaboration period during the contracted day for our HP Schools in the 2005-06 school year may sufficiently impact teacher and administrator perceptions of their use of data to inform instructional decisions and, as such, limit the results of this study.

The classroom practices of the Organizing Themes of Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment are more likely than the other three Organizing Themes to generate useful results for GGUSD because the District has recently implemented district-wide benchmark assessments to document student growth toward identified grade-level and content standards at the elementary level. At the classroom level, the Organizing Theme of Monitoring: Compilation, Analysis, and Use of Data is the practice of using timely data from curriculum-embedded assessments to monitor teaching and learning, and to inform instructional decisions (JFTK, 2004a). With the focus on desired student results and a careful analysis of assessment data to indicate how students and the school system are working toward the result, educators make adjustments to better reach the target goal. At the classroom level, the practice of the theme Recognition, Intervention and Adjustment is purposeful action toward the target goal based on the student academic performance (JFTK, 2004a). The

difference in the degree to which the data from benchmark examinations and other assessments are successfully compiled, analyzed, and used for the purpose of recognition, intervention, and adjustment within the classroom setting between HP Schools versus LP Schools will be invaluable to district and site administrators planning for developing proficiency in this area.

The second motivation for limiting the research in this study to the classroom practices of only 2 of the 5 Organizing Themes of NCEA's Best Practice Framework is simply the time required to complete all portions of the Classroom-Level Self-Audit. The Curriculum and Academic Goals portion of the Self-Audit contains 31 questions, the Staff Selection, Leadership, and Capacity Building section has 45 questions, the Instructional Programs, Practices, and Arrangements portion includes 35 questions, the Monitoring: Compilation, Analysis, and Use of Data incorporates 36 questions, and Recognition, Intervention, and Adjustment consists of an additional 32 questions (JFTK, n.d.-a). Because classroom teachers are unlikely to complete a 179-question self-audit, the researcher elected to shorten the survey in order to enhance the rate of participation. The Self-Audits for Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment were further shortened from 68 to 44 questions for reasons discussed in the Instrument section of this chapter.

Population, Census, and Analysis Unit

The theoretical population for this study is the 47 elementary schools within the GGUSD, described in detail in Chapter 1. The study population consists of the 5 elementary schools selected for participation in this study. Within this population, there

are 2 groups of individuals: those teachers and administrators working in the 3 HP Schools, and those teachers and administrators working within the 2 LP Schools. Both groups share similar demographic make-up in that their student populations consists of 65% or more of each of the subgroups most at-risk of failing to meet AMO in ELA: ELL, SED, and Hispanic/Latino. However, they differ significantly in terms of the sustained high levels of student achievement results in ELA for their SED and Hispanic/Latino subgroups from the 1999-00 school year through 2004-05, defined by making Comparable Improvement on California's API. In addition, the two groups differ by their attainment of the 2004-05 AMO in ELA. HP Schools met the AMO of 24.4% of all students school-wide and in each NSS, (ELL, SED, and Hispanic/Latino) for ELA on the CST in 2004-05, and the LP Schools failed to meet the AMO for each of the same NSSs.

A census of eligible teachers and administrators from the identified HP and LP Schools was recruited for participation in this study. HP Schools HP-1, HP-2, and HP-3 each had 21, 27, and 23 eligible teachers, respectively. LP Schools LP-1 and LP-2 each had 25 and 23 eligible teachers respectively. Hence, there were a total of 119 eligible teacher participants. Except HP-1 which had only one, each of the 5 schools had 2 eligible administrators (a Principal and a Program Facilitator) for a total of 9 site administrators. However, only those eligible teachers and administrators present in the room at the time of survey administration were recruited to participate in the study. The analysis unit is 1 survey participant.

Higher Performing (HP) Schools

The 3 HP Schools selected for this study are HP-1, HP-2, and HP-3. HP-1 Elementary School first opened in 1980 and, in 2004-05, had 2 site administrators (a Principal and a Program Facilitator), 31 teachers, and 703 students (CDE, n.d.-d; Education Data Partnership [EDP], 2006c). HP-1 had 26 classified staff members, including 14 paraprofessionals, who were not included in the study (EDP, 2006c). In 2004-05, HP-1 had 1 special education class that served students in the Resource Specialist Program (EDP, 2006c). The demographic make-up of HP-1 Elementary School is 18.6% Asian, 75.8% Hispanic/Latino, 66.1% ELL, and 67.6% SED (EDP, 2006c). The average 2004-05 demographic information about the HP Schools and LP Schools is summarized in Table 1. Seven of 21 eligible from HP-1 participated in the study. From the demographic survey administered with the study-related survey in October-November 2006, 5 teachers taught at the school for 1-10 years and 2 for 11-20 years. One of the teachers reported they were 20-30 years old, 3 were 31-40 years old, 1 was 41-50 years old, and 2 were 51-60 years old. Six of the teachers were female, and 1 was male. Because it could be used to identify individuals or schools, demographic information about the school administrators is not presented here. Instead, average administrator demographics are presented alongside average teacher demographics for HP versus LP Schools in Table 2. It must be noted here that HP-1 had 1 vacant administrative position.

HP-2 Elementary first opened in 1980 and had 2 site administrators (a Principal and a Program Facilitator) (CDE, n.d.-e; EDP, 2006d). In 2004-05, HP-2 employed 31

teachers and served 688 students (EDP, 2006d). HP-2 had 38 classified staff, including a range of 25 paraprofessionals, who were not included in the study (EDP, 2006c, 2006d). HP-2 Elementary had 1 special education class that served students in the Resource Specialist Program (EDP, 2006c, 2006d, 2006e). In 2004-05, the demographic make-up of HP-2 was 29.9% Asian, 67.2% Hispanic/Latino, 73.1% ELL, and 85.6% SED (EDP, 2006d). The average 2004-05 demographic information about the HP Schools and LP Schools is summarized in Table 1. Twenty-three of 27 eligible teachers from HP-2 participated in the study. From the demographic survey administered with the study-related survey in October-November 2006, 13 teachers taught at the school for 1-10 years, 5 for 11-20 years, 4 for 21-30 years, and 1 for 31 or more years. Five of the teachers reported they were 20-30 years old, 9 were 31-40 years old, 2 were 41-50 years old, 4 were 51-60 years old, and 3 were 61 years or older. All 23 of the teachers were female. Because it could be used to identify individuals or schools, demographic information about the school administrators is not presented here. Instead, average administrator demographics are presented alongside average teacher demographics for HP versus LP Schools in Table 2.

HP-3 Elementary School opened in 1997 and had 2 site administrators (a Principal and Program Facilitator) (CDE, n.d.-f; EDP, 2006e). In 2004-05, HP-3 Elementary employed 29 teachers and served 600 students (EDP, 2006e). HP-3 had 29 classified staff members, including 15 paraprofessionals, who were not included in the study (EDP, 2006e). HP-3 had 1 special education class that serves students in the Resource Specialist Program (EDP, 2006e). In 2004-05, the demographic make-up of

HP-3 Elementary was 7.3% Asian, 89.0% Hispanic/Latino, 72.8% ELL, and 91.0% SED (EDP, 2006e). The average 2004-05 demographic 23-three eligible teachers from HP-3 participated in the study. From the demographic survey administered with the study-related survey in October-November 2006, all 18 of the participating teachers taught at the school for 1-10 years. Three of the teachers reported they were 20-30 years old, 10 were 31-40 years old, 4 were 41-50 years old, and 1 was 51-60 years old. Seventeen of the teachers were female, and 1 was male. Because it could be used to identify individuals or schools, demographic information about the school administrators is not presented here. Instead, average administrator demographics are presented alongside average teacher demographics for HP versus LP Schools in Table 2.

Lower Performing (LP) Schools

The LP Schools selected for this study are LP-1 and LP-2 Elementary Schools. LP-1 Elementary School first opened in 1980 (CDE, 2005f). According to the Education Data Partnership, in 2004-05, LP-1 Elementary had 2 administrators (a Principal and a Program Facilitator), 34 teachers, and 749 students. The 44 classified staff members, including 27 paraprofessionals, employed at LP-1 Elementary School were not included in this study (EDP, 2006b, 2006c). LP-1 Elementary School had 1 special education class that served students in the Resource Specialist Program (RSP). In addition LP-1 Elementary had 4 Special Day Classes (SDC). Achievement results for students in these 4 SDC classrooms for whom LP-1 is not their home school were not included in the school's state-reported CST results summary through 2004-05. The demographic make-up of the students at LP-1 Elementary is 11.3% Asian, 83.7% Hispanic/Latino, 68.1%

ELL, and 76.0% SED (as determined by qualification for free or reduced-price meals) (EDP, 2006b). The average 2004-05 demographic information about the HP Schools and LP Schools is summarized in Table 1. Twenty-four of 25 eligible teachers from LP-1 participated in the study. From the demographic survey administered with the study-related survey in October-November 2006, 18 of the teachers taught at the school for 1-10 years, 5 for 11-20 years, and 1 for 21-30 years. Six of the teachers reported they were 20-30 years old, 9 were 31-40 years old, 6 were 41-50 years old, and 2 were 51-60 years old. Twenty-one of the teachers were female, and 2 were male. (One teacher did not indicate age-range or gender.) Because it could be used to identify individuals or schools, demographic information about the school administrators is not presented here. Instead, average administrator demographics are presented alongside average teacher demographics for HP versus LP Schools in Table 2.

LP-2 Elementary School first opened in 1980 (CDE, 2005f). According to the Education Data Partnership, in 2004-05, LP-2 Elementary had 2 administrators (a Principal and a Program Facilitator), 32 teachers, and 729 students. The 28 classified staff members, including 16 paraprofessionals, employed at LP-2 Elementary School were not included in this study (EDP, 2006a, 2006c). In 2004-05, LP-2 Elementary School had 1 special education class that served students in the Resource Specialist Program (RSP). The demographic make-up of the students at LP-2 Elementary is 9.6% Asian, 80.8% Hispanic/Latino, 70.0% ELL, and 83.4% SED (as determined by qualification for free or reduced-price meals) (EDP, 2006a). The average 2004-05 demographic information about the HP Schools and LP Schools is summarized in Table

1. Twenty of 23 eligible teachers from LP-2 participated in the study. From the demographic survey administered with the study-related survey in October-November 2006, 13 of the teachers taught at the school for 1-10 years, 5 for 11-20 years, and 2 for 21-30 years. Four of the teachers reported they were 20-30 years old, 6 were 31-40 years old, 7 were 41-50 years old, and 3 were 51-60 years old. Nineteen of the teachers were female, and 1 was male. Because it could be used to identify individuals or schools, demographic information about the school administrators is not presented here. Instead, average administrator demographics are presented alongside average teacher demographics for HP versus LP Schools in Table 2.

Human Subjects

Participation in a research study that requires an individual classroom teacher or site administrator to self-reflect on their own professional practice carries obvious personal risks. Some risks are strictly personal in nature, and may include privately confronting an area of professional practice with which an individual feels that he is not working at an expected level. Other risks, however, may be perceived external attention (either positive or negative) that may come about from an individual's honest participation if confidentiality and anonymity is compromised. Efforts to minimize risk and maximize anonymity and confidentiality were included in the design of this study, and are outlined under Data Collection Procedures later in this chapter. In order to acknowledge known risks and to clarify procedures to safeguard anonymity and confidentiality, participants read an informed consent form (Appendixes B and C). In addition, to ensure that appropriate measures were taken to protect the anonymity and

Table 1

Comparison of Average 2004-05 demographic information of HP and LP Schools

Characteristic	Category	Type of School HP	LP
Year Opened		1980, 1997	1980
Average Number of Administrators		2	2
Average Number of Teachers		30.3	33
Average Number of Classified Employees		31	36
Average Number of Para-Professionals		18	22.5
Average Number of Special Ed. Classrooms		1	1 [a]
Average Student Demographics			
	Number of Students	663.7	739
	Asian	18.6%	10.5%
	Hispanic	77.3%	82.3%
	ELL	70.7%	69.0%
	SED	81.4%	78.7%

Note. HP = Higher Performing Elementary School; LP = Lower Performing Elementary School; ELL = English Language Learner; SED = Socio-Economically Disadvantaged. (CDE, n.d.-b, n.d.-c, n.d.-d, n.d.-e, n.d.-f; EDP, 2006a, 2006b, 2006c, 2006d, 2006e)

[a] LP-1 Elementary School had 4 Special Day Classes in addition to the RSP special education classroom. However, CST data of students for whom LP-1 is not their home school were not included in the school's CST results summary for 2004-05.

Table 2

Summary and Comparison of Selected HP and LP Demographic Data of Teacher and Administrator Study Participants

Characteristic	Category	Type of School	
		HP	LP
Administrator Age Range			
	20-30 years	0	25%
	31-40 years	25%	0
	41-50 years	25%	75%
	51-60 years	50%	0
	61 or older	0	0
Years as Administrator in Current School			
	1-5 years	25%	75%
	6-10 years	75%	25%
Administrator Gender			
	Male	50%	25%
	Female	50%	75%

(table continues)

Characteristic	Category	Type of School HP	LP
Teacher Age Range			
	20-30 years	18.8%	22.7% [a]
	31-40 years	45.8%	34.1% [a]
	41-50 years	14.6%	29.5% [a]
	51-60 years	14.6%	11.4% [a]
	61 or older	6.2%	0
Years Teaching in Current School			
	1-10 years	75.0%	70.5%
	11-20 years	14.6%	22.7%
	31-30 years	8.3%	6.9%
	31 or more	2.1%	0
Teacher Gender			
	Male	4.2%	6.8% [a]
	Female	95.8%	90.9% [a]

Note. HP = Higher Performing Elementary Schools; LP = Lower Performing Elementary Schools

[a] Percentages for LP Teacher Demographics do not total 100% because one teacher did not provide age-range or gender.

confidentiality of the participants, this proposal was approved by Pepperdine University's Institutional Review Board (IRB) before the data collection was begun.

Confidentiality between teachers and administrators is an important professional ethic. The principal risk for a subject participating in this study is potential harm, or a perceived potential harm, resulting from a breach of confidentiality. Because the Informed Consent documentation is the only record linking the subjects and the research, and because the investigator is employed within the GGUSD as an elementary school principal with professional relationships with the administrators at the elementary schools selected for this study, subjects may perceive a potential for a breach of confidentiality. In order to address this concern, the investigator requested and was granted a Waiver of Documentation of Informed Consent, which determined that a subject's completion of the survey indicated the subject's consent to participation.

Anonymity and confidentiality of the survey respondents was protected at all times. All survey materials were mailed in a postage-paid box by the US Postal Service to the researcher's home address. Consent forms were not collected, thus the subjects' names are not associated with their survey responses. For the purposes of this study, teachers provided demographic information including length of their career as a public school certificated employee, number of years of service in their current position, length of their tenure in their current position within GGUSD, and their length of tenure in their current position at this particular elementary school (if applicable). Participants indicated their age range and gender. However, this information was compiled with the results of the survey and results reported only in terms of groups of respondents. No information

that may be used to personally identify the response of an individual teacher will be released either publicly or to school or district administrators. Further, the names of the elementary schools selected for participation are not included in the study.

Once received by the researcher at her home address, the data was stored in a locked file cabinet to which only the investigator has access. The information gathered may be made available to other investigators with whom the investigator collaborates in future research. If such collaboration occurs, the data will be released without any personally identifying information so that participants cannot be identified, and the use of the data will be supervised by the investigator. The data will be maintained in a secure manner for an indefinite period of time (with a minimum of 3 years) for research purposes.

Beyond the discussion of confidentiality and anonymity conducted above, participation in this study required no more than minimal risk to the subjects. The probability and magnitude of harm or discomfort in the research were not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or physiological examinations or tests.

Characteristics Studied

In this study's research questions, 2 dependent numeric variables are studied: the Practice Average Scores (PAS) for the 2 classroom PLC practices of Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment. These scores were calculated separately based on the Type of School, an independent attribute divided into 2 nominal levels, HP Schools versus LP Schools; Type of Educator,

an independent attribute divided into 2 nominal levels, teacher versus site administrator; and 6 independent demographic attributes, length of service as a public school certificated employee, length of service as a public school teacher/administrator, length of certificated service in GGUSD, length of certificated service in current school, age, and gender.

In this study, 5 variables measured the educator's level of experience in different ways (length of service as a public school certificated employee, length of service as a public school teacher/administrator, length of certificated service in GGUSD, length of certificated service in current school, and age). Table 3 displays the Spearman rank-ordered correlations for these 5 variables. These 10 correlations ranged in size from r_s = .68 to r_s = .97 with the median correlation of r_s = .86. The Cronbach Alpha reliability coefficient for these 5 variables was r = .96 (Table 3). This suggested the utility of aggregating these variables into a total experience score based on averaging their respective z scores. Because the relationship of these 5 variables is so strong, the single variable Experience Level is used in their place in the Analytical Techniques.

The PAS was determined based on responses from classroom teachers and site administrators on a self-audit developed by the NCEA based on their Best Practice Framework. The method of calculating the PAS for the classroom PLC practices is described in the Instrument section of this chapter.

Table 3

Intercorrelations for the Variables Measuring the Educator's Level of Experience (N = 100)

Variable	1	2	3	4	5
1. Total Years as an Employee	1.00				
2. Total Years in Current Position	.91	1.00			
3. District Years in Current Position	.88	.97	1.00		
4. Years in Current Position at School	.76	.86	.89	1.00	
5. Age Range	.86	.80	.76	.68	1.00

Note. All correlations are significant at the $p = .001$ level. Cronbach Alpha reliability coefficient for the 5 variables = .96

Data Collection Procedures

Sampling Method

It was the researcher's original intention to include a census of each of the teachers and administrators in the five schools selected for this study during a survey administration in May or June 2006. However, data collection was delayed beyond the 2005-06 school year. Because staffing changes occurred over the summer months, only teachers and administrators who worked under a contract at the same selected school site during both the 2005-06 and the 2006-07 school years were determined to be eligible to participate in the survey administration in October and November 2006. Teachers and

administrators new to the school sites during the 2006-07 were assumed to possess insufficient knowledge related to the content of the survey. Due to the small sample of administrators, the researcher attempted to include administrators who no longer worked in the selected schools. However, due to the abundance of eligible teachers and the burden of time and expense to do so, no attempt was made to include teachers who no longer worked in the selected schools.

A census of eligible teachers and administrators from the identified HP and LP Schools was recruited for participation in this study. HP Schools HP-1, HP-2, and HP-3 each had 21, 27, and 23 eligible teachers, respectively. LP Schools LP-1 and LP-2 each had 25 and 23 eligible teachers respectively. Hence, there were a total of 119 teacher participants. Except for HP-1 which had only one, each of the 5 schools had 2 eligible administrators (a Principal and a Program Facilitator) for a total of 9 site administrators.

School participation was recruited with a one-on-one conversation between the each of current school principals and the researcher, during which a brief description of the study was offered and a verbal request for school participation was made. Once the principal agreed to permit the study to be conducted within a regularly scheduled staff meeting, the researcher reviewed the survey procedures no more than 24 hours before the survey administration. During the staff meeting, only the eligible teachers and administrators present in the room were recruited for the survey. The principal requested one teacher volunteer read the survey directions, distribute survey materials, and ensure that surveys were collected and returned to the researcher as outlined below. To standardize the survey administration, each principal was provided a script in the

Principal Directions for Survey Administration that contained a statement indicating that the school was selected to participate in a research study and a request for a teacher volunteer to read the directions, distribute survey materials, and ensure that they surveys are collected and returned (Appendix D). Additionally, the teacher volunteer received (a) a script of directions for subjects to complete the survey, (b) instructions to distribute materials, and (c) instructions for collecting the materials (Appendix E). Principals and program facilitators remained in the room until the directions were read and subjects had an opportunity to ask questions to clarify procedures. Principals and program facilitators then left the room to independently complete the Administrator Survey. The procedural steps used to collect data for this research study in a way that minimized risk and maximized anonymity to survey participants are listed in Appendix F.

Instrument

Selection

The instrument selected for this study is based on the research of The NCEA. The NCEA is a collaborative effort of the Education Commission of the States, The University of Texas at Austin, and Just for the Kids, whose purpose is to improve learning through the effective use of school and student data and the identification of best practices. The NCEA developed a Best Practices Framework which describes and evidences their research of more than 300 high achieving school systems across the United States. Comparing high-achieving schools to average-achieving schools, NCEA found that high-achieving school systems consistently utilize specific practices within five themes simultaneously at district, school, and classroom levels: Curriculum and

Academic Goals; Staff Selection, Leadership, and Capacity Building; Instructional Programs, Practices, and Arrangements; Monitoring: Compilation, Analysis and Use of Data; and Recognition, Intervention, and Adjustments (NCEA, n.d.-c). These five themes are presented with a thorough review of the relevant literature in Chapter 2 of this manuscript. Organized around the NCEA's Best Practice Framework, Self-Audit tools are freely available the general public to examine the teaching and learning practices with one's school system (JFTK, n.d.-a). In addition to this general permission, specific permission was granted from NCEA for the use of the Self-Audits for this study (Appendix G).

The surveys used in this study were taken directly from the questions developed by the NCEA. Questions from NCEA's Best Practices Framework Classroom-Level Self-Audits for Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment were compared with the sample Self-Audit Reports to determine which questions were included in the calculations of the critical attributes of each Organizing Theme at the classroom level. Only those questions directly related to the measurement of the critical attributes of the classroom practices of these two Organizing Themes were included, thus the number of questions reduced from 68 to 44. The eliminated 24 questions were used only in the School-Level and District-Level Self-Audits, and were not pertinent to this research proposal. This comparison is presented in Appendix H. Classroom-Level Self-Audit questions were re-numbered for formatting consistency in this study's surveys (Appendix I).

Similarly, the questions from NCEA's Best Practices Framework School-Level Self-Audits for Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment were compared with the sample Self-Audit Reports to determine which questions were included in the calculations of the measurement of the critical attributes of each Organizing Theme at the classroom level. Only those questions that directly relate to the measurement of the critical attributes of the classroom practices of these two Organizing Themes were included, thus the number of questions reduced from 35 to 24. The eliminated 11 questions were used only in the School-Level and District-Level Self-Audits, and were not pertinent to this research proposal. This comparison is presented in Appendix H. School-Level Self-Audit questions were re-numbered for formatting consistency in this study's surveys (Appendix I). The Classroom-Level and School-Level Surveys are located in Appendixes B and C, respectively.

Scoring

Survey responses were offered using a 5-point Likert Scale as summarized in Table 4. The method of calculating the Practice Average Score was determined in a personal communication with S. Collins, NCEA Director of School Effectiveness Analysis (April 6, 2006).

Teacher and school administrator responses were compiled for each Critical Attribute. Using a simple average, the Attribute Average Score was calculated for each Critical Attribute. Don't Know, Does Not Apply, or omitted responses were not counted as valid responses, and were not included in the divisor.

Table 4

Survey Response Scoring Guide

Weight of Response	Possible Responses
4	All, Always, Yes
3	Most, Often
2	Some, Sometimes
1	Few, Rarely
0	None, Never, No
Not Counted	Don't Know, Does Not Apply, Omission

Once the Attribute Average Scores were calculated, again a simple average was used to determine the overall PAS. The sum of the Attribute Average Scores was divided by the number of Critical Attributes identified for each classroom practice to determine the PAS for each elementary school group (HP Schools and LP Schools) for both practices studied, Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment.

The numeric range of scores for each Practice was 0.0 - 4.0. Because the NCEA did not provide an interpretation of the PAS, the range of scores was assumed to follow a normal distribution. One standard deviation away from the mean in either direction on the horizontal axis accounts for approximately 68% of subjects. Two standard deviations

away from the mean account for roughly 95% of subjects. Three standard deviations away from the mean accounts for about 99% of subjects. Hence, for both Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment, PAS in the range of 0.04-0.20 (the range of the third standard deviation on the left of the mean) was considered Very Little Evidence of Practice, and implied that, in the view of the survey participant, there was very little evidence that the PLC practice was used in classrooms. A PAS in the range of 0.21-1.28 (the range of the second standard deviation to the left of the mean) was considered Little Evidence of Practice, and implied that, in the view of the survey participant, there was little evidence that the PLC practice was used in classrooms. A PAS in the range of 1.29-2.00 (the range of one standard deviation to the left of the mean) was considered Low Moderate Evidence of Practice, and implied that the survey participant either reported that there was moderate evidence that the PLC practice was in use in the classroom, but somewhat inconsistently either in the practice of all Critical Attributes or throughout all classrooms in the school. A PAS in the range of 2.01-2.72 (the range of one standard deviation to the right of the mean) was considered High Moderate Evidence of Practice, and implied that the survey participant reported moderate evidence that the Critical Attributes of the PLC practice were in use in classrooms with a moderately strong level of consistency throughout all classrooms in the school. A PAS in the range of 2.73-3.80 (the range of two standard deviations to the right of the mean) was considered Strong Evidence of Practice, implying a great number of the PLC classroom practice was employed to a high degree in classrooms throughout the school. A PAS in the range of 3.81-3.96 (the range of three standard deviations to the

right of the mean) was considered as Very Strong Evidence of Practice, implying that a great number of the PLC practices were employed to a very high degree throughout all classrooms in the school. Table 5 summarizes the normal distribution for the PAS assumed in this study.

Data Reduction and Analysis

The researcher manually entered results of the demographic survey and self-audit questionnaires into an Excel worksheet, and had the data audited by another individual to ensure accuracy. The demographic information and survey responses were uploaded to SPSS, the statistical software which was used to run the statistical tests described later under Analytical Techniques.

Table 5

Normal Distribution of Practice Average Scores (PAS)

Interpretation	Range of PAS
Very Little Evidence of Practice	.04 – .20
Little Evidence of Practice	.21 – 1.28
Low Moderate Evidence of Practice	1.29 – 2.00
High Moderate Evidence of Practice	2.01 – 2.72
Strong Evidence of Practice	2.73 – 3.80
Very Strong Evidence of Practice	3.81 – 3.96

Note. Range of scores is 0.0 – 4.0. PAS = Practice Average Score

Validity and Reliability

At the time this research was being conducted, NCEA was in the process of establishing the validity and reliability of the NCEA Best Practice Framework Self-Audit. However, up to that date, reliability and validity had not yet been established (S. Collins, personal communication, April 6, 2006). In spite of this fact, the instrument was chosen for this study because NCEA's Best Practice Framework was used to determine finalists for the Broad Prize for Urban Education, which was awarded to the GGUSD in 2004 for "overall improvement in student achievement while at the same time reducing achievement gaps across income and ethnic groups," (The Broad Foundation, ¶ 1; S. Whisenant, personal communication, January 19, 2006). Although GGUSD won the award, the district's elementary schools had varying degrees of success with students in the subgroups most at-risk of not meeting AMO in ELA in 2004-05. It was appropriate to apply the same Best Practice Framework used as part of the criteria to select GGUSD for the Broad Prize to examine the classroom practices of groups of GGUSD elementary schools demonstrating disparate levels of sustainment of high levels of student achievement for ELL, SED, and Hispanic/Latino.

Because the Best Practices Framework was developed from a rigorous study by the NCEA, this researcher assumed that the content validity of the self-audits was already established. Reliability of the teacher scales used for the self-audits was established in this study. Psychometric characteristics for the teacher subsample for both practices are displayed in Table 6. Both theme scores had acceptable Cronbach alpha reliability coefficients, suggesting the teacher scales are reliable: Monitoring: Compilation,

Analysis, and Use of Data (r = .84) and Recognition, Intervention, and Adjustment (r = .88). However, there was insufficient data to provide evidence of the reliability of the administrator scales or the construct validity of either the teacher or administrator scales.

Table 6

Psychometric Characteristics for the Two Theme Scores. Teacher Subsample (n = 92)

Practice	Number of Attributes	Item Count	*M*	*SD*	Low	High	Alpha
1. Monitoring	5	22	3.06	0.41	2.04	4.00	.84
2. Recognition	7	22	2.74	0.59	0.93	4.00	.88

Note. Monitoring = Monitoring: Compilation, Analysis, and Use of Data; Recognition = Recognition, Intervention, and Adjustment.

Analytical Techniques

The dependent variables identified for this study were the PAS for the PLC practices Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment. Possible scores range from 0.0 – 4.0, with higher scores indicating greater evidence of practice.

Independent variables identified for this study were Type of School, Type of Educator, Experience Level and Gender. The attribute Type of School contained 2 levels: HP School and LP School. The attribute Type of Educator contained 2 levels:

teacher and site administrator. The attribute Experience Level was expressed in terms of an aggregated experience score as discussed earlier under Characteristics Studied. The attribute Gender contained 2 levels: male and female.

When the data collection phase of this research project was begun, specific research techniques were anticipated. For each research question was planned a factorial design approach in which a three-factor ANOVA would be conducted for each of the demographic characteristics for both of the PLC practices to determine the relationship between Type of School (HP School versus LP School), Type of Educator (teacher versus site administrator), and gender as they related to each of the 2 dependent variables.

However, after the data were collected there were too many sparse cells ($n < 5$) for a three-factor ANOVA to yield useable results. Therefore, alternate analytical techniques were determined, and are described next.

For both research questions, *t* tests were used to compare the PAS for Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment based on Type of Educator, Type of School, and Gender. A point biserial correlation was determined to indicate the size and strength of a relationship revealed in the *t* tests. Further, a two-way analysis of covariance test was used to compare the PAS for each practice using Type of Educator and Type of School as independent variables and their Experience Level as the covariate. To understand the difference in the levels of practice reported by teachers versus administrators within and between school sites, *t* tests were used to compare the differences in their respective PAS.

Summary

This chapter discussed the nature of this quantitative study on the extent of differences in the presence of two PLC practices within elementary classrooms among selected GGUSD elementary schools that demonstrated either high versus low levels of sustained student achievement growth in ELA for ELL, SED, and Hispanic/Latino students. Also included in this chapter was a description of the methodology used during the research phase of this study, a discussion of the research design and methods, definition and description of the population/census/analysis unit, and a discussion of consent, risk minimization, and confidentiality of human subjects. The characteristics to be measured by the study and data collection procedures were reviewed. The instrument for the study was identified and described, including a discussion of scoring, data reduction and analysis, and validity and reliability, and the analytical techniques were presented. The following chapters present the study's findings as well as thorough discussions of the findings as they relate to the relevant literature, their educational implications, recommendations for further study, and recommendations for policymakers and practitioners.

CHAPTER 4: RESEARCH FINDINGS

The purpose of this study was to determine the extent of differences, as reported by teachers versus site administrators, in the presence of two PLC practices within elementary classrooms among selected GGUSD elementary schools. The 5 schools selected for the study have demographically equivalent student populations and demonstrated either higher versus lower levels of sustained student achievement growth for the subgroups of California elementary students most at-risk of failing to meet AMO in ELA (ELL, SED, and Hispanic/Latino) from 1999 through 2005. A total of 92 teachers and 8 school administrators participated in this study.

In Chapter 3, Table 2 displays the demographic characteristics for the teacher and administrator subsamples. The two groups were evenly balanced between LP and HP Schools ($p = 1.00$). However, a substantially greater percentage of administrators were male (37.5%) than was found in the teacher sample (5.4%). The Fisher's exact test probability was $p = .02$ (Table 7).

Also in Appendix J are the frequency counts for other experience variables based on the Type of Educator. However, due to the large number of sparse ($n < 5$) cell counts, the patterns of differences are reported descriptively rather than using with a test of significance. For age range, 75.0% of the administrators were over 40 years old compared to 38.0% of the teachers. For total years as a school employee, 75.0% of the administrators had more than 15 years of experience compared to 22.8% of the teachers. Fogr total years in their current role, 22.8% of the teachers had been in their role for more than 15 years compared to only one administrator (12.5%). For years in the current

Table 7

Type of School and Gender Characteristics for the Teacher and Administrator Samples (N = 100)

		Teachers		Administrators	
Characteristic	Category	*n*	%	*n*	%
Type of School [a]					
	Lower Performing	44	47.8	4	50.0
	Higher Performing	48	52.2	4	50.0
Gender [b]					
	Male	5	5.4	3	37.5
	Female	87	94.6	5	62.5

[a] Fisher's exact test probability = 1.00. [b] Fisher's exact test probability = .02.

district in their current role, 19.6% of the teachers had over 15 years of experience compared to none of the administrators. For years of experience in their current role in this current school, 27.2% of teacher had been in their role for more than 10 years compared to none of the administrators (Appendix J). A side-by-side comparison of selected demographic data from the HP versus LP teachers and administrator study participants is found in Table 2.

Research Question One

Research Question One asked, what, if any, are the differences in the classroom PLC practice Monitoring: Compilation, Analysis, and Use of Data reported by teachers versus site administrators, based on both their school's designation as an HP School or an LP School, as well as select demographic characteristics of respondents? Table 8 displays the *t* tests for independent means comparing the PAS for Monitoring: Compilation, Analysis, and Use of Data based on the Type of Educator, the Type of School, and Gender. Overall scores were substantially higher ($p = .003$) for educators from HP Schools ($M = 3.18$) than from LP Schools ($M = 2.94$).

Cohen (1988) suggested a rule of thumb for interpreting the size and strength of the correlation. He suggested that an absolute correlation of $r = .10$ would be considered to be a weak effect, an absolute correlation of $r = .30$ would be considered to be a moderate effect, and an absolute correlation of $r = .50$ would be considered to be a strong effect. Using that rule of thumb, the resulting point biserial correlation of $r_{pb} = .30$ would be considered to be of moderate strength (Cohen, 1988) (Table 8).

Table 9 displays the two-way analysis of covariance test for the educator's PAS for Monitoring: Compilation, Analysis, and Use of Data using Type of Educator and Type of School as independent variables and their aggregated experience score (Experience Level) as the covariate. The overall model was significant ($p = .001$) and accounted for 17% of the variance in the dependent variable, meaning that 17% of the variance in the PAS for Monitoring: Compilation, Analysis, and Use of Data is explained by differences in Type of Educator, Type of School, Experience Level, and Gender. On

its own, the covariate, Experience Level, was not significantly different ($p = .06$). The main effect for Type of Educator was not significant ($p = .41$). The main effect for Type of School was significant ($p = .001$) and accounted for 11% of the variation in the PAS for this practice. The interaction between Type of School and Type of Educator was also significant ($p = .04$), and accounts for 4% of the variation in the PAS for this practice.

Table 8

Comparisons of PAS for Monitoring: Compilation, Analysis, and Use of Data with Selected Variables. t Tests for Independent Means (N = 100)

Variable	Category	*n*	*M*	*SD*	*t*	*p*	r_{pb}
Type of Educator							
	Teacher	92	3.06	0.41	0.77	.44	.08
	Administrator	8	3.18	0.48			
Type of School							
	Lower Performing	48	2.94	0.47	3.06	.003	.30
	Higher Performing	52	3.18	0.32			
Gender							
	Male	8	3.15	0.46	0.58	.56	.06
	Female	92	3.06	0.42			

Note. r_{pb} = Point biserial correlation

Table 9

Analysis of Covariance Test for Monitoring: Compilation, Analysis, and Use of Data Based on Type of Educator and Type of School and Adjusting for Level of Experience (N = 100)

Source	*SS*	*df*	*MS*	*F*	*p*	Partial Eta Squared
Full Model	2.93	4	0.73	4.84	.001	.17
Experience	0.56	1	0.56	3.68	.06	.04
Type of Educator	0.10	1	0.10	0.69	.41	.01
Type of School	1.71	1	1.71	11.29	.001	.11
Educator X School	0.68	1	0.68	4.47	.04	.04
Error	14.35	95	0.15			
Total	17.28	99				

When the means of the PAS were adjusted for Level of Experience, HP Schools were found to have substantially higher means ($p = .001$) than LP Schools ($M = 3.35$ versus $M = 2.87$) (Table 10). In addition, Figure 1 displays the interaction graph of PAS for Monitoring: Compilation, Analysis, and Use of Data of teachers versus site administrators for HP and LP Schools. Administrators at LP Schools were found to have the lowest PAS ($M = 2.78$) for Monitoring: Compilation, Analysis, and Use of Data while

Table 10

Scores for Monitoring: Compilation, Analysis, and Use of Data Adjusted for the Educator's Level of Experience. Results from an Analysis of Covariance Test (N = 100)

Category	*n*	*M*	*SE*
Teacher	92	3.05	0.04
Administrator	8	3.17	0.14
Lower Performing School	48	2.87	0.10
Higher Performing School	52	3.35	0.10
Teachers			
Lower Performing School	44	2.96	0.06
Higher Performing School	48	3.14	0.06
Administrators			
Lower Performing School	4	2.78	0.19
Higher Performing School	4	3.56	0.19

Administrators at HP Schools had the highest PAS ($M = 3.56$). While the PAS for both HP and LP Administrators fall within the PAS range for Strong Evidence of Practice, the net difference between their scores is .78 points on the 0.0-4.0 scale, accounting for 19.5% of the scale. It is also interesting to note that Administrators in LP Schools rated the classroom use of Monitoring: Compilation, Analysis, and Use of Data lower than

their teachers, and the Administrators at HP school rated the classroom practice use higher than their teachers (Table 10, Figure 1).

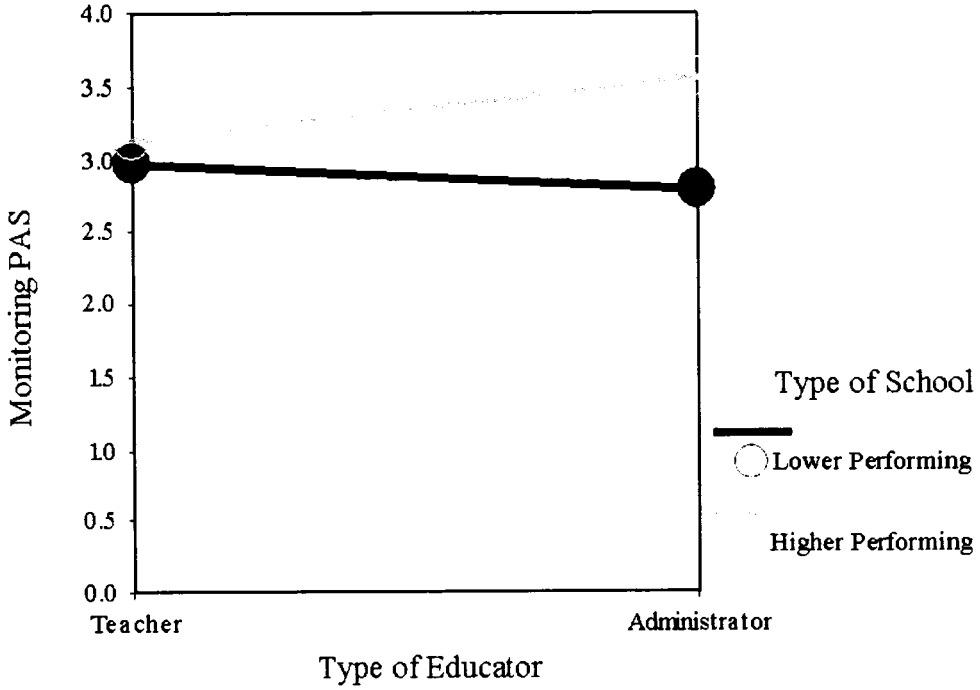

Figure 1. Interaction PAS for Monitoring: Compilation, Analysis, and Use of Data based on type of educator by type of school (N = 100). Monitoring = Monitoring: Compilation, Analysis, and Use of Data. PAS = Practice Average Score. p = .04, Partial Eta Squared = .04.

Research Question Two

Research Question Two asked, what, if any, are the differences in the classroom PLC practice Recognition, Intervention, and Adjustment reported by teachers versus site administrators, based on both their school's designation as an HP School or an LP School, as well as select demographic characteristics of respondents? Table 11 displays the t tests for independent means comparing the PAS for Recognition, Intervention, and Adjustment based on Type of Educator, Type of School, and the gender. Overall PAS for Recognition, Intervention, and Adjustment were substantially higher (p = .04) for

educators at HP Schools than LP Schools. The point biserial correlation (r_{pb} = .20) would be considered weak (Table 11).

Overall PAS for Recognition, Intervention, and Adjustment were also substantially higher (p = .002) for administrators than for teachers, and using the Cohen (1988) rule of thumb, the point biserial correlation for Type of Educator (r_{pb} = .31) would be considered to be of moderate strength.

Table 11

Comparisons of PAS for Recognition, Intervention, and Adjustment with Selected Variables. t Tests for Independent Means (N = 100)

Variable	Category	*n*	*M*	*SD*	*t*	*p*	r_{pb}
Type of Educator							
	Teacher	92	2.74	0.59	10.52	.002	.31
	Administrator	8	3.43	0.29			
Type of School							
	Lower Performing	48	2.67	0.71	4.16	.04	.20
	Higher Performing	52	2.92	0.45			
Gender							
	Male	8	3.02	0.64	1.14	.29	.11
	Female	92	2.78	0.60			

Note. r_{pb} = Point biserial correlation

Table 12 displays the two-way analysis of covariance test for the educator's PAS for Recognition, Intervention, and Adjustment using Type of Educator and Type of School as independent variables and their aggregated experience score (Experience Level) as the covariate. The overall model was significant ($p = .004$), with 15% variance in the PAS for Recognition, Intervention, and Adjustment can be explained by differences in Type of Educator, Type of School, Experience Level, and Gender. The covariate was not significant ($p = .32$), suggesting that differences in PAS are not due to educators' Experience Levels. The main effect for Type of Educator was significant ($p = .001$), with 10% of the variation in PAS is due to Type of Educator.

The main effect for Type of School was not significant ($p = .35$) nor was the interaction effect ($p = .84$) (Table 12). There is no relationship between the Type of School and the PAS for Recognition, Intervention, and Adjustment, nor is there a relationship between the interaction of Type of School and Type of Educator and the PAS for this practice (Table 12).

When the mean PAS are adjusted for Level of Experience in Table 13, however, administrators have substantially higher PAS ($p = .002$) for Recognition, Intervention, and Adjustment than teachers ($M = 3.43$ versus $M = 2.74$).

Additional Findings

To determine whether a difference exists between the levels of practice reported by teachers versus administrator within and between each school site for both Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment, the simple difference between the administrator's score for the school was

subtracted from each teacher's score. The mean of the differences per Type of School are displayed in Table 14.

Table 14 also displays *t* tests for independent means for the 2 simple difference scores and Type of School. For the simple difference score for Monitoring: Compilation, Analysis, And Use of Data, teachers in LP Schools averaged a higher PAS than did their administrators ($M = 0.21$). In contrast, at HP Schools, teachers had a lower mean PAS

Table 12

Analysis of Covariance Test for Recognition, Intervention, and Adjustment Based on Type of Educator and Type of School and Adjusting for Level of Experience (N = 100)

Source	*SS*	*df*	*MS*	*F*	*p*	Partial Eta Squared
Full Model	5.31	4	1.33	4.13	.004	.15
Experience	0.32	1	0.32	0.98	.32	.01
Type of Educator	3.49	1	3.49	10.86	.001	.10
Type of School	0.28	1	0.28	0.88	.35	.01
Educator X School	0.01	1	0.01	0.04	.84	.00
Error	30.53	95	0.32			
Total	35.83	99				

for Monitoring: Compilation, Analysis, and Use of Data than did their administrators (*M* = -.0.48). The relationship between the difference scores of Lower and HP Schools was significant ($p = .001$) and the resulting point biserial correlation ($r_{pb} = .66$) could be interpreted as a strong effect (Table 14).

Table 13

Scores for Recognition, Intervention, and Adjustment Adjusted for the Educator's Level of Experience. Results from an Analysis of Covariance Test (N = 100)

Category	*n*	*M*	*SE*
Teacher	92	2.74	0.06
Administrator	8	3.43	0.20
Lower Performing	48	2.99	0.15
Higher Performing	52	3.18	0.15
Teacher			
Lower Performing	44	2.62	0.09
Higher Performing	48	2.86	0.08
Administrator			
Lower Performing	4	3.35	0.28
Higher Performing	4	3.51	0.28

Table 14

Comparison of Difference Scores Based on Type of School. Teacher Only Subsample. t Tests for Independent Means (n = 92)

Variable	Type of School	*n*	*M*	*SD*	*t*	*p*	r_{pb}
Monitoring Simple	Lower						
Difference [a]	Performing	44	0.21	0.47	8.24	.001	.66
	Higher						
	Performing	48	-0.48	0.33			
Recognition Simple	Lower						
Difference [a]	Performing	44	-0.72	0.69	1.40	.16	.16
	Higher						
	Performing	48	-0.56	0.39			

Note. r_{pb} = Point biserial correlation. Monitoring = Monitoring: Compilation, Analysis, and Use of Data; Recognition = Recognition, Intervention, and Adjustment.
[a] Teacher's score minus the administrator's score for their school.

No significant difference is noted between the PAS for teachers versus administrators at either HP or LP Schools for the practice of Recognition, Intervention, and Adjustment (p = .16) (Table 14).

Findings included in Table 14 should be interpreted with caution. Comparison of the PAS determined by only one or two administrators with the scores determined by a comparatively larger number of teachers may be statistically problematic as the perceptions of individual administrators outweigh those of individual teachers. However,

these findings are included here and discussed in Chapter 5 because they represent the typical model of elementary schools not only in GGUSD but throughout the country. It is commonplace for elementary schools of thirty or more teachers to have only one or two administrators. This limitation is acknowledged in Chapter 5.

Summary

This chapter detailed the results of the statistical analyses performed to answer the research questions. For both research questions, *t* tests were used to compare the PAS for Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment based on Type of Educator, Type of School, and gender. A point biserial correlation was determined to indicate the size and strength of a relationship revealed in the *t* tests. Further, a two-way analysis of covariance test was used to compare the PAS for each practice using Type of Educator and Type of School as independent variables and their Experience Level as the covariate. To understand the difference in the levels or practice reported by teachers versus administrators within and between school sites, *t* tests were used to compare the differences in their respective PAS. A discussion of the results of these analyses is presented in Chapter 5.

CHAPTER 5: DISCUSSION

This chapter presents conclusions and implications of the findings, recommendations for future research both within GGUSD and throughout the state of California. Also presented are recommendations for policymakers and practitioners, within GGUSD and in California, based on the findings from Chapter 4 within the framework of the literature review presented in Chapter 2.

The purpose of this study was to determine the extent of differences, as reported by teachers versus site administrators, in the presence of two PLC practices within elementary classrooms among selected GGUSD elementary schools. The 5 schools selected for the study serve demographically equivalent student populations and demonstrated either higher versus lower levels of sustained student achievement growth for the subgroups of California elementary students most at-risk of failing to meet AMO in ELA (ELL, SED, and Hispanic/Latino) from 1999 through 2005.

The following questions guided the study:

1. What, if any, are the differences in the classroom PLC practice Monitoring: Compilation, Analysis, and Use of Data reported by teachers versus site administrators, based on both their school's designation as a Higher Performing School or a Lower Performing School, as well as select demographic characteristics of respondents?
2. What, if any, are the differences in the classroom PLC practice Recognition, Intervention, and Adjustment reported by teachers versus site administrators,

based on both their school's designation as an HP School or an LP School, as well as select demographic characteristics of respondents?

Summary of Findings

The interpretation of the range of PAS assumed in this study is presented in Chapter 3, Table 5. It is important to note that virtually all of the PAS calculated for this study fall within the range indicating Strong Evidence of Practice. However, substantial differences were noted between groups and are summarized in Tables 15 and 16.

The HP Schools in GGUSD selected for this study reported a substantially higher level of use of the PLC classroom practice of Monitoring: Compilation, Analysis, and Use of Data than the LP Schools (Table 8). This difference was of moderate strength (Table 8). When the scores are adjusted for Experience Level, 11% of the variation in scores can be attributed to the respondent's school's designation as HP or LP (Table 9). Comparing the responses of all teachers (HP + LP) versus all site administrators (HP + LP), no significant difference in their overall scores was found between teachers versus administrators (Table 8). However, a significant difference was found between teachers and administrators based on their school designation as HP or LP (Table 9), and is illustrated in Chapter 4, Figure 1. Administrators at LP Schools rated the classroom use of Monitoring: Compilation, Analysis, and Use of Data lower than their teachers, and the Administrators at HP school rated the classroom practice use higher than their teachers (Table 10). A strong effect was noted between teachers versus their particular site administrators at HP versus LP Schools (Table 14). The difference between the responses of teachers versus administrators based on their experience level is not

Table 15

Summary of Findings of the Differences in PAS for Teachers vs. Administrators overall, and based on School Designation, Experience Level, and Gender

Variable	Findings for Monitoring	Findings for Recognition
Overall	A (M = 3.18) > T (M = 3.06) p = .44 Accept H_0	A (M = 3.43) > T (M = 2.74) p = .002 r_{pb} = .31
School Designation	A_{HP} (M = 3.56) > T_{HP} (M = 3.14) > T_{LP} (M = 2.96) > A_{LP} (M = 2.78) p = .001 η_p^2 = .11	A_{HP} (M = 3.51) > A_{LP} (M = 3.35) > T_{HP} (M = 2.86) > T_{LP} (M = 2.62) p = .35 Accept H_0
Experience Level	p = .06 Accept H_0	p = .32 Accept H_0
Gender	M (M = 3.15) > F (M = 3.06) p = .56 Accept H_0	M (M = 3.02) > F (M = 2.78) p = .29 Accept H_0

Note. Monitoring = Monitoring: Compilation, Analysis, and Use of Data; Recognition = Recognition, Intervention, and Adjustment. r_{pb} = Point biserial correlation. η_p^2 = Partial Eta Squared. H_0 = Null Hypothesis. A_{HP} = Administrators at HP Schools. A_{LP} = Administrators at LP Schools. T_{HP} = Teachers at HP Schools. T_{LP} = Teachers at LP Schools.

Table 16

Summary of Additional Findings

Variable	Findings for Monitoring	Findings for Recognition
School Designation	HP (M = 3.18) > LP (M = 2.94)	HP (M = 2.92) > LP (M = 2.67)
Overall	p = .003	p = .04
	r_{pb} = .30	r_{pb} = .20
Interaction of Educator X School	p = .04	p = .84
	η_p^2 = .04	Accept H_0

Note. Monitoring = Monitoring: Compilation, Analysis, and Use of Data; Recognition = Recognition, Intervention, and Adjustment. HP = Higher Performing Elementary Schools; LP = Lower Performing Elementary Schools. r_{pb} = Point biserial correlation. η_p^2 = Partial Eta Squared. H_0 = Null Hypothesis

significant (Table 9). There is no difference between the responses of teachers versus administrators based on gender (Table 8).

The HP Schools in GGUSD selected for this study reported a substantially higher level of use of the PLC classroom practice of Recognition, Intervention, and Adjustment than the LP Schools, and this difference is considered to be weak (Table 11). Comparing the responses of all teachers (HP + LP) versus all site administrators (HP + LP), there is a significant difference of moderate strength (Table 11). When the scores are adjusted for Experience Level, 10% of the variation in scores can be attributed to the difference between teachers versus site administrators (Table 12). No difference was found between

the responses of teachers versus administrators based on their school's designation as an HP School or an LP School (Table 12). No difference was found between the responses of teachers versus administrators based on their experience level (Table 12). And no difference was found between the responses of teachers versus administrators based on gender (Table 11).

This section draws conclusions based on the findings discussed in Chapter 4 in light of the literature reviewed in Chapter 2. The discussion begins with the general findings related to the overall differences in the presence of the PLC classroom practices Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment noted between the participating HP and LP Schools in the GGUSD. Next, the discussion narrows to a specific focus on the research questions, and spotlights the differences in perceptions between teachers versus site administrators for each PLC practice based on their school's designation as HP or LP, Experience Level, and gender. Conclusions are presented through the lens of a synthesis of the relevant literature.

Conclusions

Overall Findings between HP Schools versus LP Schools

Directly supporting the findings of the NCEA, the HP Schools in GGUSD selected for this study reported a statistically significant higher level of evidence of practice for both Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment than the LP Schools. As demonstrated in Table 8, there is a moderately strong significant difference between HP and LP Schools' use of the PLC classroom practice Monitoring: Compilation, Analysis, and Use of Data. Also, as

displayed in Table 11, there is a weak significant difference between HP and LP school's use of the PLC classroom practice Recognition, Intervention, and Adjustment.

DuFour et al. (2004, 2005), DuFour & Eaker (1998), and Eaker et al. (2002) confirm that these two practices are key to ensuring students are successful in school, and agree that they are pivotal descriptors of a PLC. "Schools that operate as PLCs use formative assessments on a frequent basis to ask, 'Are the students learning and what steps must we take to address the needs of those who have not learned?'" (DuFour et al. 2004, p. 24). PLCs also monitor formative assessment data to ensure that the implemented and attained curricula match the intended curriculum, and they establish of a systematic school-wide response to intervene and adjust the instructional program to ensure all students succeed (DuFour et al., 2004; DuFour & Eaker, 1998; Eaker et al., 2002; Marzano, 2003).

One possible explanation for the difference in the levels of evidence described by HP versus LP Schools (Table 8 and Table 11) is the capacity of the educators to effectively monitor student achievement data and to use the data to recognize, intervene, and adjust their instructional practice to support all learners. This may be due to opportunities to learn and apply these practices, or may be an effect of site leadership.

Monitoring: Compilation, Analysis, and Use of Data

Type of Educator

This study found that, on the whole, administrators and teachers reported similar levels of evidence for Monitoring: Compilation, Analysis, and Use of Data. As displayed in Table 8, the mean score for all teachers is 3.06 while the mean score for all

administrators is 3.18. With a *p*-value of .44, there is no significant difference in these scores.

With a closer look at the responses of teachers versus administrators based on their school designation as HP or LP, an interaction effect is noted. As displayed in Table 10, the mean score for administrators at HP Schools is 3.56 while the mean score for the administrators at the LP Schools is 2.78. Table 9 shows that this interaction is substantially different at the .04 level. The Partial Eta Squared of .04 indicates that this difference is weak, as the practitioner's school designation accounts for only 4% of the variation of responses between teachers versus administrators for Monitoring: Compilation, Analysis, and Use of Data.

More interestingly, the administrators of HP Schools demonstrate a higher mean level of practice than all of the teachers, while administrators of LP Schools report a lower mean level of practice than all of the teachers (the mean level of practice for HP teachers is 3.15, and the mean level of practice for LP teachers is 2.95), as displayed in Figure 1. Further, when comparing the responses of teachers versus site administrators at HP Schools in Table 14, the mean score for administrators in HP Schools is .21 higher than the teachers. However, in LP Schools, the mean score for teachers is .48 higher than administrators. The point biserial correlation between HP and LP is .66, indicating a strong effect. Stated plainly, administrators in HP Schools reported substantially higher levels of the practice of Monitoring: Compilation, Analysis, and Use of Data than their teachers, and teachers in LP Schools reported substantially higher levels of the practice than their administrators. So strong is this effect that 66% of the difference between

teachers' and administrators' responses can be attributed to their school's designation as HP or LP. While this is a strong finding, it must be acknowledged that the PAS of only one or two administrators were compared with the PAS determined by a comparatively larger number of teachers. This may be statistically problematic as the perceptions of individual administrators outweigh those of individual teachers.

One possible explanation that administrators at the HP Schools reported substantially higher scores than their teachers for Monitoring: Compilation, Analysis, and Use of Data may be that the administrators perceive that teachers monitor data to a higher degree than the teachers actually do. Alternatively, the high level of practice reported by HP administrators may reflect their high expectation for teacher use of data to inform instructional practice. Administrators may leverage this high expectation to push forward the practice of classroom use of data. If this is so, it may explain why HP teachers reported a higher level of use for the classroom practice than LP teachers, and may further partially explain why HP Schools had greater success sustaining high achievement for the most at-risk subgroups in ELA.

One possible explanation that administrators at the LP Schools reported substantially lower scores than their teachers for Monitoring: Compilation, Analysis, and Use of Data may be that, despite the strategic intervention provided by GGUSD to the LP Schools, the administrators at these schools do not use data to make instructional decisions at the classroom level. Alternatively, the low level of practice reported by LP administrators may be explained by the difference between the LP administrators' expectations of how teachers should monitor student achievement data versus the

administrators' assessments of how the teachers are currently doing so. In other words, because the strategic intervention has raised their expectations, LP administrators may have underestimated the degree to which their teachers employ the practice of Monitoring: Compilation, Analysis, and Use of Data in classrooms. Additional study is required to determine which of these outcomes is the effect of the strategic intervention provided to LP Schools by GGUSD, and is suggested later as a recommendation for future research.

Experience Level

This study found that, for the PLC classroom practice of Monitoring: Compilation, Analysis, And Use of Data, there was no difference between the responses of teachers versus administrators based on their Experience Level (Table 9). This finding may suggest that, more likely than not, a teacher or administrator will use the practices embraced by their school, despite their experience level.

Gender

This study found no difference between the responses of teachers versus administrators based on gender for the PLC classroom practice of Monitoring: Compilation, Analysis (Table 8). It should be noted that only 5 of the 92 teacher participants were male, and a substantially greater percentage of administrator sample were male (37.5%) than in the teacher sample (5.4%). Although the disproportionate number of male versus female teachers may be common in elementary schools, this disparity is nonetheless mentioned as a limitation of this study later in this chapter.

Recognition, Intervention, and Adjustment

Type of Educator

This study found that, on the whole, administrators reported substantially higher levels of the PLC practice of Recognition, Intervention, and Adjustment (Table 11) than teachers, and this difference is moderately strong. Even when the scores were adjusted for Level of Experience in Table 13, the score for administrators was much higher than teachers ($M = 3.43$ versus $M = 2.74$; $p = .001$). This may indicate that administrators think that classroom recognition, intervention, and adjustment takes place to a greater degree than it actually does.

However, as noted in Table 12, the differences between the responses of teachers versus administrators cannot be explained by their school's designation as HP or LP. There is no interaction effect between Type of Educator and Type of School for Recognition, Intervention, and Adjustment (Table 12).

As noted in the discussion of conclusions for Monitoring: Compilation, Analysis, and Use of Data, on the whole, teachers and administrators in this study tend to agree that student achievement is monitored. However, it is the actions taken after the monitoring that are most important in a PLC – the way in which the school recognizes, intervenes, and adjusts based on student learning. Even though this study finds only a weak difference in the level of use of the PLC practice of Recognition, Intervention, and Adjustment in HP versus LP Schools, it is noteworthy that a significant difference is found between the perceptions of all teachers versus all administrators. California's EPC 5 asserts that effective schools and districts not only "frequently utilize an assessment and

monitoring system to inform teachers and principals about student progress and effectiveness of instruction," but that the school and district also "then use this data to make decisions that will improve instruction and student achievement" (CDE, 2005c, p. 5). In order to improve student performance, both teachers and administrators must use assessment data to design specific steps to recognize students' instructional levels, provide appropriate interventions, and adjust instructional strategies (DuFour, 2005; DuFour et al., 2004; Marzano, 2003). It is in this transition from knowing to doing that a moderately strong difference between all administrators and all teachers is noted.

Because the GGUSD has only recently implemented district-wide curriculum-embedded benchmark assessments for ELA, one possible explanation that administrators reported a higher degree of evidence of the practice of Recognition, Intervention, and Adjustment may be what Fullan (2004) calls an implementation dip. "Since change involves grappling with new beliefs and understandings, and new skills, competencies and behaviors, it is inevitable that it will not go smoothly in the early stages of implementation," especially in complex organizations like school systems (Fullan, 2004, p. 7). Practitioners in PLCs value dissonance: they look to the data to see how well the school is meeting its goals, and to reflect on how they can best support the achievement of students who are not yet learning. Thus PLCs are simultaneously a culture of learning and a culture of evaluation (Fullan, 2004). The nature of PLCs requires a diverse group of individuals to come together for a common purpose, and to benefit teachers' learning, which is difficult because it requires teachers to work together in new ways (Elmore, 2002; Fullan, 2004; Hord & Cowan, 1999). This required shift from isolationism to

collaboration may take years of deliberate work and practice. Administrators in GGUSD have participated in training related to monitoring data and recognizing, intervening, and adjusting based on student need. It is possible that administrators perceive their school-wide ability to use data as a tool to inform instructional practice more favorably than teachers because they had opportunities to learn and practice that their teachers, at large, have not yet experienced.

Experience Level

This study found that, for the PLC classroom practice of Recognition, Intervention, and Adjustment, there was no difference between the responses of teachers versus administrators based on their Experience Level (Table 12). This finding may suggest that, more likely than not, a teacher or administrator will use the practices embraced by their school, despite their experience level.

Gender

For the PLC practice of Recognition, Intervention, and Adjustment, no difference was noted between the responses of teachers versus administrators based on gender. Again, it should be noted that only 5 of the 92 teacher participants were male, and a substantially greater percentage of administrator sample were male (37.5%) than in the teacher sample (5.4%). Although the disproportionate number of male versus female teachers may be common in elementary schools, this disparity is nonetheless mentioned as a limitation of this study later in this chapter.

Implications

This section discusses the implications of this study on the field of educational leadership and the impact of PLC practices on the achievement of California's most at-risk subgroups. The first of these implications is that high levels of sustained student achievement may be a result of professional learning communities. Second, PLCs support ELA achievement for California's most at-risk student subgroups. Third, successful PLCs require a cultural transformation.

PLCs Sustain High Levels of Student Achievement

In the relatively short time that learning organizations have been researched, ample evidence has been generated to demonstrate their importance in schools (Fullan, 2005b). While much is known about creating PLCs in schools, less is understood about how they sustain high levels of student achievement over time. Current research suggests that the success of a PLC may fade over time or with the resignation of a specific leader (Fullan, 2005a; Giles & Hargreaves, 2006). However, this study suggests that high levels of student achievement may endure irrespective of changes in leadership if the school has transformed into a culture of simultaneous learning and evaluation and is actively engaged in the PLC practices Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment (DuFour et al., 2004; NCEA, n.d.-b). A longer-range study of the effective use of PLC practices on sustained student achievement scores for California's most at-risk subgroups would yield a more accurate description, as suggested later as a recommendation for future research.

Despite changes in leadership and faculty, the 3 GGUSD HP Schools selected for this study demonstrated sustained improvements in student achievement school-wide and for the NSSs most at-risk of failing to meet federal AMO in ELA (SED and Hispanic/Latino) for each of the 6 academic years from 1999-2005. Additionally, when the state of California initiated the ELL subgroup in the 2004-05 school year, that subgroup met the AMO of 24.4% proficient in ELA in each of these 3 HP Schools. When combined with demographically equivalent schools within the same district that yielded similar levels of success, these HP Schools reported higher levels of evidence of two PLC practices widely regarded as having significant impact on student learning: Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment (DuFour & Eaker, 1998; Eaker et al., 2002; Elmore, 2004; Fullan, 2003; Haycock, Jerald, & Huang, 2001; Kruse et al., 1994; Lambert, 2003; Lezotte, 2005; Marzano, 2003; Newmann & Wehlage, 1995; Reeves, 2000; Schlechty, 1997; Schmoker, 2005a; Senge, 2000; Sparks, 2002; Stiggins, 2005; Wagner, 2001).

PLCs Support ELA Achievement for Most At-Risk Subgroups

Newmann and Wehlage (1995) were the first to provide explicit evidence demonstrating the relationship between a PLC and student performance in mathematics, science, and social studies. This study adds to the relevant research, suggesting that engagement in PLC practices may also be specifically related to sustained ELA improvements for students most at-risk of failure in the GGUSD and in California (ELL, SED, and Hispanic/Latino).

PLCs Require Cultural Transformation

Taken together, the NCEA Best Practice Framework describes the practices of consistently high-performing school systems throughout the United States, and identifies the general principles common across the studied schools in each area. The way in which these principles are implemented in a particular district or school depends on a number of contextual factors, which are called Supports within The Best Practices Framework (NCEA, n.d.-c). Interestingly, NCEA found that these supports were not critical factors in increasing student achievement. While the Supports were not necessarily present to a certain degree in order for the students to reach consistently high levels of achievement, they are "considerations or factors to be understood so that the practices can be enacted successfully" (NCEA, n.d.-c, ¶ 3).

As detailed in Chapter 2, one key support for PLCs is Core Beliefs about Teaching and Learning. According to DuFour and his associates, the most critical consideration for a PLC to successfully take root within a school is the degree to which the culture adapts its assumptions, beliefs, values, such that the new ways of thinking and behaving become the new norm for the organization (DuFour, 2005, DuFour et al., 2004; DuFour & Eaker, 1998; Eaker et al., 2002). School-wide beliefs about teaching and learning are implied not only in the academic objectives set by the school and district, but also in the assessment tools used to monitor student growth, and the recognition and intervention programs in place to ensure student success. Core beliefs about teaching and learning begin at the most personal level within every member of a school and spiral outward to include the entire learning organization (York-Barr, 2001).

While beyond the scope of this study's research questions, the implication of a difference in the core beliefs about teaching and learning embraced by the schools may be at the root of the mismatch between the levels of practice for Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment between GGUSD's HP and LP Schools in this study. This is revisited later as a recommendation for further research. According to Senge (2000), beliefs left unexamined and unchallenged serve only to limit what is possible for students and may sabotage any effort to improve the organization. "Substantive and lasting change will ultimately require a transformation of culture – the beliefs, assumptions, expectations, and habits that constitute the norm for the people throughout the organization" (DuFour et al., 2005, p. 11). The emerging dominant culture of an effective school must be focused on organizational and student learning, and on evaluating progress toward intended goals (Marzano, 2003; Senge, 2000; York-Barr, 2001). "When schools and school systems increase their collective capacity to engage in ongoing assessment for learning, major improvements are achieved" (Fullan, 2004, p. 11).

Recommendations for Future Study

Across California, the academic performance of the subgroups most at-risk of failure in ELA (ELL, SED, and Hispanic/Latino) on the 2004-05 CST revealed the failure of a third of all California elementary schools to attain the AMO in of 24.4% proficient or better in ELA (CDE, 2005a). There is little time for schools that missed the AMO during the 2004-05 school year, or that are already involved with PI, to catch up before the AMO jumps to 35.2% proficient or better in 2007-08.

This study confirms the findings of earlier researchers – a relationship exists between student achievement results in HP Schools and the classroom use of two PLC practices: Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment. The significance of this study rests in what it reveals about these classroom practices to support California's and GGUSD's most at-risk subgroups to become proficient or above with grade-level standards in ELA as measured by the CST. Results of this study may help GGUSD elementary schools, and other California elementary schools with these NSSs, to avoid or exit PI status by suggesting a change in classroom practices to align with those of a PLC. In addition, this study adds to the growing body of research that suggests schools must continually engage in essential practices that define a PLC in order to sustain improvements in student achievement.

Recommendations for Future Research Questions

While this study adds to the existing literature about the impact of classroom PLC practices on student learning in ELA for our most at-risk subgroups, the literature is still incomplete. This section provides a series of recommended areas of future study and research questions that may guide the study.

The results of this study clearly identify differences in the levels of PLC practices employed in GGUSD HP versus LP Schools selected for this study, yet more research is needed to identify how the schools innovate to creatively identify and solve problems unique to their learners. The NCEA found that teachers in high-performing schools "adopt and supplement the state, district and school assessments with their own on-going assessments to ensure frequent review of their students' performance" (JFTK, 2004d, ¶

4), and "use and supplement district-adopted programs and arrangements in consistent and effective ways to differentiate instruction for accelerated and below benchmark learners" (JFTK, 2004c, ¶ 4). Because GGUSD emphasizes consistent use of district-wide curriculum-embedded assessments and full and faithful implementation of specific instructional programs and arrangements in all elementary classrooms, it may be worthwhile to determine whether it is these or other assessments and strategies that make the difference for the most at-risk students. The first two recommendations for further study enumerated here are qualitative appreciative inquiry approaches intended to identify the innovative assessments and instructional programs and arrangements with which HP Schools supplement those adopted by the district, which may contribute to their positive deviance in terms of the academic achievement of the most at-risk subgroups.

The third recommendation is an attempt to gauge the effect of the strategic interventions provided by GGUSD to the LP Schools selected for this study. The fourth recommendation suggests a study of the contextual differences between the GGUSD HP and LP Schools selected for this study, namely Core Beliefs about Teaching and Learning.

The fifth recommendation for future study takes a larger view of high-performing elementary schools across California. The recommendation attempts to gain access to specific actions taken by innovative elementary schools to sustain the organization's capacity to continually generate high levels of achievement for California's most at-risk students.

The first recommendation for further inquiry into GGUSD's HP Schools is an attempt to identify the innovative assessments used by HP classroom teachers to assist them to monitor the learning of at-risk students. Exemplary of a high-performing school district, GGUSD recently implemented district-wide benchmark assessments to document student growth toward identified grade-level and content standards at the elementary level. To build on the findings of NCEA, it may be worthwhile to determine what supplementary assessments teachers in HP Schools use to monitor the growth of their most at-risk students toward mastery of the ELA standards. This may take the form of a qualitative study to determine what assessments teachers use as they employ the Critical Attributes of Monitoring: Compilation, Analysis, and Use of Data. Research questions that may guide such a study in an HP elementary school with strong evidence of Monitoring: Compilation, Analysis, and Use of Data are

1. In addition to assessments required by the state and district, to what extent, if at all, are supplementary assessments used within classrooms of HP Schools?
2. With what consistent and specific assessments, if any, do teachers supplement the District assessments in order to monitor their most at-risk students' growth toward mastery of the ELA standards?
3. What specific assessments, if any, are used consistently throughout the school to supplement the District assessments in order to monitor the most at-risk students' growth toward mastery of the ELA standards?

4. How do teachers and administrators use this supplementary assessment data, if at all, to recognize, intervene, and adjust instruction to support at-risk students' growth toward mastery of the ELA standards?

The second recommendation for further inquiry into GGUSD's HP Schools is an attempt to identify the nature of the innovative intervention responses provided by classroom teachers to differentiate instruction for at-risk students who are not yet learning. This may take the form of a qualitative study to determine specific programs and arrangements HP teachers use as they employ the Critical Attributes of Recognition, Intervention, and Adjustment. Research questions that may guide such a study in an HP elementary school with strong evidence of Recognition, Intervention, and Adjustment are

1. To what extent do HP classrooms supplement district-adopted programs and arrangements to recognize, intervene, and adjust instruction based on monitoring formative assessment data in order to support their most at-risk students toward mastering standards in ELA?
2. With what consistent and specific programs and arrangements, if any, do teachers supplement those adopted by the district to recognize, intervene, and adjust instruction to support the most at-risk students toward mastering standards in ELA?
3. What consistent and specific programs and arrangements, if any, are used school-wide to supplement those adopted by the district to recognize, intervene, and adjust instruction to support the most at-risk students toward mastering standards in ELA?

4. What is the relationship, if any, between the use of supplemental programs and arrangements and the ELA achievement results of the most at-risk students?
5. What is the relationship, if any, between the use of supplemental programs and arrangements versus district-adopted programs and arrangements and the ELA achievement results of the most at-risk students?

The third recommendation is an attempt to gauge the effect of the strategic interventions provided by GGUSD to the LP Schools selected for this study. Along with several other GGUSD elementary schools whose student achievement on the CST was low in comparison to similar California schools, the LP Schools selected for this study were the recipient of specific, targeted intervention which included weekly teacher collaboration periods, in-depth teacher and administrator training in the Language Arts base program, an increase in the instructional minutes for students, and regularly scheduled coaching between the principals and an outside consultant. Given this level of intervention, it is surprising to find that the administrators in LP Schools reported substantially lower levels of the practice Monitoring: Compilation, Analysis, and Use of Data than their teachers. As described in the Conclusions section of this chapter, this finding may explained in a number of ways. The following research questions are offered to monitor the effect of the intervention so that appropriate recognition, intervention, and adjustment may be made in order to achieve the desired results in ELA

1. What, if any, is the effect of GGUSD's strategic intervention on administrators' level of proficiency with the PLC practice Monitoring: Compilation, Analysis, and Use of Data?
2. What is the effect, if any, of GGUSD's strategic intervention on teachers' level of proficiency with the PLC practice Monitoring: Compilation, Analysis, and Use of Data?
3. To what degree, if at all, has GGUSD's strategic intervention assisted site administrators to effectively transfer their understanding of Monitoring: Compilation, Analysis, and Use of Data to their professional leadership practice?
4. To what degree, if at all, has GGUSD's strategic intervention assisted students and families to monitor individual growth toward California grade-level ELA standards?

The fourth recommendation for future study aims to determine the contextual differences between the HP and LP Schools selected for this study in GGUSD, namely Core Beliefs about Teaching and Learning. While NCEA found that contextual factors were not critical in increasing student achievement, they are, however, "considerations or factors to be understood so that the practices can be enacted successfully" (NCEA, n.d.-c, ¶ 3). The mismatch between the levels of practice for Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment between the HP and LP Schools in this study may imply a difference in the core beliefs about teaching and learning embraced by the schools, or a mismatch between the schools' espoused

versus in-use beliefs about teaching and learning (Argyris, 1990). To gain access to the core beliefs of the organizations, a qualitative study guided by the following questions is recommended

1. What are the espoused beliefs about teaching and learning in HP versus LP Schools?
2. What are the beliefs-in-action about teaching and learning in HP versus LP Schools?
3. What is the relationship, if any, between the espoused beliefs and the beliefs-in-action about teaching and learning in HP versus LP Schools on the ELA achievement of the most at-risk subgroups?

To truly address the issue of the sustainability of high at-risk student achievement within a PLC, the fifth recommendation for future study suggests a series of long-range case studies may be in order. Such a study should include a large number of California elementary schools with demonstrated success sustaining student achievement in ELA for the state's most at-risk subgroups. In order to determine how such results are sustained over time, it is recommended that this study focus on identified force that leads the ultimate decline of innovative schools' superior academic results: "the evolutionary process of aging and decline in the organizational life cycle" (Giles & Hargreaves, 2006, p. 127). Using the Best Practices Framework and with an appreciative inquiry and quantitative approach, the following research questions are recommended

1. What is the relationship, if any, between the school-wide practices of each Organizing Theme and the achievement levels of the most at-risk subgroups over time?
2. In what practices, if any, does the learning community engage to rejuvenate the organizational life cycle to ward off threats to its sustainability?

Limitations of the Study

This section discusses the limitations related to the purpose of the study, and makes suggestions for methodological enhancements. The scope of this study was narrow, including only the elementary schools in the GGUSD that receive Title I funding, and whose school populations are 65% or more ELL, SED, and Hispanic/Latino students. As such, the results may be generalized only to other elementary schools in GGUSD with similar demographics. The study could be extended by including elementary schools that share similar demographic make-up from a wider geographic area, and including elementary schools from a variety of districts. A larger scope would likely serve to increase the number of male teacher participants. The results of such a study would be more easily generalized to other schools in California, and would control for the elements of district culture that may also serve to limit the results of the current study.

This study was also limited by its participants because of its cross-sectional survey data. The survey was administered the school year after the release of the CST data that was used to determine and select GGUSD schools to participate in the study. Faculty and administrative changes took place over the summer break, and those who were no longer assigned to the school site were not included in the study. Therefore,

teachers and site administrators who historically played a role in the school's student achievement growth may have been excluded from the study, and those individuals who are new to the school or district, who contributed little or nothing to the 2004-05 student achievement status, may have been included. The results of the study would have been extended had the survey been administered during the school year in which the school was selected for participation, and if all teachers and administrators were included.

Another limitation of this study is that the LP Schools identified for the study were recipients of targeted intervention strategies not provided to HP Schools. GGUSD typically maintains a uniform approach to the opportunities available to each elementary school site. However, because of their low decile scores on the CST when compared with similar schools in California, beginning in 2005-06 the LP Schools were the recipient of specific, targeted intervention by GGUSD which included weekly teacher collaboration periods, in-depth teacher and administrator training in the Language Arts base program, an increase in the instructional minutes for students, and regularly scheduled coaching meeting between the principals and an outside consultant. Because these interventions were not provided for the 3 HP Schools identified for this study, they may impact teacher and administrator perceptions of their use of data to inform instructional decisions, these interventions limit the results of this study. A more accurate description of the LP Schools' PLC practices of Monitoring: Compilation, Analysis, And Use of Data, and Recognition, Intervention, and Adjustment would have been obtained if the study had been conducted prior to the 2005-06 school year,

immediately following the six-year span of comparatively lower CST scores yet before the interventions were implemented.

An additional limitation of the study is the students whose CST scores result in the determination of whether a school meets its AMO in ELA, makes AYP, or meets California's API growth targets. Each year, students in grades 2 through 6 in GGUSD participate in the state CST testing. However, as the years progress, students naturally exit the elementary school and are no longer included in the elementary school's data reports. While this limitation is most relevant to the interpretation of the state-reported student achievement data (AYP and API), it is important to note that the students in the schools selected for this study have not remained constant, and that the variations in growth student achievement results over this period of time may exist for that reason. This factor may have resulted in the inadvertent omission of schools from the study.

Without the limitations of time and money, this study would be of greatest benefit to the field if it were conducted in the same school year in which the schools were selected to participate, and included teachers and administrators of HP and LP Schools from across the state whose student populations consist of 65% or more of the subgroups most likely to fail to meet ELA standards.

Recommendations for Policymakers

The findings of this study affirm the current research about professional learning communities: classroom use of PLC practices is positively correlated with higher academic performance. This study's findings add to the existing research in that it implies that there is a relationship between PLC practices and ELA performance for ELL,

SED students, and Hispanic/Latino children, the California subgroups most likely to fail to meet ELA standards. However, as Giles and Hargreaves (2006) note, "the paradox of learning organizations and communities in education is that they are being advocated most strongly just at the point when standardized reform movements legislate the content and micromanage the process of learning" (p. 153).

Already, a third of the California elementary schools with NSSs of ELL, SED, and Hispanic/Latino students are failing to meet California's AMO of 24.4% proficient or better in ELA as a result of the 2004-05 state testing. In 2007-08, the state-wide AMO climbs to 35.2%. Of the 43 GGUSD elementary schools for whom the ELL, SED, and Hispanic/Latino subgroups are numerically significant, 81% (n = 35) did not yet meet the 2007-08 AMO as a result of the 2004-05 state testing (CDE, 2005a). By 2005-06, 70% (n =30) still did not meet the 2007-08 AMO (CDE, 2006b). While these data demonstrate district-wide growth toward the goal, they also illustrate the distance between the goal and the performance of the most at-risk subgroups in individual GGUSD elementary schools. For this reason, GGUSD policymakers' eyes should be trained on the monitoring, recognition, intervention, and adjustment programs and arrangements that have demonstrated success for the most at-risk learners in the district's HP Schools.

Given what the research says about the benefits of professional learning communities on student achievement (DuFour & Eaker, 1998; Eaker et al., 2002; Elmore, 2004; Fullan, 2003; Haycock et al., 2001, Spring; Kruse et al., 1994; Lambert, 2003; Lezotte, 2005; Marzano, 2003; Newmann & Wehlage, 1995; Reeves, 2000; Schlechty,

1997; Schmoker, 2005a; Senge, 2000; Sparks, 2002; Stiggins, 2005; Wagner, 2001), the supportive findings of this study, and the current state of GGUSD's and California's elementary school performance, now is not the time to narrow the list of standardized programs and arrangements available to teachers. Instead, GGUSD policymakers truly interested in learning what programs and arrangements work to help our most at-risk students reach ELA standards are encouraged to engage in positive inquiry by locating and studying HP classrooms that employ high levels of PLC practices. To ensure that ELL, SED, and Hispanic/Latino children meet or exceed ELA standards in elementary schools throughout GGUSD and California, stakeholders must determine how innovative educators recognize, intervene, and adjust by supplementing district- and state-adopted programs and arrangements.

York-Barr (2001) advocates a similar position: "To make the subtleties of our practice known and to develop new insights and understandings, we must choose a reflective stance about our practice" (p. 43). Engaging in reflective practice increases the potential for school improvement in many powerful ways, not the least of which is creating the opportunity for educators to learn from and about their professional practice (York-Barr, 2001). Those involved in making policy would do well to encourage the development of administrators' and teachers' capacities to engage in reflective practices at the district, school, and classroom levels, and to ensure that these reflective practices embed themselves as the norm (DuFour & Eaker, 1998; Eaker et al., 2002; Fullan, 2005a; York-Barr, 2001).

To that end, state and local policymakers must distinguish between assessments for learning (sometimes called formative assessment) and assessments of learning (sometimes called summative assessment) (Barber & Fullan, 2005; Fullan, 2004). The NCLB system of AYP is an assessment of learning that gives little useful information to practitioners to inform their professional practice. Therefore, school districts must ensure that periodic standards-based formative and summative assessments are in place and that the results are easily accessible and understood by administrators, teachers, parents, and students (CDE, 2005c, n.d.-a; Reeves, 2005; Sparks, 2005). Logically, school districts must also ensure that administrators and teachers are able to interpret the results of the assessments in order to monitor student growth toward standards, and to recognize, intervene, and adjust by using or appropriately supplementing base program to ensure greater student success. Most importantly, and especially at LP Schools, while developing administrators' and teachers' capacity to engage in this kind of inquiry, data-analysis and curriculum experts should be assigned in a supportive, coaching role (CDE, 2005c, n.d.-a).

Recommendations for Practitioners

The main priorities for leaders in professional learning communities are focusing on learning, collaborative structure, and results (Eaker et al., 2002, p. 34). While it takes time and purposeful energy for a traditional school culture to shift to one that is predicated on learning and evaluation, given what is known about the role of PLC practices and the state of education in California, school practitioners have no time to waste. In order to ensure that GGUSD and California elementary schools provide the

kind of instruction needed to guarantee the ELA success of all learners, practitioners must ensure regular formative assessments of student progress toward standards. In addition, practitioners must proficiently monitor the formative assessment data to recognize, intervene, and adjust as appropriate. To the extent that practitioners do not yet have this proficiency, especially those in LP Schools, they must demand expert coaching to help develop their capacity to interpret data and to design and implement action steps that ensure all students will achieve at higher levels. Further, this capacity must "transfer improvements in the daily cultures of how people need to work in new ways" so that they new ways become the norm – the "way we do things around here" (Fullan, 2004, p. 4).

One way for practitioners to ensure a transformation of school culture is by embedding the norm of reflective practice in their work (York-Barr, 2001). This is "not just getting together to talk about work or thinking self-reinforcing thoughts about how to teach" (York-Barr, 2001, p. 2), but rather "a deliberate pause to assume an open perspective, to allow for higher-level thinking processes … to gain new or deeper understandings that lead to actions that improve learning for students" (York-Barr, 2001, p. 6). Many school districts, including GGUSD, provide protected blocks of time dedicated to teacher collaboration. Using such time for personal, small-group, and school-wide reflection, based on formative assessment data is critical for continuous improvement and enhanced student learning (York-Barr, 2001). Educators refine their professional practice by engaging in learning conversations, and so the work for administrators is to provide powerful opportunities for and to masterfully guide conversations about learning.

Final Summary

As a result of the 2004-05 state testing cycle, a third (33.40%) of all California elementary schools failed to meet the state's 2004-05 AMO in ELA, which requires that 24.4% of all students, both school-wide and in NSSs, score proficient or above on the CST. The subgroups that failed in the greatest percentages were ELL, SED, and Hispanic/Latino (CDE, 2005a). NCLB mandates that all children will meet ELA and mathematics standards by the end of the 2013-2014 school year (USDE, 2002). In order to meet that mandate, California school leaders must identify and implement best practices employed in schools whose classrooms demonstrated high levels of sustained student achievement growth for California's most at-risk subgroups in the 6 academic years from 1999 through 2005. The purpose of this study was to determine the extent of differences, as reported by teachers versus site administrators, in the presence of two PLC practices within elementary classrooms among selected GGUSD elementary schools. The 5 schools selected for the study serve demographically equivalent student populations and demonstrated either higher versus lower levels of sustained student achievement growth for the subgroups of California elementary students most at-risk of failing to meet AMO in ELA (ELL, SED, and Hispanic/Latino).

The concept of professional learning communities (PLCs) in schools has gained positive recognition in recent decades because of the emphasis on collaborative work, a strong and consistent focus on teaching and learning, and the collection and use of formative data to evaluate student progress and to adjust instruction as needed (Giles & Hargreaves, 2006; Newmann & Wehlage, 1995). The essential characteristics were

presented in this study through the lens of the NCEA's Best Practice Framework (n.d.-b, n.d.-c) which displays the results of NCEA's investigation of the practices of more than 300 consistently high-performing school systems across the United States. NCEA identified five organizing themes of practices which occur interdependently within and between the district, school, and classroom levels. This study focused on the classroom practices of two organizing themes: Monitoring: Compilation, Analysis, And Use of Data, and Recognition, Intervention, and Adjustment.

Five elementary schools within the GGUSD were selected for participation in this study. While the schools' student demographics are equivalent (65% or more of the students in each school are ELL, SED, and Hispanic/Latino), they have disparate levels of sustained high student achievement results in ELA on the CST from 1999 through 2005. Three of the schools in the study were determined to be HP, and 2 were determined to be LP. During a regularly scheduled staff meeting, eligible teachers and administrators completed a survey to indicate the level to which two PLC practices are employed within their classrooms.

A general view of the study's findings reveals that the HP Schools that participated in this study monitor student learning data and recognize, intervene, and adjust to a higher degree than LP Schools. While overall, teachers and administrators agreed that student learning is monitored, a strong effect was noted between Type of School and Type of Educator: administrators in HP Schools reported substantially higher levels of the practice of Monitoring: Compilation, Analysis, and Use of Data than their teachers, and teachers in LP Schools reported substantially higher levels of the practice

than their administrators. On the whole, administrators reported substantially higher levels of classroom use of Recognition, Intervention, and Adjustment than teachers. However, this difference cannot be explained by their school's designation as HP or LP. Finally, the difference between the reported levels of practice between teachers versus administrators is only weakly related to Experience Level for Monitoring: Compilation, Analysis, And Use of Data, and not at all for Recognition, Intervention, and Adjustment. The differences between the reported levels of practice between teachers versus administrators is not related to gender for either practice.

California instructional leaders are experiencing a dire need to identify PLC practices that are effective in their support of at-risk students. To ensure that ELL, SED, and Hispanic/Latino children meet or exceed ELA standards in California elementary schools, stakeholders must determine how innovative educators recognize, intervene, and adjust by supplementing district- and state-adopted programs and arrangements. Districts and schools must ensure that periodic standards-based assessments are in place – for the dual purposes of assessing for and of learning – and that the results are easily accessible and understood by administrators, teachers, parents, and students. In addition, practitioners must proficiently monitor formative assessment data to recognize, intervene, and adjust as appropriate. It is incumbent upon district leaders to ensure that administrators and teachers have ample meaningful opportunities to build their capacities to powerfully utilize these practices to the extent that they become embedded as a norm of the school's culture. One way to move an organization toward such a culture shift is to use reflective practices that encourage the organization to take "a deliberate pause to

assume an open perspective, to allow for higher-level thinking processes ... to gain new or deeper understandings that lead to actions that improve learning for students" (York-Barr, 2001, p. 2).

"The interconnectedness of all parts of the educational enterprise means classrooms, schools, and the school district are tied together in a web of relationships where decisions and actions in any particular part affect other parts and the system as a whole" (Sparks, 2002, p. 4-3). As such, only when school cultures transform to fully and simultaneously implement PLC practices at the district, school, and classroom levels will each and every student finally realize the goal of meeting or exceeding grade-level standards in ELA.

REFERENCES

Anderson, S., Rolheiser, C., & Gordon, K. (1998, February). Preparing teachers to be leaders. *Educational Leadership*, 55(5).

Argyris, C. (1990). *Overcoming organizational defenses: facilitating organizational learning*. Boston: Allyn and Bacon.

Barber, M., & Fullan, M. (2005). Tri-Level Development: It's the system. *Education Week*, 24(25), 32, 34-35.

Barth, R. S. (2001). *Learning by heart* (1st ed.). San Francisco: Jossey-Bass.

Byrk, A., Camburn, E., & Louis, K. S. (1994). *Professional Learning communities in Chicago elementary schools: Facilitating factors and organizational consequences*. Madison, WI: Center on Organization and Restructuring of Schools.

California Department of Education. (2003, July 14, 2005). Explanatory Notes for 2003 API Base Report. Retrieved August 1, 2005, from http://www.cde.ca.gov/ta/ac/ap/expnotes03b.asp

California Department of Education. (2005a). 2005 Accountability Progress Report Data File: California Department of Education.

California Department of Education. (2005b). 2005 Accountability Progress Report: Information Guide. Retrieved February 4, 2006, 2006

California Department of Education. (2005c, September 7). The Academic Performance Survey. Retrieved February 13, 2006, 2006, from http://www.cde.ca.gov/ta/ac/ti/seppiattach2.asp

California Department of Education. (2005d, October 26, 2005). Glossary for the 2005 APR - API Chart. Retrieved March 12, 2006, from http://www.cde.ca.gov/ta/ac/ay/glossary05b.asp

California Department of Education. (2005e, August 30, 2005). Glossary for the 2005 APR - AYP Report. Retrieved March 12, 2006, from http://www.cde.ca.gov/ta/ac/ay/glossary05e.asp

California Department of Education. (2005f, December 1, 2005). School Summary: 2005 Accountability Report: Retrieved April 3, 2006, from http://ayp.cde.ca.gov/reports/APR/2005APR_DstList.asp?cYear=&cSelect=3066522 -- GARDEN^GROVE^UNIFIED&cChoice=APR5a

California Department of Education. (2006a, February 2, 2006). Statewide System of School Support (S4). Retrieved February 11, 2006, from http://www.cde.ca.gov/sp/sw/ss/

California Department of Education. (2006b, November 9, 2006). 2005-06 Accountability Progress Reporting (APR), LEA List of Schools. Retrieved January 6, 2007 from http://ayp.cde.ca.gov/reports/APIBase2006/2006AYP_Dist.aspx?allcds=3066522

California Department of Education. (n.d.-a). Academic Program Survey - Elementary School Level. Retrieved February 11, 2006

California Department of Education. (n.d.-b). California School Directory. Retrieved April 8, 2006, from http://www.cde.ca.gov/re/sd/details.asp?cds=30665226028260&public=Y

California Department of Education. (n.d.-c). California School Directory. Retrieved April 8, 2006, from http://www.cde.ca.gov/re/sd/details.asp?cds=30665226028310&public=Y

California Department of Education. (n.d.-d). California School Directory. Retrieved April 8, 2006, from http://www.cde.ca.gov/re/sd/details.asp?cds=30665226028724&public=Y

California Department of Education. (n.d.-e). California School Directory. Retrieved April 8, 2006, from http://www.cde.ca.gov/re/sd/details.asp?cds=30665226028732&public=Y

California Department of Education. (n.d.-f). California School Directory. Retrieved April 8, 2006, from http://www.cde.ca.gov/re/sd/details.asp?cds=30665226028757&public=Y

Capra, F. (1994, August 1994). *From the parts to the whole: systems thinking in ecology and education*. Paper presented at the Retreat for faculty and administrators in Mill Valley School District.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New Jersey: Lawrence Erlbaum.

Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., et al. (1966). *Equal Educational Opportunity*. Washington, DC: National Center for Welfare Statistics, Department of Health, Education, and Welfare.

Collins, J. C. (2001). *Good to great: why some companies make the leap--and others don't* (1st ed.). New York, NY: HarperBusiness.

Correlates of Effective Schools. (1996). Retrieved July 15, 2005, from http://www.mes.org/correlates.html

Covey, S. R. (1989). *The seven habits of highly effective people: restoring the character ethic*. New York: Simon and Schuster.

Darling-Hammond, L. (1996). The quiet revolution: Rethinking teacher development. *Educational Leadership*, 53(6), 4-10.

Darling-Hammond, L. (1997). *The right to learn: a blueprint for creating schools that work* (1st ed.). San Francisco: Jossey-Bass.

Drucker, P. (1992). *Managing for the future: The 1990s and beyond*. New York: Tally Books.

DuFour, R. (2005). What is a professional learning community? In R. DuFour, R. Eaker & R. DuFour (Eds.), *On common ground: The power of a professional learning community* (pp. 31-43). Bloomington, IN: National Education Service.

DuFour, R., DuFour, R., Eaker, R., & Karhanek, G. (2004). *Whatever it takes: how professional learning communities respond when kids don't learn*. Bloomington, Ind.: National Educational Service.

DuFour, R., Eaker, R., & DuFour, R. (2005). Recurring themes of professional learning communities and the assumptions they challenge. In R. DuFour, R. Eaker & R. DuFour (Eds.), *On common ground: The power of professional learning communities* (pp. 7-29). Bloomington, IN: National Education Service.

DuFour, R., & Eaker, R. E. (1987). *Fulfilling the promise of excellence: a practitioner's guide to school improvement*. Westbury, N.Y.: J.L. Wilkerson.

DuFour, R., & Eaker, R. E. (1998). *Professional learning communities at work: best practices for enhancing student achievement*. Bloomington, Ind.: National Education Service.

Eaker, R. E., DuFour, R., & Burnette, R. (2002). *Getting started: reculturing schools to become professional learning communities*. Bloomington, Ind.: National Educational Service.

Education Data Partnership. (2006a, February 3, 2006). School Profile - Fiscal Year 2004-05. Retrieved March 5, 2006, from http://www.ed-data.k12.ca.us/profile.asp?tab=0&level=07&ReportNumber=16&County=30&fyr=0405&District=66522&School=6028260

Education Data Partnership. (2006b, February 3, 2006). School Profile - Fiscal Year 2004-05. Retrieved March 5, 2006, from http://www.ed-data.k12.ca.us/Navigation/fsTwoPanel.asp?bottom=%2Fprofile%2Easp%3Flevel%3D07%26reportNumber%3D16

Education Data Partnership. (2006c, February 3, 2006). School Profile - Fiscal Year 2004-05. Retrieved March 5, 2006, from http://www.ed-data.k12.ca.us/profile.asp?Tab=0&level=07&reportnumber=16&county=30&district=66522&school=6028724

Education Data Partnership. (2006d, February 3, 2006). School Profile - Fiscal Year 2004-05. Retrieved March 5, 2006, from http://www.ed-data.k12.ca.us/profile.asp?tab=0&level=07&ReportNumber=16&County=30&fyr=0405&District=66522&School=6028732

Education Data Partnership. (2006e, February 3, 2006). School Profile - Fiscal Year 2004-05. Retrieved March 5, 2006, from http://www.ed-data.k12.ca.us/profile.asp?tab=0&level=07&ReportNumber=16&County=30&fyr=0405&District=66522&School=6028757

Elmore, R. F. (2002). *Bridging the gap between standards and achievement: The imperative for professional development in education*. Washington, DC: Albert Shanker Institute.

Elmore, R. F. (2004). *School reform from the inside out: policy, practice, and performance*. Cambridge, ME: Harvard Education Press.

Fiszer, E. P. (2004). *How teachers learn best: an ongoing professional development model*. Lanham, Md.: ScarecrowEducation.

Fritz, R. (1989). *The path of least resistance: learning to become the creative force in your own life* (Rev. and expanded. ed.). New York: Fawcett Columbine.

Fritz, R. (1996). *Corporate tides: the inescapable laws of organizational structure*. San Francisco: Berrett-Koehler Publishers.

Fullan, M. (1999). *Change forces: the sequel*. London; Philadelphia, Pa.: Falmer Press.

Fullan, M. (2003). *The moral imperative of school leadership*. Thousand Oaks, Calif.: Corwin Press.

Fullan, M. (2004). *Core Concepts*. Toronto, Canada: Change Forces.

Fullan, M. (2005a). *Leadership & sustainability: system thinkers in action*. Thousand Oaks, Calif.: Corwin Press.

Fullan, M. (2005b). Professional Learning Communities Writ Large. In R. DuFour, R. Eaker & R. DuFour (Eds.), *On common ground: The power of a professional learning community* (pp. 209-223). Bloomington, IN: National Education Service.

Garden Grove Unified School District. (2005). GGUSD Profile. Retrieved March 5, 2006, from http://www.ggusd.k12.ca.us/profile.asp

Giles, C., & Hargreaves, A. (2006). The Sustainability of Innovative Schools as Learning Organizations and Professional Learning Communities During Standardized Reform. *Educational Administration Quarterly*, 42(1), 124-156.

Goleman, D., Boyatzis, R. E., & McKee, A. (2002). *Primal leadership: realizing the power of emotional intelligence*. Boston, Mass.: Harvard Business School Press.

Goodlad, J. I. (1955). The individual school and its principal: Key setting and key person in educational change. *Educational Leadership*, 13(October), 2-6.

Goodlad, J. I. (1975). *The dynamics of educational change: toward responsive schools*. New York: McGraw-Hill.

Havener, C. (1999). *Meaning: the secret of being alive* (1st ed.). Edina, Minn.: Beaver's Pond Press.

Havener, C. (n.d.). Celebrate the Outlaws. Retrieved July 15, 2005, from http://www.systemsthinkingpress.com/articles/celebrate_outlaws.htm

Haycock, K., Jerald, C., & Huang, S. (2001, Spring). Closing the gap: Done in a decade. *Thinking K-16*, 5(2), 3-22.

Hord, S. M. (1997). Professional learning communities: What are they and why are they important? *Issues about Change*, 6(1), 1-8.

Hord, S. M. (2000). Launching Professional learning communities: Beginning Actions. *Issues about Change*, 8(1), 1-16.

Hord, S. M., & Boyd, V. (1995). Professional development fuels a culture of continuous improvement. *Journal of Staff Development*, 16, 10-15.

Hord, S. M., & Cowan, D. E. (1999). Creating learning communities. *Journal of Staff Development*, 20(2), 44-45.

Hoy, W. K., & Tarter, C. J. (1997). *The road to open and healthy schools: a handbook for change* (Elementary and middle school ed.). Thousand Oaks, Calif.: Corwin Press.

Just for the Kids. (2004a). California Best Practices. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/study_framework.cfm?sub=State&Study=California

Just for the Kids. (2004b). California Best Practices: Curriculum and Academic Goals - Classroom Level. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/practice_definition.cfm?sub=State&study=California&detailid=147

Just for the Kids. (2004c). California Best Practices: Instructional Programs, Practices, & Adjustments - Classroom Level. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/practice_definition.cfm?sub=State&study=California&detailid=153

Just for the Kids. (2004d). California Best Practices: Monitoring: Compilation, Analysis, & Use of Data - Classroom Level. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/practice_definition.cfm?sub=State&study=California&detailid=156

Just for the Kids. (2004e). California Best Practices: Recognition, Intervention, & Adjustments - Classroom Level. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/practice_definition.cfm?sub=State&study=California&detailid=159

Just for the Kids. (2004f). California Best Practices: Staff Selection, Leadership & Capacity Building - Classroom Level. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/practice_definition.cfm?sub=State&study=California&detailid=150

Just for the Kids. (n.d.-a). NCEA Best Practices of High-Performing Schools Self-Audit. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/self_audit_framework.cfm?sub=tools

Just for the Kids. (n.d.-b). Theme: Monitoring: Compilation, Analysis, and Use of Data; School System Level: Classroom; Practice: Monitor student learning - Critical Attribute 1. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=14&code=c4.1

Just for the Kids. (n.d.-c). Theme: Monitoring: Compilation, Analysis, and Use of Data; School System Level: Classroom; Practice: Monitor student learning - Critical Attribute 2. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=14&code=c4.2

Just for the Kids. (n.d.-d). Theme: Monitoring: Compilation, Analysis, and Use of Data; School System Level: Classroom; Practice: Monitor student learning - Critical Attribute 3. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=14&code=c4.3

Just for the Kids. (n.d.-e). Theme: Monitoring: Compilation, Analysis, and Use of Data; School System Level: Classroom; Practice: Monitor student learning - Critical Attribute 4. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=14&code=c4.4

Just for the Kids. (n.d.-f). Theme: Monitoring: Compilation, Analysis, and Use of Data; School System Level: Classroom; Practice: Monitor student learning - Critical Attribute 5. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=14&code=c4.5

Just for the Kids. (n.d.-g). Theme: Recognition, Intervention, and Adjustment; School System Level: Classroom; Practice: Recognize, intervene, or adjust based on student performance - Critical Attribute 1. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=15&code=c5.1

Just for the Kids. (n.d.-h). Theme: Recognition, Intervention, and Adjustment; School System Level: Classroom; Practice: Recognize, intervene, or adjust based on student performance - Critical Attribute 2. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=15&code=c5.2

Just for the Kids. (n.d.-i). Theme: Recognition, Intervention, and Adjustment; School System Level: Classroom; Practice: Recognize, intervene, or adjust based on student performance - Critical Attribute 3. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=15&code=c5.3

Just for the Kids. (n.d.-j). Theme: Recognition, Intervention, and Adjustment; School System Level: Classroom; Practice: Recognize, intervene, or adjust based on student performance - Critical Attribute 4. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=15&code=c5.4

Just for the Kids. (n.d.-k). Theme: Recognition, Intervention, and Adjustment; School System Level: Classroom; Practice: Recognize, intervene, or adjust based on student performance - Critical Attribute 5. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=15&code=c5.5

Just for the Kids. (n.d.-l). Theme: Recognition, Intervention, and Adjustment; School System Level: Classroom; Practice: Recognize, intervene, or adjust based on student performance - Critical Attribute 6. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=15&code=c5.6

Just for the Kids. (n.d.-m). Theme: Recognition, Intervention, and Adjustment; School System Level: Classroom; Practice: Recognize, intervene, or adjust based on student performance - Critical Attribute 7. Retrieved February 11, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sub=tools&sec=report&report=critical&selfAuditID=15&code=c5.7

Krisco, K. H. (1997). *Leadership and the art of conversation: conversation as a management tool.* Rocklin, CA: Prima Pub.

Kruse, S., Louis, K. S., & Bryk, A. (1994). Building Professional Community in Schools. *Issues in Restructuring Schools*, 6, 3-6.

Lambert, L. (1998). *Building leadership capacity in schools.* Alexandria, Va.: Association for Supervision and Curriculum Development.

Lambert, L. (2003). *Leadership capacity for lasting school improvement.* Alexandria, Va.: Association for Supervision and Curriculum Development.

Lezotte, L. (2004). Revolutionary and evolutionary: The effective schools movement. Retrieved March 12, 2006, from http://www.effectiveschools.com/freestuff.asp

Lezotte, L. (2005). More Effective Schools: Professional learning communities in action. In R. DuFour, R. Eaker & R. DuFour (Eds.), *On common ground: The power of professional learning communities* (pp. 177-191). Bloomington, IN: National Education Service.

Little, J. W. (1990). The persistence of privacy: Autonomy and initiative in teachers' professional relations. *Teachers' College Record*, 91(4), 509-536.

Marzano, R. J. (2003). *What works in schools: translating research into action.* Alexandria, Va.: Association for Supervision and Curriculum Development.

McLaughlin, M. (1994). Strategic Sites for Teachers' professional development. In P. Grimmett & J. Neufield (Eds.), *The Struggle for Authenticity* (pp. 31-51). New York: Teachers College Press.

McLaughlin, M.W. & Talbert, J.E. (1993). *Contexts that matter for teaching and learning*. Stanford: Center for Research on the Context of Secondary School Teaching, Stanford University.

Moore, M. (2002). The Rhythms of Change. *OD Practitioner*, 34(2), 24-28.

National Association of Elementary School Principals (U.S.). (2002). *Leading learning communities: standards for what principals should know and be able to do.* Alexandria, VA: National Association of Elementary School Principals.

National Center for Educational Accountability. (n.d.-a). Are proven instructional practices and materials used in every classroom? (Critical Attributes of Classroom Level Practice of Instructional Programs, Practices, and Arrangements). Retrieved April 14, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sec=report&report=practice&selfAuditID=13

National Center for Educational Accountability. (n.d.-b). Best Practices of High-Peforming School Systems. Retrieved February 11, 2006, 2006, from http://www.just4kids.org/bestpractice/index.cfm?sub=home

National Center for Educational Accountability. (n.d.-c). Best Practices of High-Performing School Systems: The Framework. Retrieved February 11, 2006, 2006, from http://www.just4kids.org/bestpractice/framework.cfm?sub=framework

National Center for Educational Accountability. (n.d.-d). Do teachers collaborate regularly in grade/subject-level teams? (Critical Attributes of Classroom Level Practice of Staff Selection, Leadership, and Capacity Building). Retrieved April 14, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sec=report&report=practice&selfAuditID=12

National Center for Educational Accountability. (n.d.-e). Do teachers continually monitor the progress of every student? (Critical Attributes of Classroom Level Practice of Monitoring: Compilation, Analysis, and Use of Data). Retrieved April 14, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sec=report&report=practice&selfAuditID=14

National Center for Educational Accountability. (n.d.-f). Do teachers have a plan to ensure all students succeed? (Critical Attributes of Classroom Level Practice of Recognition, Intervention, and Adjustment). Retrieved April 14, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sec=report&report=practice&selfAuditID=15

National Center for Educational Accountability. (n.d.-g). Is the district curriculum taught in every classroom? (Critical Attributes of Classroom Level Practice of Curriculum and Academic Goals). Retrieved April 14, 2006, from http://www.just4kids.org/bestpractice/selfaudit/sample_report.cfm?sec=report&report=practice&selfAuditID=11

National Commission on Excellence in Education. (1983). *A nation at risk.* Washington, DC: U.S. Government Printing Office.

Newmann, F. (1991a). Criteria for restructuring schools. *Issues in Restructuring Schools*, 1, 19-21.

Newmann, F. (1991b). Director's Introduction. *Issues in Restructuring Schools*, 1, 1-2.

Newmann, F. (1991c). What is a 'restructured' school? A framework to clarify means and ends. *Issues in Restructuring Schools*, 1, 11-19.

Newmann, F. (1994). School-wide professional community. *Issues in Restructuring Schools*, 6, 1-2.

Newmann, F., & Wehlage, G. (1995). *Successful school restructuring.* Madison, WI: Center on Organization and Restructuring of Schools.

Policy and Evaluation Division, California Department of Education. (2001a, September 20, 2001). 1999-2000 Academic Performance Index (API) Growth Report: Garden Grove Unified. Retrieved February 11, 2006, from http://api.cde.ca.gov/reports/APIG_Dist.asp?cYear=&cSelect=3066522 -- GARDEN^GROVE^UNIFIED&cChoice=DstAPI1

Policy and Evaluation Division, California Department of Education. (2001b, December 12, 2001). 2000-2001 Academic Performance Index (API) Growth Report: Garden Grove Unified. Retrieved February 11, 2006, 2006, from http://api.cde.ca.gov/reports/2001Grth_dst.asp?cYear=&cSelect=3066522 -- GARDEN^GROVE^UNIFIED&cChoice=2001GDst

Policy and Evaluation Division, California Department of Education. (2003, April 15, 2003). 2001-2002 Academic Performance Index (API) Growth Report: Garden Grove Unified. Retrieved February 11, 2006, from http://api.cde.ca.gov/reports/2002Grth_dst.asp?cYear=&cSelect=3066522 -- GARDEN^GROVE^UNIFIED&cChoice=2002GDst

Policy and Evaluation Division, California Department of Education. (2004a, June 8, 2004). 2002-03 Academic Performance Index (API) Growth Report: Garden Grove Unified. Retrieved February 11, 2006, from http://api.cde.ca.gov/reports/API/2003Grth_dst.asp?cYear=&cSelect=3066522 -- GARDEN^GROVE^UNIFIED&cChoice=2003GDst1

Policy and Evaluation Division, California Department of Education. (2004b, June 8). 2002-2003 Academic Performance Index (API) Growth Report: District Report: Garden Grove Unified School District. Retrieved March 25, 2006, from http://api.cde.ca.gov/reports/2002Base_DstApi.asp?cYear=&cSelect=3066522 -- GARDEN^GROVE^UNIFIED&cChoice=2002BApiD

Policy and Evaluation Division, California Department of Education. (2005a). 2003-04 Academic Performance Index (API) Growth Report: Garden Grove Unified. Retrieved February 11, 2006, from http://api.cde.ca.gov/reports/API/2004Grth_dst.asp?cYear=&cSelect=3066522 -- GARDEN^GROVE^UNIFIED&cChoice=2004GDst1

Policy and Evaluation Division, California Department of Education. (2005b, July 25). 2003-2004 Academic Performance Index (API) Growth Report: District Report: Garden Grove Unified School District. Retrieved March 25, 2006, from http://api.cde.ca.gov/reports/API/2004Grth_DstApi.asp?cYear=&cSelect=3066522 -- GARDEN^GROVE^UNIFIED&cChoice=2004GDst2

Policy and Evaluation Division, California Department of Education. (2005c, July 25, 2005). 2004 Accountability Progress Report: Garden Grove Unified. Retrieved February 11, 2006, from http://ayp.cde.ca.gov/reports/API/2004Progress_DstList.asp?cYear=&cSelect=3066522--GARDEN^GROVE^UNIFIED

Policy and Evaluation Division, California Department of Education. (2006a, January 18, 2006). 2004-05 Academic Performance Index (API) Growth Report: Garden Grove Unified. Retrieved February 11, 2006, from http://api.cde.ca.gov/reports/API/2005Grth_Dst.asp?cYear=2004-05&cSelect=3066522 -- GARDEN^GROVE^UNIFIED&cChoice=DstAPI1&cYear=2004-05

Policy and Evaluation Division, California Department of Education. (2006b, February 11, 2006). 2005 Accountability Progress Report: Garden Grove Unified. Retrieved February 11, 2006, from http://ayp.cde.ca.gov/reports/APR/2005APR_DstList.asp?cYear=2004-05&cSelect=3066522--GARDEN^GROVE^UNIFIED

Policy and Evaluation Division, California Department of Education. (2006c, March 14). Local Educational Agency (LEA) Report - API Base: 2005 Academic Performance Index (API) Base Report: LEA: Garden Grove Unified. Retrieved March 25, 2006, from http://api.cde.ca.gov/APIBase2006/2005Base_DstApi.aspx?cYear=&allcds=3066522&cChoice=2005BApiD

Policy and Evaluation Division, California Department of Education. (2006d, January 18). Local Educational Agency (LEA) Report: 2004-05 Academic Performance Index (API) Growth Report: LEA: Garden Grove Unified. Retrieved March 25, 2006, from http://api.cde.ca.gov/reports/API/2005Grth_DstApi.asp?cYear=&cSelect=3066522 -- GARDEN^GROVE^UNIFIED&cChoice=2005GDst2

Quinn, R. E. (1996). *Deep change: discovering the leader within*. San Francisco, Calif.: Jossey-Bass Publishers.

Reeves, D. B. (2000). *Accountability in action: a blueprint for learning organizations*. Denver, CO: Advanced Learning Press: Distributed by Center for Performance Assessment.

Reeves, D. B. (2005). Putting it all together: Standards, assessment, and accountability in successful professional learning communities. In R. DuFour, R. Eaker & R. DuFour (Eds.), *On common ground: The power of professional learning communities* (pp. 45-63). Bloomington, IN: National Education Service.

Rosenholtz, S. J. (1991). *Teacher's Workplace: The social organization of schools*. New York: Teachers College Press.

Schein, E. H. (1985). *Organizational culture and leadership* (1st ed.). San Francisco: Jossey-Bass Publishers.

Schlechty, P. C. (1997). *Inventing better schools: an action plan for educational reform* (1st ed.). San Francisco: Jossey-Bass Publishers.

Schlechty, P. C. (2002). *Working on the work: an action plan for teachers, principals, and superintendents* (1st ed.). San Francisco: Jossey-Bass.

Schlechty, P. C. (2005). *Creating great schools: six critical systems at the heart of educational innovation* (1st ed.). San Francisco, CA: Jossey-Bass.

Schmoker, M. (1997). Setting goals in turbulent times. In A. Hargreaves (Ed.), *Rethinking educational change with heart and mind* (pp. 128-148). Alexandria, VA: Association for Superivision and Curriculum Development.

Schmoker, M. (2005a). Here and now: Improving teaching and learning. In R. DuFour, R. Eaker & R. DuFour (Eds.), *On common ground: The power of professional learning communities* (pp. xi-xvi). Bloomington, IN: National Education Service.

Schmoker, M. (2005b). No turning back: The ironclasd case for professional learning communities. In R. DuFour, R. Eaker & R. DuFour (Eds.), *On common ground: The power of professional learning communities* (pp. 135-153). Bloomington, IN: National Education Service.

Senge, P. M. (1990). *The fifth discipline: the art and practice of the learning organization* (1st ed.). New York: Doubleday/Currency.

Senge, P. M. (2000). *Schools that learn: a fifth discipline fieldbook for educators, parents, and everyone who cares about education* (1st Currency pbk. ed.). New York: Doubleday.

Sergiovanni, T. J. (1996). *Leadership for the schoolhouse: how is it different? why is it important?* (1st ed.). San Francisco: Jossey-Bass Publishers.

Sparks, D. (2002). *Designing powerful professional development for teachers and principals.* Oxford, OH (P.O. Box 240, Oxford, OH, 45056): National Staff Development Council.

Sparks, D. (2005). *Leading for results: transforming teaching, learning, and relationships in schools.* Thousand Oaks, Calif.: Corwin Press.

Stiggins, R. J. (2001). *Student-involved classroom assessment* (3rd ed.). Upper Saddle River, N.J.: Merrill Prentice Hall.

Stiggins, R. J. (2005). Assessment FOR learning: Building a culture of confident learners. In R. DuFour, R. Eaker & R. DuFour (Eds.), *On common ground: The power of professional learning communities* (pp. 65-83). Bloomington, IN: National Education Service.

Stiggins, R. J., Arter, J., Chappuis, J., & Chappuis, S. (2004). *Classroom assessments for student learning: Doing it right, using it well.* Portland, OR: Assessment Training Institute.

The Broad Foundation. Showcasing Success. Retrieved November 5, 2005, from http://www.broadfoundation.org/investments/showcasing.shtml

United States Department of Education. (1994). *Goals 2000.* Washington, DC.

United States Department of Education. (2002). *No Child Left Behind Act of 2001.* Washington, DC.

Wagner, T. (2001). Leadership for learning: An action theory of school change. *Phi Delta Kappan*, 82(5), 378-383.

Wiggins, G. P. (1998). *Educative assessment: designing assessments to inform and improve student performance* (1st ed.). San Francisco, Calif.: Jossey-Bass.

York-Barr, J. (2001). *Reflective practice to improve schools: an action guide for educators.* Thousand Oaks, Calif.: Corwin Press.

Zander, R. S., & Zander, B. (2000). *The art of possibility.* Boston, Mass.: Harvard Business School Press.

APPENDIX A

The National Center for Educational Accountability's Best Practices Framework

The Best Practices Framework

ORGANIZING THEMES	DISTRICT PRACTICES	SCHOOL PRACTICES	CLASSROOM PRACTICES
CURRICULUM & ACADEMIC GOALS 	Adopt standards, align curriculum and set goals for improvement for all students	Align curriculum with standards to meet specific student improvement and learning goals	Base teaching on standards, aligned curriculum and agreed upon adaptation
STAFF SELECTION, LEADERSHIP, & CAPACITY BUILDING 	Recruit, develop and support strong instructional leaders and highly qualified teachers	Select, develop, and support leadership and staff based on student learning	Collaborate to increase knowledge and improve instructional quality for all students
INSTRUCTIONAL PROGRAMS, PRACTICES, & ARRANGEMENTS 	Provide research-based instructional programs; ensure research-based practices	Use effective and research based programs, practices and arrangements in every classroom	Use effective and research based programs, practices and arrangements
MONITORING COMPILATION, ANALYSIS & USE OF DATA 	Develop user-friendly student assessment and data monitoring systems to track school, teacher, and student performance	Use student assessments and data systems to monitor teaching and learning	Monitor student learning at regular intervals and use this data to inform instruction
RECOGNITION, INTERVENTION, & ADJUSTMENTS 	Recognize, intervene or adjust based on school leader, teacher and student performance	Recognize, intervene or adjust based on teacher and student performance	Recognize, intervene or adjust based on student performance

CORE BELIEFS ABOUT TEACHING AND LEARNING

(NCEA, n.d.-b, p. 1)

APPENDIX B

Classroom-Level Survey Packet

How Does the Classroom Use of Data Affect our Most At-Risk Student Subgroups' Achievement in English Language Arts?

TEACHER SURVEY

INFORMED CONSENT

I authorize Carrie L. Mitchell, M.S., a doctoral student under the supervision of Dr. Robert C. Paull in Educational Leadership, Administration, and Policy at Pepperdine University, Graduate School of Education and Psychology, to include me in the research project entitled "A Study Of The Relationship Between Two Professional Learning Community Practices In Elementary Classrooms And The English Language Arts Achievement Of California's Most At-Risk Student Subgroups In A California School District." Ms. Mitchell is also a principal in the Garden Grove Unified School District; however, she is conducting this research as a student at Pepperdine University GSEP and not in her capacity as a school principal.

I understand that my participation in this study is strictly voluntary. If I choose not to participate, this will not affect my employment in any way, and will result in no penalty or loss of benefits to which I am otherwise entitled.

I have been asked to participate in a research project that is designed to determine the degree to which my school engages in the practice of monitoring student achievement data in order to recognize, intervene, and adjust learning opportunities for students. Further, the research project is designed to determine whether there is a difference in the responses of teachers versus site administrators, or whether there are differences in responses based on selected demographic characteristics of respondents. Finally, the research project is designed to determine whether there is a relationship between my school's degree of data monitoring and intervention, and my school's demonstrated results sustaining student achievement for Hispanics/Latinos, English-Language Learners, and Socio-Economically Disadvantaged students on the English Language Arts portion of the California Standards Test. My participation in this study requires one 20-30 minute session.

I have been selected for this study because I am a teacher in a school whose student population consists of 65% or more Hispanic/Latino students, 65% or more English Language Learners, and 65% or more Socio-Economically Disadvantaged students. My school was selected for participation in the study for its demonstrated results sustaining achievement growth for these subgroups.

I will be asked to provide basic demographic data about myself and to complete a multiple choice paper-and-pencil questionnaire describing how data is used in my classroom, grade-level, and school.

A potential physical risk involved in taking this survey is fatigue. If at any time I become too tired to complete the survey, I may withdraw from the study.

While there is no personal benefit to me as a result of my participation in this study, possible benefits to the field of elementary education include a better understanding of the relationship between the classroom use of data and student academic performance.

I understand that I have the right to refuse to participate in, or to withdraw from, the study at any time. I also have the right to refuse to answer any question I choose not to answer.

I understand that under California law, the privilege of confidentiality does not extend to information about the abuse of a child. If the investigator has or is given such information, she (or he) is to report it to the authorities. The obligation to report includes alleged or probable abuse as well as known abuse. Furthermore, under California law, the investigator is obligated to report any evidence of physical abuse against elders or dependent adults, or if a person indicates she or he wishes to do serious harm to self, others, or property.

If the findings of the study are published or presented to a professional audience, no personally identifying information will be released. The data gathered will be stored in locked file cabinets to which only the investigator will have access. The information gathered may be made available to other investigators with whom the investigator collaborates in future research. If such collaboration occurs, the data will be released without any personally identifying information so that I cannot be identified, and the use of the data will be supervised by the investigator. The data will be maintained in a secure manner for an indefinite period of time (with a minimum of 5 years) for research purposes.

I understand that I may choose to receive a snack as an incentive for my participation in this study. However, I understand I will receive no compensation, financial or otherwise, for participating in this study.

I understand that if I have any questions regarding the study procedures, I can contact Carrie L. Mitchell at to get answers to my questions. I have further questions, I may contact Dr. Robert C. Paull at . If I have further questions about my rights as a research participant, I may contact Dr. Stephanie Woo, Chairperson of the GPS IRB, Pepperdine University at .

I understand to my satisfaction the information in the consent form regarding my participation in the research project. All of my questions have been answered to my

satisfaction. I have received a copy of this informed consent form which I have read and understand.

By reading this consent form and completing the survey, I am giving consent to participate in this study.

How Does the Classroom Use of Data Affect our Most At-Risk Student Subgroups' Achievement in English Language Arts?

TEACHER SURVEY MATERIALS

DEMOGRAPHIC SURVEY

Directions: Please indicate your answers to the following demographic questions with checks in the appropriate column.

		1-5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	31+ years
A	Counting this year, how many years have you served as a **public school certificated employee**? (teacher, school psychologist, Teacher-On-Special-Assignment, site or district administrator, etc., including service in other states or districts)	☐	☐	☐	☐	☐	☐	☐
B	Counting this year, how many years have you served as a **public school teacher**?	☐	☐	☐	☐	☐	☐	☐
C	Counting this year, how many years have you served as a public school teacher **in this District**?	☐	☐	☐	☐	☐	☐	☐
D	Counting this year, how many years have you served as a public school teacher **in this school**?	☐	☐	☐	☐	☐	☐	☐

		Pre-K	K	1	2	3	4	5	6	Sp. Ed.
E	Please indicate the grade-level you currently teach. (Check all that apply)	☐	☐	☐	☐	☐	☐	☐	☐	☐

		20-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	Over 61
F	Please indicate your age range.	☐	☐	☐	☐	☐	☐	☐	☐	☐

		Male	Female
G	Please indicate your gender.	☐	☐

How Does the Classroom Use of Data Affect our Most At-Risk Student Subgroups' Achievement in English Language Arts?

TEACHER SURVEY MATERIALS

Directions: Based on your experience as an elementary school teacher <u>at this school</u> <u>this year</u>, indicate the response that best fits your answers to the following questions.

		All	Most	Some	Few	None	Don't Know	Does Not Apply
1	Prior to the opening of a new school year, do all teachers receive student academic profiles detailing performance on any state or national assessments for the students they will be teaching?	☐	☐	☐	☐	☐	☐	☐
2	Do teachers in this school use the same grading standards or rubrics for student work (i.e. "A" level work is the same for all students)?	☐	☐	☐	☐	☐	☐	☐
3	Do teachers in this school assess individual student progress regularly?	☐	☐	☐	☐	☐	☐	☐
4	Do teachers in this school view testing as a tool for informing classroom instruction?	☐	☐	☐	☐	☐	☐	☐
5	Do teachers in this school study disaggregated assessment data by specific skill so they can pinpoint objectives students have and have not mastered?	☐	☐	☐	☐	☐	☐	☐
6	Do teachers in this school make their instructional decisions based on student performance data?	☐	☐	☐	☐	☐	☐	☐
7	Do students participate in setting their learning goals, monitoring their progress, and planning intervention strategies, as appropriate?	☐	☐	☐	☐	☐	☐	☐
8	Do students who are having difficulty mastering the curriculum receive extra instruction until they have mastered and can apply the knowledge?	☐	☐	☐	☐	☐	☐	☐
		Always	Often	Some-times	Rarely	Never	Don't Know	Does Not Apply
9	Are students who demonstrate early mastery of academic objectives presented with more challenging assignments and opportunities?	☐	☐	☐	☐	☐	☐	☐
10	Do classroom assessment tasks require students to use basic skills in more complex ways (e.g., to analyze, to synthesize, to evaluate)?	☐	☐	☐	☐	☐	☐	☐
11	Is the progress of students performing "below grade level" monitored more frequently?	☐	☐	☐	☐	☐	☐	☐
12	Is individual student progress monitored within classrooms using a variety of assessment tools and strategies?	☐	☐	☐	☐	☐	☐	☐

		Always	Often	Some-times	Rarely	Never	Don't Know	Does Not Apply
13	Do teachers in this school study either end of year data or use pre-tests to evaluate students' entry level knowledge and skills?	☐	☐	☐	☐	☐	☐	☐
14	Do teachers' grades reliably predict student performance on the state assessment in this school?	☐	☐	☐	☐	☐	☐	☐
15	Is assessment seen as a critical part of the instructional program at this school?	☐	☐	☐	☐	☐	☐	☐
16	Do you use data to track the relative success of specific lessons?	☐	☐	☐	☐	☐	☐	☐
17	Does the principal meet with teachers individually to review and discuss student performance data?	☐	☐	☐	☐	☐	☐	☐
18	Do you meet with other teachers to review and discuss student performance data?	☐	☐	☐	☐	☐	☐	☐
19	Do parents receive specific communication regarding their students' progress toward mastering the written curriculum?	☐	☐	☐	☐	☐	☐	☐
20	Do parents receive frequent communication regarding their students' progress toward mastering the written curriculum?	☐	☐	☐	☐	☐	☐	☐
21	Do teachers in this school provide timely feedback to students regarding their performance?	☐	☐	☐	☐	☐	☐	☐
22	Are students involved in monitoring their own progress toward mastering academic objectives?	☐	☐	☐	☐	☐	☐	☐
23	Do teachers provide students with immediate feedback relative to their responses?	☐	☐	☐	☐	☐	☐	☐
24	Do teachers allow opportunities for students to correct errors?	☐	☐	☐	☐	☐	☐	☐
25	Are student rewards directly related to progress toward academic objectives?	☐	☐	☐	☐	☐	☐	☐
26	Are classroom celebrations in place to recognize high-performing students?	☐	☐	☐	☐	☐	☐	☐
27	Do teachers provide additional learning opportunities for students who begin the school year below grade level?	☐	☐	☐	☐	☐	☐	☐
28	Do intervention strategies become more intensive as a student's need persists?	☐	☐	☐	☐	☐	☐	☐
29	Do teachers in this school study student performance data by specific skills or objectives to identify particular intervention needs?	☐	☐	☐	☐	☐	☐	☐

		Always	Often	Some-times	Rarely	Never	Don't Know	Does Not Apply
30	Are instructional interventions for students implemented immediately?	☐	☐	☐	☐	☐	☐	☐
31	Do teachers continually evaluate intervention programs based on their effectiveness in increasing student achievement?	☐	☐	☐	☐	☐	☐	☐
32	Do teachers select intervention strategies based upon proven their effectiveness with similar student populations?	☐	☐	☐	☐	☐	☐	☐
33	Are diagnostic assessments used to identify appropriate instructional intervention strategies for students needing additional assistance?	☐	☐	☐	☐	☐	☐	☐
34	Are struggling students identified early in the year, prior to failing the state assessment?	☐	☐	☐	☐	☐	☐	☐
35	Are students who demonstrate early mastery of material provided with extended learning opportunities?	☐	☐	☐	☐	☐	☐	☐
36	Do teachers regularly communicate with the principal about individual student progress and needed interventions?	☐	☐	☐	☐	☐	☐	☐
37	Do teachers regularly communicate with parents about their student's progress and needed interventions?	☐	☐	☐	☐	☐	☐	☐
38	Are classroom level interventions (re-teaching, flexible grouping, peer tutoring, etc.) utilized in all classrooms in this school as a first tier of student intervention?	☐	☐	☐	☐	☐	☐	☐
39	Is any extra instruction students receive coordinated with the instruction of the regular classroom teacher?	☐	☐	☐	☐	☐	☐	☐
40	Do school-level student interventions exist to supplement a teacher's classroom efforts?	☐	☐	☐	☐	☐	☐	☐
41	Do teachers have access to district personnel to assist them in meeting student learning needs?	☐	☐	☐	☐	☐	☐	☐
42	Are instructional materials or programs that do not prove effective in raising student achievement abandoned?	☐	☐	☐	☐	☐	☐	☐
43	Are adjustments in students' schedules ever made in response to concerns about student performance?	☐	☐	☐	☐	☐	☐	☐

		Yes	No	Don't Know	Does Not Apply
44	Does the school have campus-level support for student interventions beyond the classroom teacher?	☐	☐	☐	☐

Thank you for your participation! Please place the survey in the security envelope provided, then in the larger envelope clearly marked "Survey Materials."

APPENDIX C

School-Level Survey Packet

How Does the Classroom Use of Data Affect our Most At-Risk Student Subgroups' Achievement in English Language Arts?

SITE ADMINISTRATOR SURVEY

INFORMED CONSENT

I authorize Carrie L. Mitchell, M.S., a doctoral student under the supervision of Dr. Robert C. Paull in Educational Leadership, Administration, and Policy at Pepperdine University, Graduate School of Education and Psychology, to include me in the research project entitled "A Study Of The Relationship Between Two Professional Learning Community Practices In Elementary Classrooms And The English Language Arts Achievement Of California's Most At-Risk Student Subgroups In A California School District." Ms. Mitchell is also a principal in the Garden Grove Unified School District; however, she is conducting this research as a student at Pepperdine University GSEP and not in her capacity as a school principal.

I understand that my participation in this study is strictly voluntary. If I choose not to participate, this will not affect my employment in any way, and will result in no penalty or loss of benefits to which I am otherwise entitled.

I have been asked to participate in a research project that is designed to determine the degree to which my school engages in the practice of monitoring student achievement data in order to recognize, intervene, and adjust learning opportunities for students. Further, the research project is designed to determine whether there is a difference in the responses of teachers versus site administrators, or whether there are differences in responses based on selected demographic characteristics of respondents. Finally, the research project is designed to determine whether there is a relationship between my school's degree of data monitoring and intervention, and my school's demonstrated results sustaining student achievement for Hispanics/Latinos, English-Language Learners, and Socio-Economically Disadvantaged students on the English Language Arts portion of the California Standards Test. My participation in this study requires one 20-30 minute session.

I have been selected for this study because I am an administrator (principal or program facilitator) in a school whose student population consists of 65% or more Hispanic/Latino students, 65% or more English Language Learners, and 65% or more Socio-Economically Disadvantaged students. My school was selected for participation in the study for its demonstrated results sustaining achievement growth for these subgroups.

I will be asked to provide basic demographic data about myself and to complete a multiple choice paper-and-pencil questionnaire describing how data is used in my classroom, grade-level, and school.

A potential physical risk involved in taking this survey is fatigue. If at any time I become too tired to complete the survey, I may withdraw from the study.

While there is no personal benefit to me as a result of my participation in this study, possible benefits to the field of elementary education include a better understanding of the relationship between the classroom use of data and student academic performance.

I understand that I have the right to refuse to participate in, or to withdraw from, the study at any time. I also have the right to refuse to answer any question I choose not to answer.

I understand that under California law, the privilege of confidentiality does not extend to information about the abuse of a child. If the investigator has or is given such information, she (or he) is to report it to the authorities. The obligation to report includes alleged or probable abuse as well as known abuse. Furthermore, under California law, the investigator is obligated to report any evidence of physical abuse against elders or dependent adults, or if a person indicates she or he wishes to do serious harm to self, others, or property.

If the findings of the study are published or presented to a professional audience, no personally identifying information will be released. The data gathered will be stored in locked file cabinets to which only the investigator will have access. The information gathered may be made available to other investigators with whom the investigator collaborates in future research. If such collaboration occurs, the data will be released without any personally identifying information so that I cannot be identified, and the use of the data will be supervised by the investigator. The data will be maintained in a secure manner for an indefinite period of time (with a minimum of 5 years) for research purposes.

I understand that I may choose to receive a snack as an incentive for my participation in this study. However, I understand I will receive no compensation, financial or otherwise, for participating in this study.

I understand that if I have any questions regarding the study procedures, I can contact Carrie L. Mitchell at to get answers to my questions. I have further questions, I may contact Dr. Robert C. Paull at . If I have further questions about my rights as a research participant, I may contact Dr. Stephanie Woo, Chairperson of the GPS IRB, Pepperdine University at .

I understand to my satisfaction the information in the consent form regarding my participation in the research project. All of my questions have been answered to my

satisfaction. I have received a copy of this informed consent form which I have read and understand.

By reading this consent form and completing the survey, I am giving consent to participate in this study.

How Does the Classroom Use of Data Affect our Most At-Risk Student Subgroups' Achievement in English Language Arts?

SITE ADMINISTRATOR SURVEY MATERIALS

DEMOGRAPHIC SURVEY

Directions: Please indicate your answers to the following demographic questions with checks in the appropriate column.

		1-5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	31+ years
A	Counting this year, how many years have you served ~~as a **public school certificated**~~ **employee**? (teacher, school psychologist, Teacher-On-Special-Assignment, site or district administrator, etc., including service in other states or districts)	☐	☐	☐	☐	☐	☐	☐
B	Counting this year, how many years have you served as a **public school administrator**?	☐	☐	☐	☐	☐	☐	☐
C	Counting this year, how many years have you served as a public school administrator **in this District**?	☐	☐	☐	☐	☐	☐	☐
D	Counting this year, how many years have you served as a public school administrator **in this school**?	☐	☐	☐	☐	☐	☐	☐

		20-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	Over 61
E	Please indicate your age range.	☐	☐	☐	☐	☐	☐	☐	☐	☐

		Male	Female
F	Please indicate your gender.	☐	☐

How Does the Classroom Use of Data Affect our Most At-Risk Student Subgroups' Achievement in English Language Arts?

SITE ADMINISTRATOR SURVEY MATERIALS

Directions: Based on your experience as an elementary school site administrator <u>at this school</u> <u>this year</u>, indicate the response that best fits your answers to the following questions.

		All	Most	Some	Few	None	Don't Know	Does Not Apply
1	Do teachers in this school use the same grading standards or rubrics for student work (i.e. "A" level work is the same for all students)?	☐	☐	☐	☐	☐	☐	☐
2	Do teachers view testing as a tool for informing classroom instruction?	☐	☐	☐	☐	☐	☐	☐
3	Do teachers study disaggregated assessment data by specific skill so they can pinpoint objectives students have and have not mastered?	☐	☐	☐	☐	☐	☐	☐
		Always	Often	Some-times	Rarely	Never	Don't Know	Does Not Apply
4	Is the progress of students performing "below grade level" monitored more frequently?	☐	☐	☐	☐	☐	☐	☐
5	Is the primary use of data in the district to inform teaching and learning?	☐	☐	☐	☐	☐	☐	☐
6	Is student assessment perceived as a vital part of learning in the district, rather than an interruption to it?	☐	☐	☐	☐	☐	☐	☐
7	Is assessment seen as a critical part of the instructional program at this school?	☐	☐	☐	☐	☐	☐	☐
8	Does the principal meet with teachers individually to review and discuss student performance data?	☐	☐	☐	☐	☐	☐	☐
9	Are school intervention programs in place for students who begin a school year below grade level?	☐	☐	☐	☐	☐	☐	☐
10	Are school celebrations in place for recognizing student achievement?	☐	☐	☐	☐	☐	☐	☐
11	Do intervention strategies become more intensive as a student's need persists?	☐	☐	☐	☐	☐	☐	☐
12	Do teachers in this school study student performance data by specific skills or objectives to identify particular intervention needs?	☐	☐	☐	☐	☐	☐	☐

		Always	Often	Some-times	Rarely	ever	Don't Know	Does Not Apply
13	Are selected interventions chosen based on proven effectiveness with similar student populations?	☐	☐	☐	☐	☐	☐	☐
14	Are diagnostic assessments used to identify appropriate instructional intervention strategies for students needing additional assistance?	☐	☐	☐	☐	☐	☐	☐
15	Are struggling students identified early in the year, prior to failing the state assessment?	☐	☐	☐	☐	☐	☐	☐
16	Do teachers regularly communicate with the principal about individual student progress and needed interventions?	☐	☐	☐	☐	☐	☐	☐
17	Is any extra instruction students receive coordinated with the instruction of the regular classroom teacher?	☐	☐	☐	☐	☐	☐	☐
18	Do school-level student interventions exist to supplement a teacher's classroom efforts?	☐	☐	☐	☐	☐	☐	☐
19	Are instructional materials or programs that do not prove effective in raising student achievement abandoned?	☐	☐	☐	☐	☐	☐	☐
20	Are adjustments in students' schedules ever made in response to concerns about student performance?	☐	☐	☐	☐	☐	☐	☐

		Yes	No	Don't Know	Does Not Apply
21	Does the school have campus-level support for student interventions beyond the classroom teacher?	☐	☐	☐	☐
22	Do teachers have access to school personnel to assist them in meeting student learning needs?	☐	☐	☐	☐
23	Do teachers have access to district personnel to assist them in meeting student learning needs?	☐	☐	☐	☐
24	Do opportunities for student interventions exist outside the traditional school day?	☐	☐	☐	☐

Thank you for your participation! Please place the survey in the security envelope provided, then in the larger envelope clearly marked "Survey Materials."

APPENDIX D

Principal Directions for Survey Administration

DIRECTIONS FOR SURVEY ADMINISTRATION SCRIPT

SCHOOL PRINCIPAL

Principal: During the final 20-30 minutes of a regularly scheduled staff meeting, please begin the survey administration by reading aloud these italicized directions to your staff.

Our school has been selected to participate in a research project that is designed to study how our school regularly monitors student achievement data in order to recognize, intervene, and adjust learning opportunities for our student. The research project is also designed to study how our monitoring of data is related to our school's demonstrated results sustaining student achievement for Hispanics/Latinos, English-Language Learners, and Socio-Economically Disadvantaged students on the English Language Arts portion of the California Standards Test.

The researcher conducting this study is Carrie L. Mitchell, a doctoral student under the supervision of Dr. Robert C. Paull in Educational Leadership, Administration, and Policy at Pepperdine University, GSEP. Ms. Mitchell is also a principal in the Garden Grove Unified School District; however, she is conducting this research as a student at Pepperdine University GSEP and not in her capacity as a school principal.

Participation in this research project is completely voluntary and there is no penalty for non-participation. If you choose not to participate, or if you were not a teacher at this school both this year and last year, you may leave the room at any time.

I need a volunteer teacher to read the directions, distribute the survey materials, and seal the completed surveys in an envelope.

Principal: After a teacher has volunteered, please give him/her the Teacher Survey Packets, and the Teacher Volunteer Information.

Please remain in the room for the reading of the directions and to ask clarifying procedural questions, and then excuse yourself and your Program Facilitator to complete the Administrator Survey independently in a different room.

After completing the Administrator Survey, the principal and program facilitator are to place their survey in the security envelope provided. Then, both envelopes are to be placed into a larger envelope clearly marked "Survey Materials." This envelope is to be brought directly to the school office to be mailed to the researcher via USPS.

APPENDIX E

Volunteer Teacher Directions for Survey Administration

DIRECTIONS FOR SURVEY ADMINISTRATION SCRIPT

VOLUNTEER TEACHER

Volunteer: Thank you for volunteering to distribute and collect the materials for this study. Please read the sections in italics aloud to your colleagues, and follow the directions as presented below.

Directions:

The researcher conducting this study is Carrie L. Mitchell, a doctoral student under the supervision of Dr. Robert C. Paull in Educational Leadership, Administration, and Policy at Pepperdine University, GSEP. Ms. Mitchell is also a principal in the Garden Grove Unified School District; however, she is conducting this research as a student at Pepperdine University GSEP and not in her capacity as a school principal.

Our school has been selected to participate in a research project that is designed to study how our school regularly monitors student achievement data in order to recognize, intervene, and adjust learning opportunities for our student. The research project is also designed to study how our monitoring of data is related to our school's demonstrated results sustaining student achievement for Hispanics/Latinos, English-Language Learners, and Socio-Economically Disadvantaged students on the English Language Arts portion of the California Standards Test.

We were selected for two reasons. #1: Our school population is 65% or more English Language Learners, 65% or more Socio-Economically Disadvantaged; and 65% or more Hispanic/Latino. #2: Our school has demonstrated results sustaining student achievement for each of those subgroups.

This study is completely voluntary. You do not have to participate in this study if you do not want to. If you choose not to participate, or if you were not a teacher at this school both this year and last year, you may leave the room at any time.

Only currently contracted teachers present at school today who were also employed with a contract at this school during the 2005-06 school year are asked to participate in this study. Administrators assigned to our school during the 2005-06 school year are also asked to participate. It should take only the 20-30 minutes remaining in our faculty meeting to complete the study.

To thank you in advance for your participation in her study, the researcher has provided the treats for our meeting.

Each of you will receive a packet that contains four items:

1. *A document describing your informed consent to participate in this study. Please read this document. By completing the survey, you are giving your consent to participate in the study.*
2. *A brief demographic survey*
3. *A multiple-choice paper-and-pencil survey asking you to indicate how data is used in your classroom, grade-level, and school.*
4. *A security envelope.*

When you have completed the survey, insert it into the security envelope provided, and drop it into this large envelope clearly marked "Survey Materials," which I will place by the door. [Hold up the large envelope provided.]

It is important for you to know that your responses will be kept anonymous. No personally identifying information is collected. And, the results from the study will be reported in such a manner that individuals or very small groups of teachers will not be identifiable.

In order for this study to be useful to other schools and districts, you are encouraged to report your experiences objectively on the survey forms.

Are there any questions <u>regarding these procedures</u>?

(Please clarify <u>only</u> procedural questions as well as you can. Do not attempt to answer questions related to the study. These questions should be directed to the researcher using the contact information is provided on the Consent Form.

Now that they have heard the directions, I will give the principal and program facilitator their Administrator Surveys. They will leave the room and will complete their own surveys for the same study.

<u>Distribution of Survey Materials:</u>
Please give the principal and program facilitator (if they were assigned in an administrative capacity at this school last year) an "Administrator Survey Packet." When the principal and program facilitator have left the room, please distribute the Teacher Survey Packets to all <u>contracted</u> teachers who are present at this meeting.

Distribute survey materials to teachers who were assigned, by contract, to this school both this year and last year. Eligible teachers who are absent from school today will not participate in the study.

Collection of Survey Materials:
When teachers have completed their surveys, please ensure the following:

1. Individuals are to seal their survey inside the security envelope provided.

2. These individual envelopes are to be placed inside the larger envelope clearly marked "Survey Materials"

3. Each teacher may retain their Consent Form.

When all Survey Materials have been placed inside the "Survey Materials" envelope:

1. Please seal the envelope.

2. Bring the sealed envelope to the office to be mailed in today's outgoing US Postal Service mail.

Again, thank you for assisting in the administration of this survey!

APPENDIX F

Procedural Steps of Data Collection

Classroom Level Survey Procedures

1. During the final 20-30 minutes of a regularly scheduled staff meeting, the school principal read the Principal Direction for Survey Administration Script (Appendix D) to acknowledge that the school was selected for participation in a research study, and to request a teacher volunteer to read the survey directions, distribute survey materials, and ensure that surveys were collected and returned to the researcher as outlined below.
2. The teacher volunteer read aloud the italicized portion of the Teacher Volunteer Directions for the Survey Administration Script (Appendix E), giving the directions for reading the consent form, completing and returning the survey.
3. The teacher volunteer distributed Teacher Survey Materials Packets to all eligible teachers in attendance at the staff meeting. The Teacher Survey Materials Packet contained a consent form, a demographic survey, and questionnaire materials (Appendix B).
4. After they heard the directions and had an opportunity to ask questions, site administrators excused themselves from the meeting room, and independently completed their Site Administrator Survey Materials Packet in a separate location (Appendix C).

5. After reviewing the consent form, teachers had the opportunity to "opt out" of the study by simply not completing the survey.
6. After teachers completed the Teacher Survey, they placed their survey inside the security envelope provided and sealed it closed. Next, teachers placed their sealed envelopes into a large envelope was clearly marked "Survey Materials." Teachers had the option to retain their copy of the Consent Form.
7. Once all Teacher Surveys were returned to the large "Survey Materials" envelope, the volunteer teacher sealed it inside a self-addressed postage-paid box, and brought it to the school's office to be mailed directly to the researcher via the USPS.

School-Level Survey Procedures

1. During the final 20-30 minutes of a regularly scheduled staff meeting, after having read/heard the directions for survey administration and having had the opportunity to ask questions, while teachers completed their Teacher Surveys under the facilitation of a teacher volunteer, site administrators independently completed their Site Administrator Survey Materials Packet in a separate location (Appendix C).
2. After reviewing the consent form, site administrators had the option to "opt out" of the survey by simply not completing the survey.
3. After administrators completed the Site Administrator Survey, they placed their completed survey inside a security envelope.

4. Once both Site Administrator Surveys have been completed, the principal collected both sealed envelopes containing the Site Administrator Surveys, sealed the envelopes within a larger envelope to ensure the security and confidentiality of the documents, and placed the larger envelope inside the pre-addressed postage-paid box provided. The box was then mailed directly to the researcher via the USPS.

APPENDIX G

Institutional Approvals

Institutional approvals to conduct this research project are listed below:

- In a personal communication on November 9, 2005, Dr. L. Schwalm, Superintendent of GGUSD, gave authorization for this study to be conducted in selected elementary schools in GGUSD.
- In a personal communication on May 11, 2006, and in writing on July 24, 2006, Dr. S. Franklin, Assistant Superintendent of Elementary Education of GGUSD, gave authorization for this study to be conducted in selected elementary schools in GGUSD (Appendix G).
- In a personal communication on April 13, 2006, S. Collins, NCEA Director of School Effectiveness Analysis, gave permission to use NCEA's Best Practice Framework Self-Audits in this study (Appendix G).
- In addition, to ensure that appropriate measures have been taken to protect the confidentiality of the participants, this proposal was submitted to Pepperdine University's Institutional Review Board (IRB) for approval before the survey was administered.
- Finally, informed consent was solicited from the teachers and administrators from both groups at the time of survey administration at which point participants will be given the opportunity to opt out of the survey.

Permission to Use NCEA's Self-Audits

From: "Sarah Collins"
To: "Carrie Mitchell"
Date: Thursday, April 13, 2006 12:21:53 PM
Subject: RE: Classroom Best Practices - dissertation study

Ah, thank you! Now I remember ..

Here it is - in both black and white and color. I don't know if it will be of any use, but it helped me think more deeply about the structure.

By the way, so you have this in writing, it fine for you to use the National Center for Educational Accountability Self-Audit in your dissertation research.

Let us know if there is anything else we can do to help.
Sarah

Permission to Conduct Study in Garden Grove Unified School District

GARDEN GROVE UNIFIED SCHOOL DISTRICT

BOARD OF EDUCATION
Lan Quoc Nguyen, President
Bob Harden, Vice President
Trung Quang Nguyen
KimOanh Nguyen-Lam
Linda Reed

SUPERINTENDENT
Laura Schwalm

July 24, 2006

Dr. Stephanie Woo
Graduate and Professional School IRB
Pepperdine University – West LA Campus

Protocol #: E0606D10

Project Title: *A Study of the Relationship Between Two Professional Learning Community Practices in Elementary Classrooms and the English Language Arts Achievement of California's Most At-Risk Student Subgroups in a California School District*

Dear Dr. Woo:

Carrie L. Mitchell, an elementary school principal in the Garden Grove Unified School District, has requested and has been granted permission to conduct the above-named dissertation study within our district.

I have reviewed Ms. Mitchell's study methodology and survey materials. She may administer surveys to teachers and administrators at
elementary schools during non-instructional hours.

Please do not hesitate to contact me if further information is needed.

Sincerely,

Sherry Franklin, Ed.D.
Assistant Superintendent
Elementary Education

APPENDIX H

Identification of Self-Audit Questions Reflective of the Critical Attributes

Theme: Monitoring: Compilation, Analysis, And Use of Data Classroom Practice: Monitor student learning	
Critical Attribute 1:	Teachers examine and use district benchmark and state assessment results to direct instructional decisions. Classroom assessments are supplemental to and aligned with these assessments. Classroom Level Self-Audit Questions: 6, 7, 8, 23, 26 School Level Self-Audit Questions: 4, 5, 18, 19, 20 (JFTK, n.d.-b)
Critical Attribute 2:	Classroom assessment is ongoing and richly varied to monitor student learning of district curriculum. Assessment tasks require students to demonstrate a command of basic skills as well as more complex thinking since that prior knowledge is a prerequisite to effective learning. Performance data includes observation of student behavior, engagement, daily work, participation, and homework. These data ensure that what has been taught has been learned. Classroom Level Self-Audit Questions: 5, 17, 20 School Level Self-Audit Questions: (none) (JFTK, n.d.-c)
Critical Attribute 3:	Teachers study prior student performance data to understand the needs of students entering their classes. Classroom Level Self-Audit Questions: 2, 21 School Level Self-Audit Questions: (none) (JFTK, n.d.-d)
Critical Attribute 4:	Students performing "below grade level" are monitored even more frequently. Students who demonstrate early mastery of a given academic objective are given more challenging assignments and opportunities. Classroom Level Self-Audit Questions: 16, 18 School Level Self-Audit Questions: 14 (JFTK, n.d.-e)

(table continues)

Theme: Monitoring: Compilation, Analysis, And Use of Data Classroom Practice: Monitor student learning	
Critical Attribute 5:	Specific student progress is shared with the principal and parents in writing, by phone, and in conferences. Teacher grades and feedback are highly predictive of student's ability to demonstrate mastery on district and state assessments. Classroom Level Self-Audit Questions: 3, 22, 27, 28, 29, 30, 31, 32, 33, 34 School Level Self-Audit Questions: 2, 31 (JFTK, n.d.-f)

Theme: Recognition, Intervention, and Adjustment Classroom Practice: Recognize, intervene, or adjust based on student performance	
Critical Attribute 1:	Learning is not a variable. Resources, time, and strategies for learning will vary to ensure all students in the classroom meet stated academic goals. Classroom Level Self-Audit Questions: 1, 2, 28 School Level Self-Audit Questions: 29 (JFTK, n.d.-g)
Critical Attribute 2:	Student performance data, augmented by daily student monitoring, are used to recognize student success and to determine when and what interventions are needed. Extended opportunities are available for students who demonstrate early mastery of the curriculum These interventions and extensions are continually reviewed within the collaborative planning team. Classroom Level Self-Audit Questions: 7, 8, 12, 16, 18 School Level Self-Audit Questions: 10, 16, 19 (JFTK, n.d.-h)

(table continues)

Theme: Recognition, Intervention, and Adjustment Classroom Practice: Recognize, intervene, or adjust based on student performance	
Critical Attribute 3:	Proven, practical intervention practices and strategies (e.g., reteaching, flexible grouping, paraprofessional support, etc.) have been identified and developed to serve as first-level responses to learning difficulties. If learning difficulties are common across a particular concept or objective, additional resources are identified, and the difficulty is discussed within the teacher's collaborative planning group. Classroom Level Self-Audit Questions: 15, 22 School Level Self-Audit Questions: 18 (JFTK, n.d.-i)
Critical Attribute 4:	Classroom-selected instructional resources, practices, and arrangements are continually evaluated and/or adjusted in terms of student achievement results. Classroom Level Self-Audit Questions: 27 School Level Self-Audit Questions: 28 (JFTK, n.d.-j)
Critical Attribute 5:	Interventions begin early in the school year (within the first 3 weeks of school opening). Classroom Level Self-Audit Questions: 10, 13, 17 School Level Self-Audit Questions: 3, 20 (JFTK, n.d.-k)
Critical Attribute 6:	Teachers are quick to ask for assistance when classroom-level interventions are not sufficient to address learning needs of any given student. Communication with teacher collaborative teams and the principal are strong and constant relative to student learning concerns. Classroom Level Self-Audit Questions: 11, 20, 21, 23, 24, 25, 30, 31, 32 School Level Self-Audit Questions: 15, 22, 23, 24, 32, 33, 34, 35 (JFTK, n.d.-l)
Critical Attribute 7:	Intervention effectiveness is continually measured. Classroom Level Self-Audit Questions: 14 School Level Self-Audit Questions: (none) (JFTK, n.d.-m)

APPENDIX I

Renumbering of NCEA's Self-Audit Questions

Monitoring: Compilation, Analysis, and Use of Data				
	Classroom Level Self-Audit		School Level Self-Audit	
	NCEA Quest. #	New Quest. #	NCEA Quest. #	New Quest. #
Critical Attribute 1	6 7 8 23 26	4 5 6 15 16	4 5 18 19 20	2 3 5 6 7
Critical Attribute 2	5 17 20	3 10 12		
Critical Attribute 3	2 21	1 13		
Critical Attribute 4	16 18	9 11	14	4
Critical Attribute 5	3 22 27 28 29 30 31 32 33 34	2 14 17 18 19 20 21 22 23 24	2 31	1 8
Recognition, Intervention, and Adjustment				
Critical Attribute 1	1 2 28	7 8 43	29	20
Critical Attribute 2	7 8 12 16 18	25 26 29 33 35	10 16 19	10 12 14
Critical Attribute 3	15 22	32 38	18	13

(table continues)

Recognition, Intervention, and Adjustment				
	Classroom Level Self-Audit		School Level Self-Audit	
	NCEA Quest. #	New Quest. #	NCEA Quest. #	New Quest. #
Critical Attribute 4	27	42	28	19
Critical Attribute 5	10	27	3	9
	13	30	20	15
	17	34		
Critical Attribute 6	11	28	15	11
	20	36	22	16
	21	37	23	17
	23	39	24	18
	24	40	32	21
	25	41	33	22
	30	44	34	23
			35	24
Critical Attribute 7	14	31		

Note. NCEA Question numbers not listed in this table were omitted from this survey administered in this study. Only those questions directly related to the measurement of the critical attributes of the classroom practices Monitoring: Compilation, Analysis, and Use of Data and Recognition, Intervention, and Adjustment were included in the survey. Classroom-Level and School-Level Self-Audit questions were re-numbered for formatting consistency in this study's surveys.

APPENDIX J

Demographic Characteristics for the Teacher and Administrator Samples (N = 100)

Characteristic	Category	Teachers		Administrators	
		n	%	*n*	%
Age Range [a]					
	20-25 years	3	3.3	0	0.0
	26-30 years	16	17.4	1	12.5
	31-35 years	23	25.0	0	0.0
	36-40 years	15	16.3	1	12.5
	41-45 years	12	13.0	3	37.5
	46-50 years	8	8.7	1	12.5
	51-55 years	8	8.7	0	0.0
	56-60 years	4	4.3	2	25.0
	Over 61 years	3	3.3	0	0.0

(table continues)

[a] Significance tests not performed due to many sparse ($n < 5$) cell counts

Characteristic	Category	Teachers		Administrators	
		n	%	*n*	%
Total Years as a School Employee [a]					
	1-5 years	18	19.6	0	0.0
	6-10 years	34	37.0	1	12.5
	11-15 years	19	20.7	1	12.5
	16-20 years	9	9.8	3	37.5
	21-25 years	2	2.2	1	12.5
	26-30 years	6	6.5	1	12.5
	Over 30 years	4	4.3	1	12.5

(table continues)

[a] Significance tests not performed due to many sparse ($n < 5$) cell counts

Characteristic	Category	Teachers		Administrators	
		n	%	*n*	%
Total Years in Current Role [a]					
	1-5 years	17	18.5	2	25.0
	6-10 years	35	38.0	2	25.0
	11-15 years	19	20.7	3	37.5
	16-20 years	9	9.8	1	12.5
	21-25 years	2	2.2	0	0.0
	26-30 years	6	6.5	0	0.0
	Over 30 years	4	4.3	0	0.0

(table continues)

[a] Significance tests not performed due to many sparse ($n < 5$) cell counts

Characteristic	Category	Teachers		Administrators	
		n	%	*n*	%
Years in District in Current Role [a]					
	1-5 years	17	18.5	2	25.0
	6-10 years	40	43.5	4	50.0
	11-15 years	17	18.5	2	25.0
	16-20 years	6	6.5	0	0.0
	21-25 years	3	3.3	0	0.0
	26-30 years	7	7.6	0	0.0
	Over 30 years	2	2.2	0	0.0

(table continues)

[a] Significance tests not performed due to many sparse ($n < 5$) cell counts

Characteristic	Category	Teachers		Administrators	
		n	%	*n*	%
Years in School in Current Role [a]					
	1-5 years	28	30.4	4	50.0
	6-10 years	39	42.4	4	50.0
	11-15 years	10	10.9	0	0.0
	16-20 years	6	6.5	0	0.0
	21-25 years	5	5.4	0	0.0
	26-30 years	3	3.3	0	0.0
	Over 30 years	1	1.1	0	0.0

[a] Significance tests not performed due to many sparse ($n < 5$) cell counts