

High School Professional Development and Funding: Effect on Student Achievement as
Perceived by Teachers and Principals

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Abstract

This study was conducted at two high schools in San Diego County. The data collection focused on identifying the types of professional development in the two categories of traditional and non-traditional as well as the funding sources. This was a mixed methods research study that had both quantitative and qualitative elements that involved document analysis, interviews, and Likert type surveys. The first area analyzed was whether a correlation existed between student achievement and the funds allocated to professional development by the district and school site. In addition, this study also collected data on the perceptions of two high school principals and seven teachers at two high schools of differing academic departments to determine whether a correlation existed between traditional and non-traditional professional development and student achievement.

For the first area of focus, the findings showed there was a negative relationship between the total amount of professional development funding and student achievement at one high school while there was a very weak correlation found at the other high school. In regards to the additional area of focus for this study, the results indicated the principal at one site did not perceive that there was a sound method to measure the effect of professional development and student achievement; whereas, the second principal felt that professional development was an effective method to increase student achievement. Additionally, teachers overwhelmingly believed their professional development participation resulted in their students test scores to go up.

The conclusions of this study demonstrated that professional development and the amount of professional development funding was not a major variable in determining student achievement. Rather, researcher concluded further research is needed to focus on other variables effecting student achievement. In addition, researcher concluded there must be comprehensive professional development plans available to be distributed to teachers to ensure higher levels of transparency and accountability between teachers and principals for school sponsored professional development.

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Chapter I: Introduction

Professional Development (PD) is a driving force in many industries to improve the quality of employees to better the product they produce. In many professions, PD allows professionals to improve their trade by learning new skills and techniques to use in their practice on the job. Industries and businesses use PD to facilitate better efficiency of their workers as well as compete with their competitors in the global marketplace.

In education, the goal of PD is to improve teacher's practices and the instructional strategies to be utilized in the classroom to increase student achievement. These new instructional strategies and practices are manifested in learning new technology for instruction, classroom management methods, and techniques to provoke student engagement. Through these new instructional practices learned in PD, educators hope the new training will result in higher student achievement (Coehn & Hill, 2001; Kennedy, 1998; see also Abiloch, Harada, & Fontichiaro, 2013).

In theory, this sounds as if it might be a simple process to train teachers in the newest methods available in education. However, schools across America have tough budget choices to make as to where the funds should be allocated in regards to the level of state and federal funding. Therefore, there are many schools that may not appropriately fund PD or spend their PD funds on effective PD programs to better their teacher's skills and improve student achievement. Thus, student achievement in schools may falter. Ineffective PD programming is potentially a contributing factor to falling school test scores and overall academic performance (Gulamhussein, 2013).

Effective PD can be measured by several methods such as quantitative means in analyzing student achievement. Student achievement is the understanding or subject matter knowledge and skills at one point in time (Zieleniak, 2011). Thus, student achievement is the student's knowledge at a particular point of time after being assessed. As a result, since student achievement correlates with high test scores, it can exemplify an increase in the quality of teaching students encounter in the classroom when test scores increase at a school site. In California, the California High School Exit Exam (CAHSEE) is the benchmark in place for all students to pass in order to graduate from high school. The CAHSEE is a two-pronged test consisting of two selections: English Language Arts (ELA) and mathematics. In order to pass, tenth grade students must earn 60% to pass the ELA and 55% to pass mathematics. Due to large statewide tests like the CAHSEE, schools have focused PD towards attaining higher test scores for the greatest number of students to increase graduation rates. Thus, by studying whether correlations exist between PD funding and student test performance, it provides the opportunity to measure effective PD.

While other factors like socioeconomics, demographics, federal/state government political climate, district composition, and composition of teachers at schools affect student performance, PD is a critical variable that helps maintain and boost school performance when used effectively (Gulamhussein, 2013). As a result, it is this researcher's belief that PD programming needs to be analyzed by politicians, educators, and parents for the betterment of American schools and their ability to complete on a global stage. Thus, the question of how PD is funded and to which type of professional development programs those funds are distributed becomes crucial to understanding why some schools have higher student achievement than others.

Within the world of education, there are two major ways PD can be conducted to train teachers. For example, PD is conducted by schools through traditional and non-traditional means. Traditional PD is manifested in teachers attending outside school conferences, workshops, and trainings. These outside events are sponsored by organizations not associated with the school and take place off the schools site. Thus, traditional PD events are sponsored by educational entities outside of schools and the school district. For traditional PD events, a selected number of teachers will attend outside trainings to learn new teaching skills (Coehn & Hill, 2001; Kennedy, 1998).

On the other hand, non-traditional PD is characterized as mentoring, coaching, and peer evaluation which occurs at the school site. Non-traditional PD is sponsored by the district and/or the administration at a particular school site. Thus, senior teachers and/or experienced teachers will work with teachers at the school site to teach them various skills and instructional strategies. In addition, through non-traditional approaches, PD teachers can monitor and evaluate their colleagues throughout the school year to ensure growth has occurred (Gulamhussein, 2013).

Federal and state funds are used to fund public school institutions. These funds are pooled together to fund education in the state of California. Federal funding for education is derived from the Elementary and Secondary Act (ESEA) that provides financial assistance to the states and schools. In addition to general assistance in the form of Title funds, ESEA offers grants to elementary and secondary school programs for children of low income families, instructional materials, strengthening state education agencies, research, and PD for teachers (ESEA, 2012). State funding for education is derived from the California state budget and takes up over half of the state's budget. It is distributed to districts based on enrollment numbers and average attendance hours (average daily attendance-ADA) for students (CA Dept of Ed). While

the state budget fluctuates on a yearly basis, districts and usually school site administrators have the liberty to allocate funds for PD. As a result, districts and schools have multiple avenues sources of income from the federal and state government to allocate funds to be used for PD initiatives.

The schools participating in this study come from neighboring districts in San Diego County in the state of California. School A is located in one of the largest school districts in the state that is comprised of 27 high schools. Within this district there is a wide variety of demographics as well as socioeconomic classes that live inside the district boundaries. School A has a diverse population of students and is comprised of a large group of students who qualify for free to reduced lunches. Academically, School A one of the top performing schools in the district. It has one of the highest CAHSEE passing percentages in English and Math amongst its peers in its district.

On the other hand, School B is located in a smaller district comprised of 13 high schools in a high school only district. Like in School A's district, School B's district is diverse as well as comprised of various socioeconomic backgrounds and has a third of the students qualifying for free to reduced lunches. Also, school B has one of the highest CAHSEE passing rates in both English and Math within its district. As a result, for this study, there are two schools with similar backgrounds and academic performance which makes them prime subjects to be studied for this study.

Purpose of the Study

The purpose of this study was to identify the types of professional development and the funding sources of professional development at two high schools in San Diego. The correlation between student achievement and the funds allocated to professional development by the district and school site were also analyzed. It is important to get the insights from the major stakeholders at the school sites about professional development and its' impact on student achievement. So, this study investigated the perceptions of two high school principals and seven high school teachers of differing academic departments at two different school sites regarding PD and student achievement. This was accomplished through a Likert type scale survey, focus group interviews, and financial document/test score analysis.

Specifically, the research questions answered by this study include: Is there a correlation between student achievement in form of CAHSEE scores and the amount of 2012-2015 federal and state funds spent on traditional and non-traditional professional development at two high school sites in neighboring districts? What are the perceptions of two high school principals and seven high school teachers of differing academic departments regarding whether a correlation exists between traditional and non-traditional professional development and student achievement based on test scores?

Importance of the study

Professional development is a strategy that school systems have to strengthen educators' performance levels and thereby raising student achievement. Through the work of this study, policy makers and site staff at high schools may be better suited to review current federal funds allocated to PD, both traditional and non-traditional, examine and evaluate how PD funds are

spent and determine where PD funds should be budgeted to affect student achievement as measured by CAHSEE test scores. It is the researcher's desire that other school districts, in addition to districts around the country, can use this exploratory research to review, discuss and evaluate their use of PD funds towards the goal of increasing student achievement.

Definition of Terms

The following terms used in this study are words directly used by the researchers in their studies and this researcher.

Academic Performance Index: Measures and ranks academic performance of California public schools through standardized tests (Smarter Balance Assessment and CASHEE).

Average Daily Attendance: The number of instructional hours (700 hours) a student enrolled in a school must attend to be compensated by the state of California for minimum education expenditures.

Block Grants: State educational grants that are applied for by individual schools and/or districts for additional funding initiatives and needs.

California High School Exit Exam: Assessment required for high school graduation in the state of California. It was created by the California Department of Education with the goal to improve academic performance of California high school students in the areas of reading, writing, and mathematics.

Common Core: Initiative within the United States that details educational standards for grades K-12 in English and Mathematics. Each Common Core Standard must be covered over the course of the year by the time students finish the grade they are enrolled in.

Economic Impact Aid: A form of state funding in California that provides supplemental funds to support English Language Learners and services of educationally disadvantaged students.

Elementary and Secondary Education Act: Far reaching federal funding legislation that funds primary and secondary education through Title I, II, III, IV, V, and VI funds.

Federal Title I Funds: Funds within the Elementary and Secondary Education Act that are distributed to school districts with a higher percentage of students from low-income families. Also, funds are drawn to prevent dropouts and carry out improvements in schools.

Federal Title II Funds: Funds within the Elementary and Secondary Education Act that are distributed to facilitate student learning and provide avenues for better preparing and maintaining good teachers for the classroom.

Free and Reduced Lunch Program: Free or reduced lunch for socioeconomically disadvantaged students. This is the major program indicator that determines whether a school qualifies for Title I funds. To qualify for Title I, at least 40% of its students are enrolled in this program.

Local Education Agencies: Synonym for a school district, an entity that operates local primary and secondary schools in the United States.

Local Control Funding Formula (LCFF): A state budget enacted in 2013 that replaces the previous K-12 finance system in California. LCFF creates a base, supplemental, and concentration grants to fund K-12 education.

No Child Left Behind: Legislation passed in 2001 that reauthorizes Title I funding; flagship program for aiding disadvantaged students. This program supports standards-based education

reform based on the notion that by setting high standards and creating measurable goals can improve individual outcomes in education.

Non-Traditional Professional Development: Form of PD that is characterized as mentoring, coaching, and peer evaluation that takes place at the school site.

Per-Pupil Spending: Funding in which a school receives per student by the state through their enrollment in at least 700 instructional hours.

Professional Development: Encompasses all types of facilitated learning opportunities including credentials such as academic degrees to formal coursework, conferences and informal learning opportunities shared in a professional practice.

SAT/ACT: Standardized tests used for college admissions in the United States.

Student Achievement: Characterized an individual's status on subject matter knowledge, understanding, and skills at one point of time.

Student Learning: Characterized as the growth of a student in the subject matter knowledge, understanding, and skills over time.

Traditional Professional Development: Manifested in teachers attending outside school conferences, workshops, and trainings.

Summary

In education, the goal of PD is to improve teacher's practices and the instructional strategies to be utilized in the classroom to increase student achievement. Student achievement is one indicator that schools and districts can use to measure effective PD. In California, student

achievement at the secondary level is measured in part by the CAHSEE. Thus, by training teachers with the newest methods of instruction it can provide avenues for increasing student achievement. Traditional and non-traditional PD methods are utilized and created by districts and schools. Studies have shown there has been a correlation between non-traditional PD and gains in student achievement.

Schools in America have tough budget choices to make as to where the funds should be allocated in regards to the level of state and federal funding. Therefore, by analyzing how federal and state funds are distributed to PD programs, it may bring forth new understanding on how to properly fund PD programs that can directly affect student achievement.

This exploratory study aims to explain whether the distribution and use of Title I, Title II, and state funds are being spent on programs that affect CAHSEE test scores at two high schools in San Diego County. In addition, this study looks to see if a correlation exists between the federal funding amounts for traditional professional development compared to non-traditional professional development at two San Diego high schools in San Diego County.

Chapter II: Literature Review

Introduction

The research questions in this study pertain to two interrelated topics regarding Professional Development (PD). First, this study attempts to determine if a correlation exists between student achievement in form of CAHSEE scores and the amount federal and state funds spent from 2012-2015 on traditional and non-traditional professional development at two high school sites in neighboring districts. In addition, this study seeks to see if the perceptions of two high school principals and seven teachers of differing academic departments regarding whether a correlation exists between traditional and non-traditional professional development and student achievement based on test scores. Thus, in order to better understand these questions this literature review will cover PD's importance in schools, approaches to PD in schools, funding PD, student achievement and the CAHSEE, and PD's effect on student achievement.

Importance of PD in Schools

Maintaining and providing educational opportunities for educational faculty is important to improving academic performance in American schools. One of the main challenges for American schools is to facilitate a process in which teachers are given the tools to improve their teaching. This concept is incredibly important because of ever-changing curricula (i.e. Common Core), technology (i.e. computing power, utilization of computers in the majority of jobs), and the means of doing business in our world (i.e. globalized interconnected economy). To this end, PD programs have the potential to provide opportunities to better afford teachers the educational tools to promote student learning in the classroom (Guskey, 2000).

In addition, Guskey has stated schools must allocate their resources to varying programs to ensure the school can function effectively (Guskey, 2000). Funding, according to Guskey, was key to maintaining and paying for the salaries of the teachers at a school. However, various funds are also given to district and school programs under the Elementary and Secondary Educational Act. Such funds are designated to facilitate student learning and provide avenues for better preparing and maintaining skilled teachers for the classroom (Guskey, 2000).

Along with administrative leadership, utilization of test score data, quality resources and communication amongst colleagues, professional development (PD) has been noted by researchers as one of the main mechanisms for improving school performance (Desimone, Smith, & Phillips, 2007; Elmore, 2002; Frechtling, 2001; Newmann, King, & Youngs, 2000; Wolf, 2007). According to Desimone (2007), PD in the form of active learning for teachers has shown to help teachers improve classroom planning implementation, analyzing or reviewing student work, and presenting information to students. However, initiating high quality professional development may take longer than what many expect. Therefore, Desimone concluded that high quality professional development should occur at a slow pace, “diluted by the persistence of traditional practices” (Desimone, et al., 2007, p. 104). As a result, professional development takes time to yield results because old practices are hard to break. Thus, this notion of pace may correlate with the rate of improved student achievement at schools because PD takes time for it to become effective.

Approaches to Professional Development

Schools approach professional development (PD) through traditional and non-traditional methodologies. First, many school schools have utilized traditional types of PD that consist of

teacher workshops and conferences that take place outside the school site. These activities are short in duration and have not shown to have as much effect on student achievement in schools (Coehn & Hill, 2001; Kennedy, 1998). Also, it has been shown that workshops and conferences are much more costly than non-traditional PD activities, since they require teachers to be sent out of the school site to outside venues hosted by private organizations (Coehn & Hill, 2001; Kennedy, 1998).

Exemplary PD Traditional Approaches. Gulamhussein (2013) argued that in-school training required only a few trained educators to facilitate PD sessions among their colleagues. Since the cost of training five to ten teachers outside of the school via traditional PD would be cheaper than training the entire faculty, such an approach could allow for these small amount of teachers trained in the traditional PD to then facilitate PD for the rest of the faculty (i.e. a non-traditional strategy). According to Gulamhussein (2013), this approach to PD has shown to be a much more efficient practice of economizing PD in schools since the cost of one teacher receiving outside PD is much cheaper than a small/large group of teachers receiving the same training. Thus, when one teacher receives training and goes back to the school to teach their colleagues, PD is gained by a larger group of teachers for a fraction of the cost.

Exemplary PD Non-Traditional Approaches. On the other hand, over the past several years, studies have provided evidence that the most effective funded professional development programs are conducted through non-traditional means. These programs include ongoing programs such as mentoring, coaching, and peer evaluation (Abiloch, Harada, & Fontichiaro, 2013).

Research has shown that teacher participation in these non-traditional PD activities is positively correlated with student achievement in schools (Coehn & Hill, 2001; Kennedy, 1998). Non-traditional PD methods have been considered much more economical in practice than other programs as well, since the majority of these types of PD programs are run via in-house staffing (Gulamhussein, 2013).

There are a variety of different factors that must be incorporated into effective non-traditional professional development activities (Gulamhussein, 2013). These include cost, implementation of mentoring/coaching programs, and allotting time for teachers to incorporate instructional strategies into their practice. For example, Gulamhussein (2013) found that there were many costs associated with non-traditional professional development, included hiring substitutes, coaching, group instruction, and hours away from the classroom during school hours. The costs associated with coaching and group instruction specifically would involve the time/funds invested in the training of these coaches. Thus, like any investment, there is an upfront cost associated before benefits are yielded.

Funding Professional Development

One dilemma faced by the federal government, states, school districts, and schools, has been how to effectively distribute and spend funds for PD. In the United States, PD is funded from annual budgets of the state and federal government. According to the California Department of Education, state funding is based on the funds allocated to education from the state budget. In California, public school funding is the largest program in the state budget and receives over 50% of the state's general budget fund. Since the budget is determined and passed by the state legislature and governor, the state funds for education fluctuate year to year. PD

funds from the state consist of grants, allocated funds from the General Education Fund, and Economic Impact Aid (EIA). Grants are in the form of Block Grants, which are applied for by individual schools and/or districts. Funds from the General Education Fund fluctuate on a year to year basis and are predetermined based on the number of students in a district, demographic and socioeconomic factors, as well as the academic performance of the school.

Finally, EIA has been a state categorical program that provides supplemental funds to support English Language Learner's and services for educationally disadvantaged students. Since the adoption of the Local Control Funding Formula includes requirements to serve Limited English Proficient, Economic Disadvantaged Youth, and foster youth the EIA program was de-funded after the 2012-13 budget allocation cycle.

Federal Funding. Federal funding for PD is derived from Title I, Part A and Title II, Part A of the Elementary and Secondary Education Act (ESEA) of 1965. For Title I, Part A funding the ESEA requires school districts to use at least five percent of their Title I, Part A funds for ensuring that teachers who are not certified as highly qualified meet that standard under provisions outlined in the No Child Left Behind Act (NCLB). Also, if schools do not meet their academic progress goals, then failing schools must spend ten percent of their Title I, Part A funds on teacher professional development (ESEA, 2012).

Title II, Part A provides funding for PD in subject matter knowledge, assisting teachers to use the state content standards, and improving teaching skills. According to the Federal Department of Education, in 2012-2013, 44.4% of the 2.33 billion Title II budget, Part A, dollars were used to support teacher professional development (ESEA, 2012). Within this section of Title II, Part A it was stated that the Perkins money (in the form of a federal grant) derived from

this law could be spent on a variety of different educational programs at a school, including professional development. In order for Perkins monies to be allowed for PD, provisions in ESEA have stated that as long as a school has met the intent and purposes of these programs (Professional Development programs) and demonstrated that the plan contained sufficient activities to reasonably address the needs of the intended beneficiaries of those programs (teachers and students) previously identified through a comprehensive needs assessment, then it could combine distributed funds to support overall school wide activities initiated for all students (Federal Department of Education, 2012). Many school wide initiatives for students have been in the form of non-traditional and traditional PD activities for teachers (Federal Department of Education, 2012).

Based on the premise of this section of ESEA, schools have the authority to spend Title II, Part A funds with minimal regulation from outside bodies (i.e., school district, state/federal law). Therefore, this law has allowed schools to distribute Title II, Part A PD funds differently at each individual school site within a school district (Elementary and Secondary Act of 1965). The type and amount of regulation at school districts depends upon the procedures and policies created by the districts. Districts must complete budget reports as required by ESEA.

As a result, schools have many ways to fund PD if administrators and district policy makers deem it necessary for schools to budget money for it. Schools have been able to allocate funding from other streams of revenue within Title II, Part A to fund PD. For example, schools could decide to move funds from student activities funded under Title II to PD activities.

Alternatively, schools have the ability to earmark money outside of Title II for PD to another program to be funded at the school.

Many academics and government officials have recognized the need for a re-allocation of resources and a combination of funding sources to effectively increase funds for professional development. Since there has been increased choices as to how to allocate money, schools have had to make difficult choices where and when they spend Title II funds; for PD, faculty salaries, and school activities (i.e., student clubs, sports, the arts/theater etc.). In regards to PD, schools have had to decide whether to sponsor shorter, less-in depth professional development that serves a large number of teachers or to support more effective, focused, and sustained professional development for a smaller number of teachers.

As a result of the recession in 2007, spending for PD in school districts has ranged “two to five percent” of a district’s budget (Gulamhussein, 2013, p. 8). These funding levels in regards to the total percentage for PD under Title II, Part A have remained steady and have not increased (Gulamhussein, 2013). Thus, this has left schools in a tough position to spend effectively for PD because funds have not increased significantly over the past eight years.

State Funding. State funding is derived from the California general budget that is approved by the state legislature and governor on a yearly basis. Over the past five years, California has spent 52-54% of its state budget on education (CA Department of Ed., 2015). In order to distribute these funds from the general education fund, the state provides an allotment to districts and schools based on student enrollment and average daily attendance (ADA). Therefore, schools receive an allotted sum of funds for students attending a minimum of 700 hours of instruction at their school. Operational costs for schools are calculated by attributing the cost of the 700 hours of instruction to derive the minimum classroom compensation cost that must be fulfilled by the state in order to maintain school operations. Minimum classroom

expenses are derived from a formula that includes the costs of certificated and classified salaries, employee benefits, books and supplies, equipment replacement, and services and indirect costs. Thus, this fund per student formula is calculated by the adjusted expenditures of the district divided by the total average daily attendance of students to arrive at the current expense of education for that year (i.e., paying minimum costs for 700 hours of instruction per student) (CA Department of Ed, 2015).

California ranks as one of the lower per-pupil spending states in the country. However, California has one of the highest levels of need because of a high student population (i.e., 6.2 million students), number of English learners (23.2%, the highest in the nation), and students from low-income families (54.1%, above the national average) (Tantum, 2014). Thus, in an effort to provide more funds for students, under California's Local Control Funding Formula (LCFF) approved for the 2013-2014 school year, school districts received funds based on the proportion of students who are English learners, foster children, or from low income families. As a result, California hopes school funds will be distributed transparently in a way to align funding in areas where there are the most student needs (Tantum, 2014).

As stated earlier in the review, state funding is derived from Block Grants, Economic Impact Aid, and the General Education Fund. These funding measures have been in place prior to 2013. In 2013, when the state of California passed the Local Control Funding Formula (LCFF), the LCFF created a base, supplemental, and concentration grants in place of most previously existing K-12 funding streams. It provides a variety of different funding components to schools that adds up to the base fund for the average daily attendance (ADA). For example, LCFF provides a base grant for Local Education Agencies (Schools/districts) of \$7,643 for each

student. However, differing amounts of LCFF funds are determined by a variety of different factors that include grants for specific needs a school/district may have (i.e., percentage of English Language Learners, percentage of students from low-income families, and percentage of students in youth foster care) (CA Department of Ed., 2015). As a result, if certain schools/districts fall into one of these categories, the funding for ADA per student will increase to accommodate those needs.

In order to keep schools accountable under this new system, the state board of education has produced rubrics to help local education agencies evaluate the strengths, weaknesses, and areas that require improvement. Regulations and oversight of local education agencies will ensure schools/districts are implementing services for targeted students (CA Department of Ed., 2015).

Student Achievement and CAHSEE

Student Achievement. Student achievement and student learning are two related concepts that must be defined in order to understand how they can be affected by mechanisms used to keep track of them by the federal and state government. According to Zieleniak (2011), student achievement is the “status of subject matter knowledge, understanding, and skills at one point of time” (Zieleniak, 2011, p.9). Subject matter knowledge and understanding is best reflected in course grades and standardized testing. Thus, this reflects a student’s progress after assessments are given during a given point in the year. For example, standardized tests like the CAHSEE, SAT, and ACT will demonstrate student achievement at single point in time. It does not measure achievement from one particular time earlier in the year to a time later in the year.

Student Learning. On the other hand, student learning occurs during the course of the school year. Zieleniak has stated student learning is “the growth in the subject matter knowledge, understanding, and skills over time (Zieleniak, 2011 p. 9).” As a result, when discussing student learning, it points towards achievement over the course of a year or multiple years. For example, a pre-assessment and post-assessment during a single calendar school year would exemplify student learning because it can adequately measure student growth over a course of time by providing an earlier score on a similar assessment to a latter assessment conducted later in the year.

CAHSEE. In order to measure student achievement at a given point of time for California high school students, the California High School Exit Exam (CAHSEE) is administered to 10th grade students as an assessment to determine if students have the skills and knowledge to graduate high school. According to the California Department of Education, the primary purpose of the CAHSEE is to significantly improve student achievement in public high schools by demonstrating grade level competency in reading, writing, and mathematics (CA Department of Ed., 2015). The composition of the CAHSEE is in two parts: English-Language Arts and mathematics. Each section upholds state content standards through grade ten in English and Algebra I for mathematics.

In addition, the CAHSEE has been administered to identify students who have not developed the necessary skills needed for graduation. As a result, the state encourages districts to give struggling students the resources and attention to achieve the necessary skills during their high school years to graduate. The National Board for Professional Teaching Standards believes the goal of this assessment is to “improve student learning and to strengthen the quality of signal associated with a high school diploma” (NBPTS, 2005, p. 2). In turn, according to NBPTS

(2005), the CAHSEE creates accountability measures to improve student achievement, increase parental involvement, and to improve the quality of schools.

On the other hand, NBPTS (2005) notes that over the course of the CAHSEE's existence, there has been a drop in student achievement across the board for lower achieving students. For example, NBPTS found that the CAHSEE reduces the graduation rate of the bottom ten percent of students by 25 percentage points. Also, NBPTS stated that the exit exam is "associated with an average drop in probability of on-time graduation by 35.7 points among the bottom 30 percent of students" (NBPTS, 2005, p.4). Therefore, while the CAHSEE remains one of the biggest measures for student achievement in California high schools, it is not without its problems due to its effect on graduation rates and performance of lower achieving students.

Another method of measuring student achievement on a yearly basis across the state of California is through the calculation of the Academic Performance Index (API) for all public schools. This method of ranking academic performance for public schools was put into place in 1999 under The Public Schools Accountability Act (PSAA) which developed a system of accountability that holds students, schools, and districts accountable for improving student performance. According to the California Department of Education, API is a numeric score that is calculated by incorporating a school's yearly student performance and progress by providing Smarter Balance Assessment and CAHSEE scores to the state (CA Department of Ed., 2015).

Also, while calculating API scores, particular subgroups (i.e., English Learner Status, students with disabilities, and socioeconomically disadvantaged students) at each school are weighed and averaged into the overall API score. Once an API score is calculated, it will range from a low of 200 to a high of 1000. As of 2013, according to the California Department of

Education, the statewide API performance target for all schools is 800. By using an API score distribution that measures student achievement, schools can be ranked and analyzed by the districts and the state to determine if they are succeeding or failing.

In order to keep schools accountable, API is correlated directly to monetary and incentive awards. These awards are set by Annual Percent Growth Targets for each school as outlined in No Child Left Behind (NCLB) and the Public Schools Accountability Act (PSAA). Thus, depending on whether the school meets or exceeds their yearly API goal predetermined by the state, it will help determine if a school will receive particular funds (NCLB, 2001; also see PSAA, 1999).

As a result, API has been a critical indicator used to measure student achievement. It has helped predetermine whether schools are successful and allows the federal/state government and local districts keep track of school performance. In turn, due to the API methodology that has been in place, it has allowed policymakers in education and governmental officials make policy decisions regarding education budgetary matters as well as education policy. However, changes may have already been initiated to eliminate the API system altogether. In early 2015, API has been put on a two year hiatus for reform or to be replaced by a new system.

Professional Development Effects on Student Achievement

Overall, regardless of whether PD is conducted through traditional or non-traditional methodologies, there are a number of studies that have stated how effective PD correlates with student achievement. According to a study by Desimone, Smith & Ueno (2006), PD has been shown to be critical for teacher learning and development if it is facilitated by schools and funded appropriately. In this study, effective PD consists of funds being direct towards programs

that help increase student achievement. It has been documented that particular programs of PD that center around the use of integrating technology, instructional methods, and assessment strategies for higher learning can result in effective instruction and improved student achievement (Abiloch, Harada, & Fontichiaro, 2013).

In addition, Weiss and Hartle (1997) demonstrated that PD improves staff performance results, especially when participating administration and teachers set high expectations for the programs. Jeanpierre and colleagues (1995) similarly concluded that high-expectations during professional development gave teachers like students the incentive to fulfill the requirements of high quality work to boost achievement.

Thus, effective PD has taken many forms to boost achievement across the board. The variables of funding directed towards PD programs at schools, initiating PD programs centered on technology, instructional strategies, and assessments along with a culture of high expectations during PD exercises has shown evidence of increased teacher and student achievement. In the end, there has been evidence of initiating all of these variables at once. As a result, educators, policymakers, and district officials have a blueprint within the research to initiate researched PD programs throughout their district and/or school site to improve student achievement.

Summary

PD has been a major area of education that has been studied in recent years. Due to the ever-changing curricula, technology, and globalization of society, there has been a need to continually train teachers in the newest forms of instructional strategies to prepare students for the world. As a result, traditional and non-traditional methodologies of PD have been utilized to

train teachers. Research has shown non-traditional PD activities have positively correlated with student achievement (Coehn & Hill, 2001; Kennedy, 1998).

Funding PD programs has been a one of the hardest hurdles to cross in developing effective PD programs. State and federal budgets have been stretched and funding education has decreased in recent years. Consequently, districts in California have the ability to apply for Block Grants, receive funds from LCFF, and receive federal Title I, Part A and Title II, Part A funds for PD. However, these funds have been pooled together to help fund PD. As a result, this has created difficulties for consistent PD programs to be enacted by districts and schools since funds are inconsistent on a yearly basis.

Student achievement and indicators of academic achievement have been a basis for measuring whether schools are performing up to preset standards by the state. The CAHSEE has been the benchmark for student achievement at the high school in California. Along with the CAHSEE and Smarter Balance Tests, API scores have been calculated to rank and compare schools across the state to determine whether they have been succeeding or failing predetermined state educational goals. Depending on whether schools achieve API scores by the state, will help determine whether they will receive particular funds from the state and federal government. Thus, the CAHSEE and API have been major indicators that help policymakers determine budgetary matters in allotting funds.

A number of studies have linked several key factors to effective PD improving student achievement. When schools have funded PD programs that center around technology, instructional methods, and assessment strategies there have been evidence of improved instruction and student achievement (Abiloch, Harada, & Fontichiaro, 2013). In addition, Weiss

and Hartle (1997) demonstrated effective PD manifests itself when participating administrators have set high expectations for the PD programs they have initiated. Thus, through a culmination of evidence, there has been data collected that has exemplified successful avenues to fund and initiate PD in districts and school sites.

Chapter III: Methodology

The research questions of this study are focus on whether a correlation exists between two high schools in San Diego County between federal Title I, Title II, and state funds that are being spent on traditional and non-traditional PD programs and any effects on CAHSEE test scores over a three year time span from 2012-2015. Also, this study looks to see if a correlation exists between the perceptions of two high school principals and seven high school teachers of differing academic departments regarding PD and student achievement based on test scores. This methodology addressed the subjects participating in this study, materials used to collect data, data collection techniques, and the methods with which the data was analyzed to demonstrate findings

Subjects

In this study there are a number of subjects that participated. The subjects for this study included staff from two high schools in two different high school districts in San Diego County. Overall, there were two administrators, one from each site, and eight teachers, four teachers from each participating high school site.

High Schools and Districts. The two high schools chosen for this study are located in San Diego County in the state of California. Each high school is located in suburban environments with similar demographics and socioeconomic backgrounds of students. In this study, the schools and their districts are identified as District A, high school A and District B, high school B. The two school districts are vastly different when it comes to total student enrollment and student composition (demographics, language, socioeconomic levels). However, they are similar in terms of academic performance and CAHSEE pass rates.

School A's district is comprised of over 200 primary, secondary, and charter schools with a student enrollment of 135,000 in 2014. School A has an enrollment of 2,437 students and is considered a Title I school by the state and federal government. Its' top three student demographics are Caucasian, Hispanic, and Indochinese. The language composition background of the school's population is comprised of 65.1% of English only speakers, 21.5% reclassified English learners, and 4.3% English learners. Students identified as being socioeconomic disadvantaged comprise 40% of the school's population. In addition, 39.1% of the school's population is eligible for the free or reduced school lunch program.

School B's district is a high school only district comprised of 13 high schools and with a student enrollment of 16,000 in 2014. School B has an enrollment of 2,112 students and unlike School A is not considered a Title I school by the state and federal government. Its top three student demographic backgrounds are Caucasian, Hispanic, and African American. The language composition background of the school's population is comprised of a majority of native English speakers and has 10% of its population characterized as English learners. Students identified as socioeconomic disadvantaged comprise 46% of the schools population. In addition, 31.5% of the school's population is eligible for the free or reduced school lunch program.

In regards to academic performance within their respective districts, School A and B have a reputation for being higher performing schools in terms of academic performance and CAHSEE pass rates. Within each district School A and School B are ranked in the top five of academic performance in terms of API and CAHSEE pass rates.

Administrators. In order to attain the pertinent information needed for this study, both administrators in School A and School B were individually interviewed using a structured

questionnaire. In addition, both administrators were asked to provide in advance, the documentation about PD budgets of their school. Administrators (principals) from both school sites provided PD fund distribution data found in their school budget for the school years of 2012-2015 as well as outlined an overall description of their school's PD program. Principals were asked to provide this information because they have the knowledge of their school's PD program as well as access to financial records regarding PD fund distribution at their school site. Also, under the job obligation of principals, they have the responsibility to distribute funds in their budget to PD programs at their school to facilitate improved teaching with the goal of increasing student achievement. Since principals have the liberty to choose what PD programs they believe will improve their schools academic performance, they were best suited to attain much of the quantitative (i.e., budget funds used for PD) and qualitative data (i.e., description of their schools PD programs) required for this study.

District A, School A Principal. Data about the principal at School A was obtained from the school website. Accordingly, School A's principal has been principal-for three years at this school site. Principal A has been a teacher and administrator throughout their career and focuses are creating a culture on campus that is inclusive and encourages positive reinforcement. This principal has taken on many new initiatives and has incorporated PD funds into collaborative meetings, weekly professional learning community meetings, a restorative justice program, common core, and competency instruction sessions. All of these programs aim to increase student achievement through increasing the school's CAHSEE scores, graduation rates, and Smarter Balance Assessment scores. In order to pay for these programs, Principal A uses Title I and state funds. Title I funds fluctuate yearly but remain consistent on a year to year basis. The

state funds the school receives for PD are not consistent funds from a year to year basis; they are scrapped together from remaining funds designated for other academic programs at the school.

District B, School B Principal. Data about the principal at School B was obtained from the school website. Accordingly, School B's principal has been principal (Principal B) for seven years at this school site. Principal B has been a teacher and administrator throughout their career and has focused on fulfilling the school's WASC (Western Association of Schools and Colleges Accreditation) action plan. This principal has focused on creating a positive behavior environment for the school's students. The initiatives Principal B has initiated regarding PD have been fulfilling the WASC action plan by teaching teachers effective instructional strategies in literature, math, and utilizing technology, Professional Learning Community meetings, and installing a Positive Behavior Support Intervention (PBIS). All of these programs aim to increase student achievement through increasing the schools CAHSEE scores, graduation rates, and Smarter Balance Assessment scores.

In order to pay for these PD programs, Principal B uses state funds. The state funds the school receives for PD are not consistent funds from a year to year basis; they are scrapped together from remaining funds designated for other academic programs at the school.

School A and School B Teachers. To obtain various perspectives and descriptions of the participating schools' PD program, 3-4 teachers were recruited from different academic departments (specifically those who have participated in the schools PD programs) to volunteer to participate by the principals in School A and School B. They were interviewed individually and then filled out a short survey after the interview and submitted it to the researcher before leaving the interview room.

By having teachers from different academic departments, a broad spectrum of comments regarding the PD program and their effects on student achievement was assured. Therefore, a unique group of teachers from each school site provided supplemental qualitative data for this study to ensure a variety of perspectives for each schools PD programs are discussed.

School A. School A had four teachers participating in this study from the English, Math, PE, and counseling department. Based on the interview information, three of School A's teachers have over 15 years of experience while one teacher has less than 10 years of teaching experience. All four teachers are involved in PD activities at School A with differing levels of participation and motivation.

School B. Based on the interview information, School B had three teachers participating in this study who teach Special Education, Home Economics (an elective course), and a school librarian/campus technology teacher. Each teacher has over 15 year years of experience teaching. All three teachers are involved in PD activities in School B with differing levels of participation and motivation.

Materials

Budgets. The materials used for this study included PD budgets from the each participating school for the school years of 2012-2015 (See Attachment A). The PD budget for School District A was obtained from principal A and budget for School District B was obtained from principal B. The PD budget summary from School District B included yearly PD allotments to fund each school's PD program.

Student Achievement Data. CAHSEE scores from each school site (2012-2015) was obtained from the California Department of Education and included English and Math scores from 2012-2015. (See Attachment B)

The administrator interview form (See Attachment C) was developed by the researcher and includes seven questions pertaining to each schools PD program as well as the administrator's thoughts and feelings regarding its funding and its effects on student achievement.

The teacher interview forms and surveys (See Attachment D) were developed by the researcher included ten questions pertaining to the schools PD program as well as the teacher's thoughts and feelings regarding its funding and its effects on student achievement.

Other materials included an audio recorder and laptop that were used to conduct and gather the data for this study. The audio recorder was used to record the administrator and teacher interviews and the laptop was used to collect the information, analyze data, and conduct statistical analysis.

Statistical charts have been included to show the statistical relationships that were found after the statistical analysis was conducted. These charts show the statistical relationships found between PD funds and CAHSEE pass rates in English and Math. In addition, a Likert scale has been provided to show the results of the teacher survey given during the teacher interviews (See Appendix E).

Data Collection Procedures

This is a mixed method study and includes both quantitative and qualitative data. Data was collected through a variety of means, including document analysis, surveys, and interviews. The study occurred over a five week period that lasted from mid-May through June 2015.

Quantitative Data. First, quantitative data for this study was collected through analyzing each school's financial records dating back three years (2012-2015). The financial records in the form of school budgets were gathered from school site principals at their scheduled interview and school district financial representatives during a three week communication period. These financial records in the form of school budgets contained all the funds set aside for PD and how it's allocated to particular PD programs at each school.

Then, each school's California High School Exit Exam (CAHSEE) test scores dating back three years (2012-2015) were gathered over two days by the researcher from the state of California's Dataquest CAHSEE score archive and analyzed to see if the scores at each school site increased or decreased over this time period.

Finally, surveys given to teachers at each school were analyzed numerically through a teacher preferential ratings system to see if any particular trends regarding how effective they believed the PD programs were improving their instruction and affecting student achievement (CAHSEE).

Qualitative Data. Qualitative data was collected via individual interviews. Administrators were interviewed using a structured questionnaire regarding their vision of their schools' PD

programs, rationale for allocating funds to particular PD programs, and potential effects they felt the PD had on CAHSEE scores.

Then, teachers were interviewed individually regarding their participation in their school's PD programs, how these programs might have affected their instruction, and such programs' overall effectiveness on CAHSEE scores at their school. To collect this data from these individuals during the interviews, there were audio recordings (administrator only) of the interviews and there were written logs of the information administrators and teachers provided in each interview.

Data Analysis

The quantitative and qualitative data collected was analyzed using descriptive statistics for this study. Sources of data included PD budgets, administrator interviews and questionnaires, and teacher surveys.

Quantitative Data. Quantitative data was collected by analyzing PD funding (school budgets; Federal Title I and Title II and state funding) and student achievement scores (CAHSEE scores) at each school. Appropriate quantitative interview and survey data was also analyzed using descriptive statistics. Descriptive statistics was used in analyzing Federal Title I and Title II and state funds expenditures on PD programs (i.e., traditional and non-traditional PD), and how the funding total was distributed on a yearly basis for PD at school A and school B. Finally, there was a comparison of the total allotted funds for PD and how those funds were spent at each school to determine if a trend exists between PD funds/spending and student achievement (CAHSEE scores) at each site over a three year span (2012-2015).

Next, the surveys collected from the teachers participating in this study were analyzed through descriptive statistics and a Likert scale. Through this method, surveys were analyzed to see whether there were perceptual similarities and differences that existed amongst the teachers and administrators feelings regarding PD at their school site (i.e., do they participate, how effective is it etc.).

Qualitative Data. The qualitative data gathered from the administrator and teacher interviews were analyzed through interview/coding analysis. Interview analysis occurred through a two pronged approach. First, interviews were analyzed through daily interpretive analysis. Thus, at the end of every day of interviewing, there was a review of the notes and tapes that summarized and interpreted the information obtained that day. Once the interview sessions were completed at each school, interpretive analysis broke down the daily reports and by summarizing the qualitative data derived from each report. As a result, data from the interview summaries was coded to see if any trends existed amongst the administrators and teachers that were interviewed for this study. In the following chapter, the findings from the quantitative analysis and qualitative analysis will be presented and described.

Chapter IV: Findings

The purpose of this study was to identify the types of professional development and the funding sources of professional development at two high schools in San Diego County. The first research question of this study focused on ascertaining if a correlation exists in the funding levels between two high schools in San Diego County of the federal Title I, Title II, and state funds being spent on traditional and non-traditional PD programs that effect CAHSEE test scores over a three year time span from 2012-2015.

In addition, the second research question was to investigate if a correlation exists between the perceptions of two high school principals and teachers of differing academic departments regarding PD and student achievement based on test scores. These questions have been asked to gain insight from the major stakeholders at the school sites about professional development and its' impact on student achievement. In this chapter, the presented findings of this study have been derived from teacher and administrator interviews, financial/test score document analysis, and survey analysis.

Types of Traditional and Non-traditional Professional Development

School A and School B by teachers and administrators. This section will discuss the overall picture of traditional and non-traditional Professional Development programs found at School A and School B. Here, the analysis in the following figures (See Figure 1 and Figure 2) shows the types of professional development as stated by teachers and administrators about the types of PD programs found at both School A and School B.

The question was asked in both teacher and administrator interviews whether their PD programs were manifested in traditional or non-traditional means. Thus, teachers and principals from both School A and School B were asked to discuss their school's PD program to identify what types of PD occur at their school site. Thus, a categorization has been given in Figure 1 and Figure 2 of their responses to the interview question.

Each chart has been broken down into two categories separating traditional and non-traditional PD programs to differentiate what specific programs occurred at both-sites. Figure 1 indicates the teacher responses in School A and School B identifying traditional and non-traditional professional development programs

Traditional PD	Non-Traditional PD
Staff meetings (Schoolwide)	BTSA (Beginning Teacher Support and Assessment) some districts use a model such as teachers mentoring beginning teachers)
Pedagogical Off Site Conferences (for ex., Advanced by the Sea)	PLC (Professional Learning Communities) on a weekly basis
San Diego County of Education Meetings	Positive Behavior Support Training
	On-Site Technology Training

Figure 1. School A and School B Teacher responses to type of PD programs.

In Figure 1, teachers in both schools outlined various programs for traditional and non-traditional PD. For traditional PD, teachers stated they attended large staff meetings, San Diego County of Education Meetings, and pedagogical off-site conferences like Advanced Placement by the Sea. On the other hand, for non-traditional PD, teachers discussed how they were involved in BTSA, weekly professional learning communities, positive behavior support training, and on-site technology training.

In the following Figure 2, the results are categorized according to the responses from School A principal and School B principal.

Traditional PD	Non-Traditional PD
Restorative Justice Program (School Climate)	PLC's (Professional Learning Communities)
Common Core Standards	Competency Instruction
	On-site Technology Training

Figure 2. School A and School B Principal responses to type of PD programs.

In contrast, principals from School A and School B in Figure 2 outlined various similarities as well as discussed differences regarding the traditional and non-traditional PD programs at their school sites. Principals at both schools regarded their restorative justice program (positive behavior support) and common core standards trainings as traditional PD. This differs from teacher's responses at School A and School B because teachers felt restorative justice programs were initiated through non-traditional PD. In addition, teachers did not mention Common Core Standards training as a traditional PD program at all. However, teachers did mention Common Core as a major topic at school-wide staff meetings.

In regards to non-traditional PD programs, principals at School A and B stated professional learning communities, competency instruction, and on-site technology training were comprised of these programs. Principals and teachers in both interviews stated professional learning communities and on-site technology training were major aspects of their non-traditional PD program at their school. However, the principals and teachers differed in opinion regarding whether BTSA and competency instruction were non-traditional PD. Principals believed

competency instruction can be regarded as non-traditional PD while teachers disagreed. Also, teachers believed BTSA can be regarded as non-traditional PD while the principals disagreed.

PD Program Differences in School A and B Teacher Responses Summary

In this section of the findings, School A and School B's PD program information derived from the teacher interviews were categorized and compared and contrasted. These findings were summarized from a question asked in the teacher interview regarding what programs their school does for PD and whether these programs were manifested in traditional or non-traditional means.

School A. The figure below is the summary of teacher responses from School A. There were four teachers that responded to the question about their perspective on the categories of traditional and non-traditional professional development.

Traditional PD	Non-Traditional PD
Staff Meetings	BTSA
San Diego County of Education Meetings	PLC's (Professional Learning Communities)
Pedagogical Off-site Conferences (AP By the Sea)	Positive Behavior Support Training
	On-Site Technology Training

Figure 3. School A Teacher Responses to Overview of School's PD Programs.

In Figure 3, School A's teachers stated traditional PD is manifested in staff meetings, county of education meetings, and pedagogical off-site conferences. Half of School A's traditional PD in the eyes of teachers occurs on the school site in staff meetings while the other half takes place at off-site meetings or conferences. The off-site traditional PD was not centered

at the district offices; it was mostly comprised of conferences that were not district sponsored. In regards to non-traditional PD, teachers discussed their schools BTSA program, professional learning communities, positive behavior support training, and on-site technology training as the programs that comprised this portion of their PD program. Teachers at School A believed that the weekly professional learning communities made up the majority of their non-traditional PD while BTSA, positive behavior support training, and on-site technology training made up only a fraction of their non-traditional PD.

School B. Teachers in School B had some different perspectives about the role of some types of PD that did not agree with the responses by School A teachers. In Figure 4, the summary of the responses of School B teachers are categorized as reported by them.

Traditional PD	Non-Traditional PD
District conferences/workshops	PLC's (Professional Learning Communities)
San Diego County PD meetings	Teacher Mentor meetings
	Google Ninja (On-site Technology Training)

Figure 4. School B Teacher Responses to Overview of School's PD Programs.

As can be seen in Figure 4, School B's teachers outlined their traditional PD manifested in school district conferences/workshops and county of education meetings. Teachers at School B stated the vast majority of their traditional PD takes place at the district office while only a small fraction of it occurs at county PD meetings. For non-traditional PD, teachers at School B stated it was manifested in professional learning communities, teacher mentor meetings, and through their Google Ninja program. School B teachers stated the majority of the non-traditional

PD takes place in professional learning communities while teacher mentoring meetings and the Google Ninja program take up only a small fraction of their time spent non-traditional PD.

Summary of teacher's responses. In regards to traditional PD, School B's teachers did not state staff meetings or off-site pedagogical conferences as means of traditional PD. As a result, School B's traditional PD was more district centered than School A because it predominately took place at the district offices. This means the majority of traditional PD took place at the district offices than on the site of School B. This was a major contrast to School A's PD program because School A's traditional PD program manifested in on-site staff meetings and off-site PD meetings/conferences that were not district sponsored.

For non-traditional PD, teachers at School A and B believed the majority of non-traditional PD took place in professional learning communities that took place on a weekly basis at a designated time. In addition, each school has on-site technology training conducted by teachers who mentor teachers one on one or in small groups. School A and B have vastly different traditional PD programs. However, in regards to non-traditional PD, both schools align and share many of the same programs.

PD Program Differences in School A and B Principals Responses Summary

In this section of the findings, School A and School B's PD programs from the principal interviews will be categorized and compared and contrasted. This finding was derived from the interview question asked in the administrator interview regarding what their school does for PD and whether these programs were manifested in traditional or non-traditional means.

In the following Figure 5, the responses from School A principal are categorized by the type of PD development as perceived by them and in response to the interview question.

Traditional	Non-Traditional
Restorative Justice Program (School Climate)	PLC's (Professional Learning Communities)
Common Core	Competency Instruction
	On-site Technology Workshop

Figure 5. School A Principal Responses to Overview of School's PD Programs.

School A's principal stated their two major traditional PD programs were a restorative justice program to foster a better school climate and teaching teachers how to utilize the Common Core in their teaching. These programs were instituted in staff meetings at the school-site that occurred one to three times a semester.

In regards to non-traditional PD, School A's principal outlined professional learning communities, competency instruction, and on-site technology workshops as the main programs they utilize for non-traditional PD. Professional learning communities were the main program used for non-traditional PD. Principal A stated these weekly meetings allowed for curriculum development, collaboration, and mentoring. In addition, the competency instruction program involved teachers collaborating during school hours to work on curriculum. Finally, the on-site technology workshop involved one teacher teaching a small group or teacher's one on one to facilitate growth in using technology in their classrooms.

Figure 6 summarizes the responses from the School B principal and categorized by the type of PD development as perceived by them and their response to the interview question.

Traditional	Non-Traditional
School Climate – PBIS	PLC's (Professional Learning Communities)
WASC Recommendation: Action plan that introduces new literary, math, and technology instructional methods	Additional Release Time for Team Collaboration for Teachers
	Google Ninja – on site technology mentoring

Figure 6. School B Principal Responses to Overview of School's PD Programs.

School B's principal stated their two major traditional PD programs were a school climate initiative to create a better overall school atmosphere as well as initiating a WASC Action Plan that introduces new instructional methods in literary, math, and technology. These programs were instituted in staff meetings at the school-site that occurred one to three times a semester.

When asked about non-traditional PD, School B's principal stated professional learning communities, additional release time for team collaboration, and the on-site technology program (Google Ninja) were the main non-traditional PD programs utilized at that school site. Principal B outlined professional learning communities were the main program utilized for non-traditional PD. According to Principal B, the weekly meetings the professional learning communities constituted of consisted provided for curriculum development, collaboration, and mentoring. In addition, the additional release time given to teachers occurred during school hours to allow teachers to collaborate and build curriculum. Lastly, School B utilized a technology mentoring program whereby a teacher teaches teachers one on one or in a small group how to use Google technologies in the classroom.

Summary of principal's responses. The responses School A and B's principals gave for this question differ in regards to traditional PD but are very similar for non-traditional PD. For traditional PD, both schools utilize staff meetings to teach teachers on new initiatives to help create a better school climate for students. However, the major different lies in the Common Core initiative by School A and the WASC Action Plan utilized by School B. School A was given Common Core funds by the district to initiate its own PD program to teach teachers how to use the Common Core within their instruction. In contrast, School B does not have a Common Core program on-site. Yet, it must be noted School B's Common Core program was a district sponsored program and conducted at the district office. The WASC Action Plan has been initiated in School B to utilize better instruction that is outside of the scope of Common Core. This program has been placed to improve the schools teachers in all core subject areas of English, Math, and Science.

For non-traditional PD, both School A and B's principals aligned on their responses and the programs they utilize to non-traditional PD at their site. Both schools used weekly professional learning communities and additional release time for teachers to foster curriculum development, collaboration, and mentoring. In addition, School A and B have utilized on-site technology training to teach their teachers how to use technology in the classroom to better their instruction.

Frequency and Positive Effect of PD Programs at School A and B: Teachers Responses

In response to the interview question regarding whether participating teachers at both School A and B believed that PD was necessary for their own professional development, all

seven teachers said yes. When asked how PD improved their teaching, the following responses were given by teachers in School A and School B as shown in Figure 7.

Positive Effect	School A-Frequency	School B-Frequency
Learning my job	1	0
Curriculum	2	1
Where to find resources	1	0
Common Core	2	2
New Instructional Strategies	1	1
SEIS – IEP's	0	1
New Autism Instruction	0	1
Google/Technology Training	4	3

Figure 7. Frequency of PD Experiences and Positive Effects at Schools A and B Teachers.

Based on Figure 7, Google/technology training was the most frequent type of PD experienced by teachers at both schools. The second most frequent program teachers experienced was Common Core PD. There was a tie in the third most frequent programs experienced by teachers. For these two programs, the same frequency of teachers experienced curriculum and new instructional strategy PD.

In comparing School A and B, there were a couple similarities regarding the frequency of PD programs teachers experienced. For example, both School A and B had a high frequency of participation in Google/technology training and Common Core PD. Also, there was a difference in School B's frequency of special education (SEIS and New Autism Instruction) PD because one School B teacher taught special education while none of the participants at School A taught special education.

PD Funding and Student Achievement

Within this section of the findings, School A and B's total funding amount, funding sources and the total funding amounts correlation with CAHSEE scores will be discussed.

School A. In analyzing the data for School A, there was an increase in the total amount of funding from 2012-2015 by \$87,500 dollars (See Figure 8). In 2014-2015, School A received an additional \$90,000 from the state of California for Common Core PD for that calendar year. These funds were to be spent during this year only on Common Core PD. Outside of the Common Core PD funds from the state in 2014-2015, the remaining funds are directed towards paying for substitute teachers while teachers were attending traditional and non-traditional PD. The sources for PD funds come from the federal and state government. Since School A was categorized as a Title I school over this time period, School A received federal funds to be allocated for PD. In addition to federal funds, the remaining funds used for PD came from state funding sources (i.e., General Fund, Economic Impact Aid, and Discretionary Funds).

Furthermore, in regards to finding a statistical correlation, as School A spent more on PD, CAHSEE scores decreased in both English and Math (See Figure 8). We can see this based on the correlation coefficients of $-.99$ and $-.96$. These values are negative which show the inverse relationship. Therefore, as funding increased, scores decreased. The coefficient is defined between -1 and 1 , which means there was a very negative correlation between total funding amounts and CAHSEE test scores.

Year	Total Funding Amount	<u>Source(s)</u>	<u>CAHSEE English</u>	<u>CAHSEE Math</u>
2012-2013	8,000	Title I + State (General Fund)	99.06%	99.44%
2013-2014	11,600	Title I + State (Economic Impact Aid + Discretionary Funds)	98.87%	98.06%
2014-2015	96,500	Title I + State (Discretionary Funds)	96.99%	95.04%

Figure 8. School A Total Funding Amount, Sources, and CAHSEE English and Math Scores.

***Correlation between funding and CAHSEE English: -0.998887**

***Correlation between funding and CAHSEE Math: -0.962237**

School B. In analyzing the School B data, the total funding amount for PD from 2012-2015 decreased by \$970 dollars (See Figure 9). These funds were used to pay for substitutes while teachers were attending PD events. When it came to funding sources, School B only received PD funds from the state of California since it was not designated as a Title I school by the federal government.

Additionally, when determining the statistical correlation, in School B, the site had a positive correlation between PD spending and CAHSEE English scores with a correlation coefficient of .85 (See Figure 9). However, there was a negative relationship with PD funding and Math scores with a correlation coefficient of -.99.

Year	Total Funding Amount	<u>Source(s)</u>	<u>CAHSEE English</u>	<u>CAHSEE Math</u>
2012-2013	9,970	State (General Fund)	88.00%	93.00%
2013-2014	10,000	State (General Fund)	87.00%	93.00%
2014-2015	9,000	State (General Fund)	86.00%	95.00%

Figure 9. School B Total Funding Amount, Sources, and CAHSEE English and Math Scores.

***Correlation between funding and CAHSEE English: 0.8525407**

***Correlation between funding and CAHSEE Math: -0.999652**

School A and B Teacher Interview Findings

In this section of the findings, the perceptions of teachers regarding PD at their school site derived from the teacher interviews at both School A and B will be discussed. Teacher perceptions were asked about: motivation, and perceptions of PD funds distribution,

Motivation. First, in regards to the question that asks teachers whether teachers were motivated to participate in PD activities at your school site, six of the seven teachers at School A and B answered yes. Only one teacher answered they were not motivated to participate in PD activities at their school site; it was a teacher that taught at School B.

Perceptions of PD Funds. Next, in regards to the perceptions of whether the distribution of PD funds was done effectively at their school site, five teachers at both School A and B were unsure while one teacher said no and one teacher said yes. Both of the teachers who responded yes and no to this question were from School A. The follow up question about whether the money allotted to PD was going to the right programs, responses indicated the teachers at both School A and B did not know where PD funds were going.

Furthermore, in asking about the amount of money they believed was spent on PD at both School A and B, the majority (five teachers) were unsure while one teacher felt it was between \$25,000-50,000 dollars and another teacher thought it was over \$75,000.

Administrator Interview Findings: Overall Principal Perceptions of School Site PD

In this section of the findings, the perceptions of principals regarding PD at their school site derived from the administrator interviews at both School A and B will be discussed. Their perceptions were gathered about: effectiveness of traditional PD and non-traditional PD and the distributions of PD funds.

Effectiveness of traditional PD. First, in regards to the question that asks principals what the effectiveness of traditional PD is at their school site, School B's principal stated it was effective while School A's principal stated it wasn't effective. School A's principal noted while traditional PD can be good for individual teachers looking to improve their teaching by attending outside PD conferences, it is not effective for school wide PD. Also, School A's principal stated school wide traditional PD must have complete buy in from the staff to be an effective tool to execute effective PD.

Effectiveness of non-traditional PD. Next, in regards to the question asking for the principal's perception regarding the effectiveness of non-traditional PD at their school site, both principals stated it was effective. Both principal's at School A and B affirmed non-traditional PD showed more buy-in from the faculty as well as was more of an effective tool to facilitate teacher PD.

Distribution of PD funds. Furthermore, in regards to the question discussion whether PD funds are being distributed according to the principal's vision for the school, School B's principal said yes while School A's principal was unsure. School A's principal stated they were unsure funds were being distributed according to their vision because not enough funds have been given to effectively initiative their ideal PD program for their school. In addition, School B's principal questioned whether there was an accurate measure to see how PD funds effect achievement. This principal affirmed the belief there was no adequate measure that shows how PD can effectively demonstrate how teacher improvement can effect student achievement.

School A and B Teacher's Survey Findings

In this section of the findings, the teacher survey responses for both School A and B will be broken down using a Likert scale for the six questions conveyed to teachers in the survey. The following explanations and graphs for each question will outline the findings derived from the teacher surveys.

Survey Question 1: Attendance of PD. In the first question asked in the survey, teachers were asked how many PD courses, meetings, and/or conferences they have attended this year.

Based on the results (See Figure 10), all teachers from both School A and B attended at least one PD event. In Figure 11, from the results, two teachers attended one to five events, three teachers attended five to ten events, and two teachers attended ten or more events.

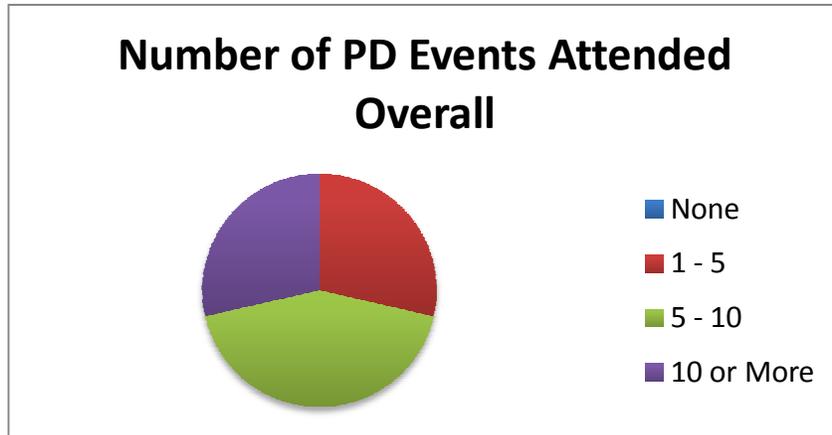


Figure 10. Overall Number of PD events attended in one school year.

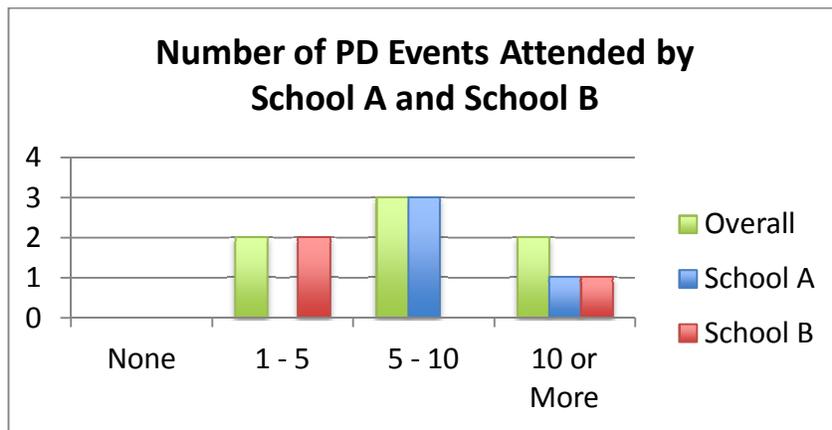


Figure 11. Overall number of PD events attended by teachers at School A and B.

When we analyze School A’s results, teachers participated in at least five or more PD events a year. Three teachers participated in at least five to ten PD events while one teacher attended ten or more. On the other hand, for School B, teachers participated in at least one to five PD events a year. Two teachers attended one to five PD events while one teacher participated in ten or more.

Survey Question: 2a Relevancy of PD to Job. In question 2a, teachers were asked if the PD content they have learned was relevant to their current job. Overall, the consensus from all teachers was that the PD content they are learning has been relevant to their jobs (See Figure 12).

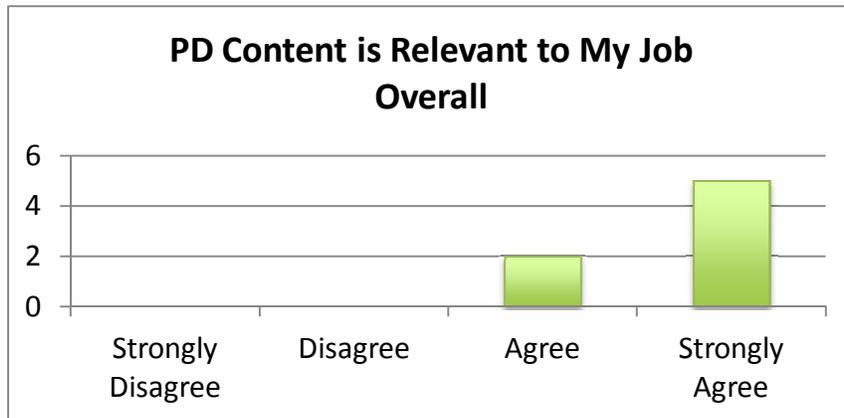


Figure 12. Overall relevancy of PD to job responsibilities.

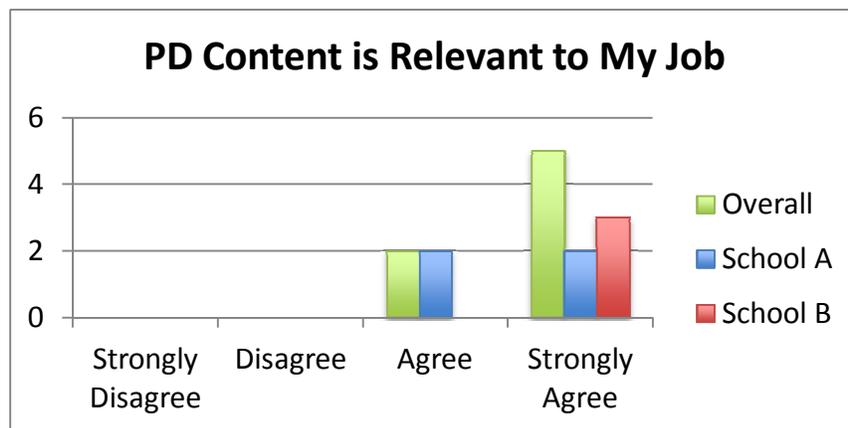


Figure 13. Relevancy of PD to job by School A and School B.

As indicated in Figure 13, for both School A and B, three teachers agreed while four teachers strongly agreed it was relevant for their current job. For School A, two teachers agreed

while two teachers strongly agreed. In regards to School B, all three teachers surveyed strongly agreed with this statement.

Survey Question 2b: Adequacy of funding for PD. In question 2b, teachers were asked if they believed the PD funds at their school were being adequately spent to improve their teaching. Figure 14 displays the results that indicate that there was disagreement amongst the teachers when asked if PD funds were being spent adequately to improve their teaching.

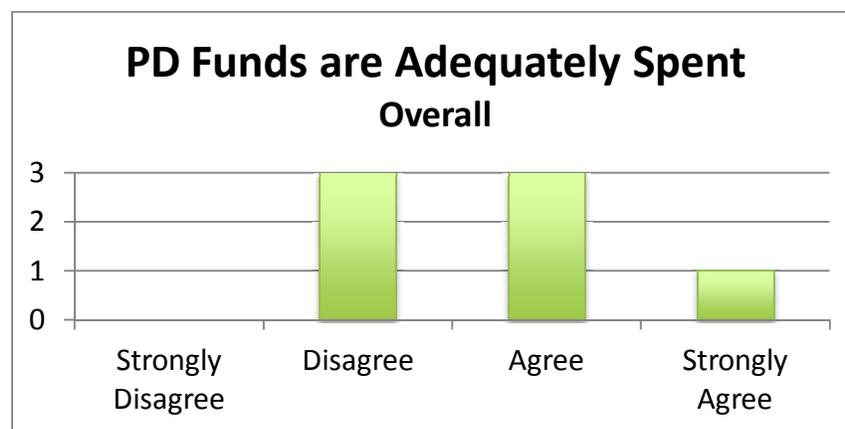


Figure 14. Overall results about adequacy of funding.

As shown in Figure 15, for both School A and B, three teachers disagreed funds weren't being spent adequately. Then, three teachers agreed funding was being spent adequately on PD while one teacher strongly agreed funding was being spent appropriate to improve their teaching. In regards to School A, only one teacher disagreed funds were not being adequately spent.

However, two teachers agreed while one teacher strongly agreed funds were being adequately spent to improve their teaching. On the other hand, for School B teachers two teachers disagreed PD funds weren't being adequately spent while one teacher agreed the funds were being spent adequately.

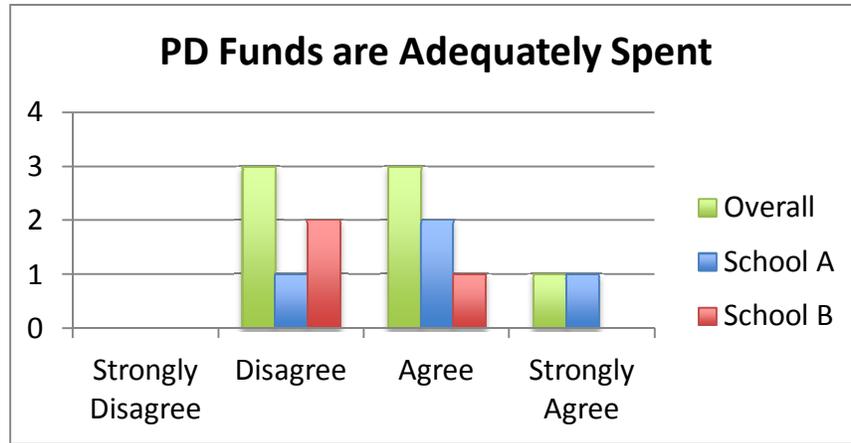


Figure 15. Adequacy of funding by School A and School B.

Survey Question 2c: PD helped instruction. In question 2c, teachers were asked if the PD activities they participated in helped their instructional strategies. Results indicate as shown in Figure 16 that teachers believed the PD programs they participated in helped their instructional strategies.

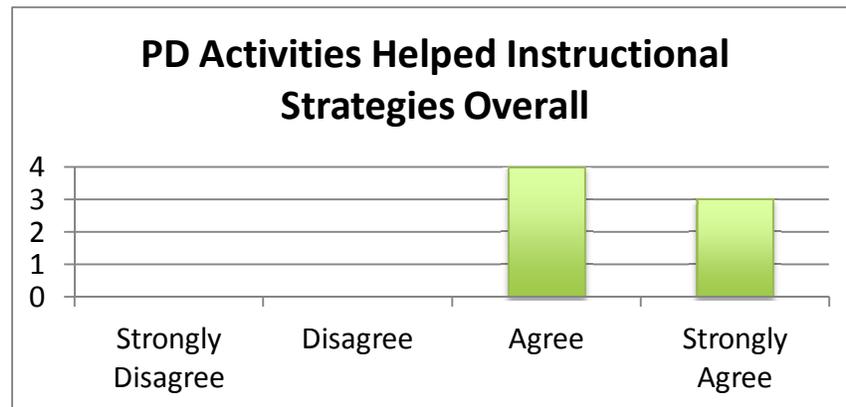


Figure 16. Overall results for PD helping instruction for School A and B.

Figure 17 shows that for both School A and B, four teachers agreed while three teachers strongly agreed the PD activities they participated in helped their instructional strategies. In

regards to School A, three teachers agreed while one teacher strongly agreed the PD activities they participated in helped their instructional strategies. Similarly, for School B one teacher agreed while two teachers strongly agreed the PD activities they participated in helped their instructional strategies.

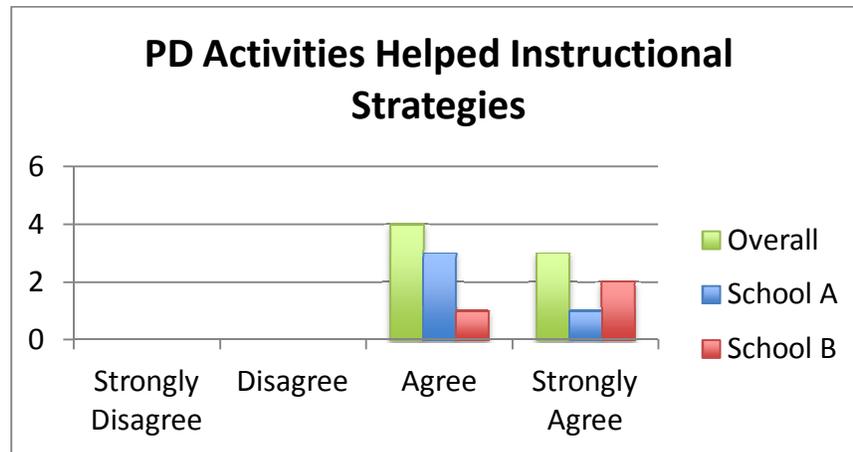


Figure 17. PD helping instruction by School A and School B.

Survey Question 2d: PD increased student achievement. In question 2d, teachers were asked if the PD activities they participated in helped increase their student achievement in the form of test scores in their classroom. The overall results indicated a majority of teachers surveyed agreed that the PD they've participated has increased their students achievement in their classroom (See Figure 18).

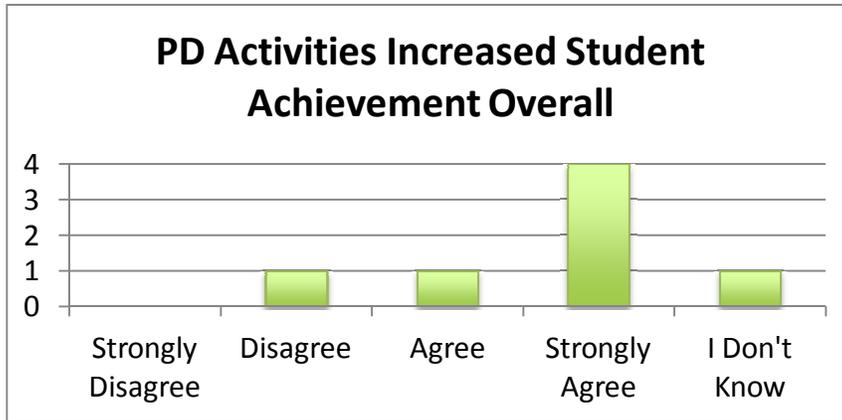


Figure 18. Overall results for PD increasing student achievement.

When analyzing the results from teacher responses at School A and School B, the data indicates that there was more disagreement in School A while there was agreement in School B that the PD teachers participated in helped increase their student’s achievement (See Figure 19).

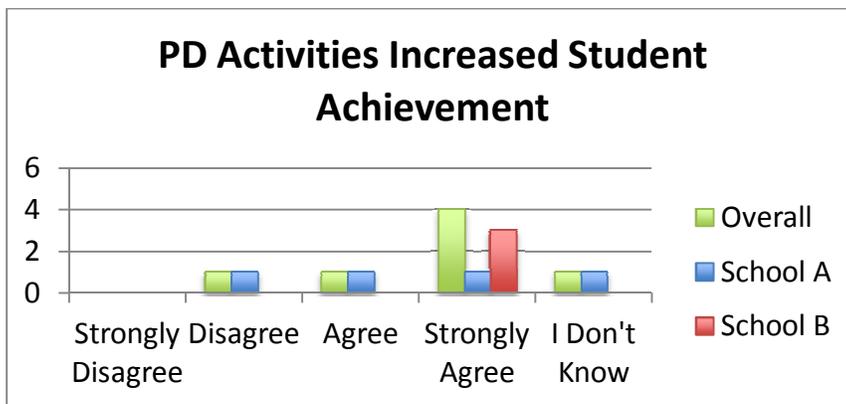


Figure 19. PD increasing student achievement.

For both School A and B, four teachers strongly agreed while one teacher agreed their PD increased student achievement. One teacher disagreed because they believed PD is a hard measure to indicate whether student achievement is a byproduct of effective PD due to a variety of different variables effecting student achievement. In addition, one teacher did not know

whether their PD they participated in helped increased their student achievement. This teacher felt it could but believed there was insufficient evidence to link a correlation to their PD and their students student achievement.

In regards to School A, each teacher answered differently from each other. Therefore, for School A, there was no significant agreement or disagreement on whether their PD effected their student achievement in the form of test scores. The results showed one teacher disagreed, one teacher agreed, one teacher strongly agreed, and one teacher did not know whether the PD helped effect their student's achievement.

In contrast, the results indicated for School B that all three teachers surveyed strongly agreed that their PD they participated in effected their student's achievement. Teachers at School B believed the PD they have participated in has shown an increase in student achievement.

Survey Question 3: Quality of PD. In question 3, teachers were asked to grade the quality of the PD sessions, meetings, and conferences they collectively attended this year. As shown in Figure 20, overall, results indicated the majority of teachers (five) rated their PD as an "A" denoting it as outstanding. Two teachers rated their PD below an "A." One teacher rated their PD a "B" while another teacher rated their PD a "C."

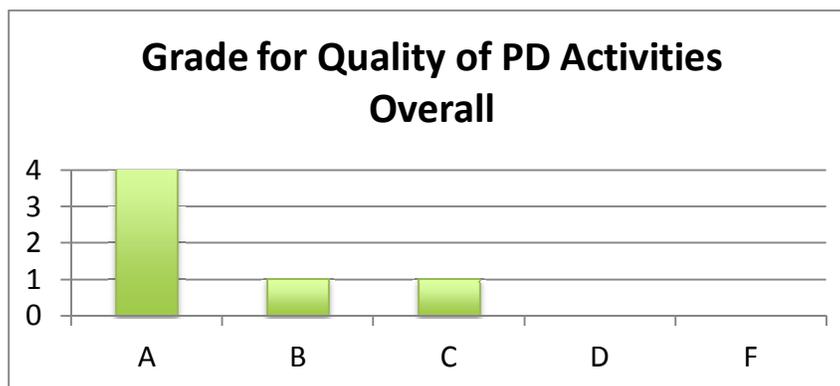


Figure 20. Quality of PD disclosed as a grade.

In the teacher responses by School A and School B, there was a variance as shown in Figure 21. In regards to School A, two teachers rated their PD an “A” while two teachers rated it a “B” and a “C.” On the other hand, for School B, all three teachers surveyed rated their PD an “A.” Thus, while the majority of teachers rated their PD an A, we see School A has more disagreement amongst the rating of PD than School B.

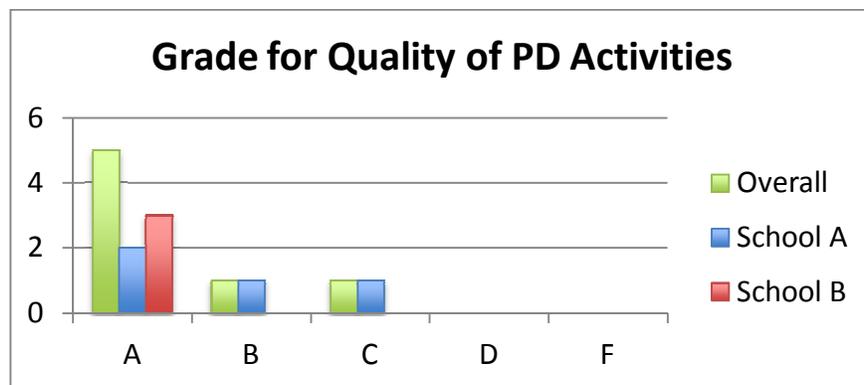


Figure 21. Quality of PD disclosed as a grade by School A and School B.

In the following chapter, these findings are discussed in relationship to the research questions of this study. In addition, implications in the research, recommendations in the form of an action plan are posed for policy makers and school stakeholders, and the researcher’s final thoughts on the study.

Chapter V: Discussion

Overview of the Study

The purpose of this study was to identify the types of professional development and the funding sources of professional development at two high schools in San Diego. The correlation between student achievement and the funds allocated to professional development by the district and school site were also analyzed. It is important to get the insights from the major stakeholders at the school sites about professional development and its' impact on student achievement to evaluate its effectiveness. This study investigated the perceptions of two high school principals and teachers of differing academic departments at two different school sites regarding PD and student achievement. The results for this study were derived from through a Likert type scale survey, focus group interviews, and financial document/test score analysis.

Specifically, the research questions answered by this study included: Is there a correlation between student achievement in form of CAHSEE scores and the amount of 2012-2015 federal and state funds spent on traditional and non-traditional professional development at two high school sites in neighboring districts? What are the perceptions of two high school principals and teachers of differing academic departments regarding whether a correlation exists between traditional and non-traditional professional development and student achievement based on test scores?

Summary of the Findings

The findings derived from this can be described in a two prong approach that tackles each of the two research questions. First, in regards to whether a correlation exists between CAHSEE scores and the amount of 2012-2015 federal and state funds spent on traditional and non-

traditional PD, School A had a very negative correlation between total PD funding amounts and CAHSEE test scores for both English and Math while School B had a positive correlation for CAHSEE English scores and a negative relationship for Math scores. Thus, the results were mixed for the first research question for both School A and B. School A spent much more on PD during the time span of 2012-2015. However, as School A spent more on PD, scores decreased in both English and Math. In contrast, as School B spent more on PD, the English scores decreased while the Math scores increased.

Next, for the question asking whether the perceptions of two high school principals and teachers of differing academic departments regarding whether a correlation exists between traditional and non-traditional PD and student achievement based on test scores, the results indicated there was a major disconnect between the principals and teachers perceptions of PD funding and its effect on student achievement. First, both principals stated non-traditional PD was the most effective tool for PD at both of their schools. However, in regards to traditional PD, School A's principal stated it was not effective at their school while School B's principal outlined its effectiveness at their school site.

When it came to whether PD funds were being distributed to the principal's vision for the school, School A's principal was unsure due to the lack of PD funds while School B's principal believed funds were being distributed according to their vision. However, School B's principal questioned whether there was an accurate measurement that can effectively demonstrate how teacher improvement through PD can effect student achievement.

On the other hand, teachers had many different perceptions from their administrator colleagues regarding this question. At both School A and School B, teachers were unsure

whether the distribution of PD funds to traditional and non-traditional PD programs were done effectively. In addition, the vast majority of teachers were unsure where the PD funds were going at each school. Also, there was a disagreement amongst all of the teachers interviewed regarding whether PD funds were being spent adequately; half of teachers agreed while the other half disagreed.

In regards to whether PD activities helped student achievement in the form of test scores, the majority of all teachers strongly agreed. Thus, teachers at both schools agreed their participation in PD has helped student achievement.

Finally, while there was disconnect between the perceptions of PD funding and its' effectiveness on student achievement by principals' and teachers, over half of the teachers from both School A and School B rated their quality of PD the highest mark on the survey.

Conclusions

Research question one key findings. Analyzing the results showed several key findings. In regards to the first research question about whether there is a correlation between student achievement in form of CAHSEE scores and the amount of 2012-2015 federal and state funds spent on traditional and non-traditional professional development at two high school sites in neighboring districts, we saw a negative relationship with PD funding and CAHSEE scores.

Although School A spent more money each year on PD, CAHSEE scores in both English and Math decreased. This demonstrated that the amount of money spent on PD may not be what ultimately determines whether test scores go up. As a result, one can assume there may other variables like the quality of PD, PD buy-in (approval and motivation of teachers to participate in

PD) from teachers, and the demographics of the school that may affect test scores more than higher amounts of PD funds.

In examining the key findings for School B regarding research question one, School B's results indicated that PD funds showed a correlation for English scores but there was no correlation with Math CAHSEE scores. Therefore, the results indicated that there are variables that affected the English CAHSEE scores and the amount of PD funding may not be the major variable to the differences in correlation with English and math at School B. It can be concluded that unlike School A's negative relationship, School B's funding relationship with test scores does not seem to be a major variable based on the results gathered from this study.

Overall, the results gathered from this portion of study demonstrated PD funding amounts may not be a major indicator that determines CAHSEE test scores. However, like stated above, the results indicated other variables like the quality of PD may be affecting CAHSEE test scores more than PD funding amounts because of the weak relationships found between PD funding amounts and CAHSEE test score results.

Research question two key findings. In regards to the second research question asked in this study about the perceptions of two high school principals and teachers of differing academic departments regarding whether a correlation exists between traditional and non-traditional professional development and student achievement based on test scores, the results revealed a major diverge between the principals and teachers regarding several major areas. First, the majority of teachers had no idea of the amount of funds spent on PD each year at the school site as well as what programs the PD funds were directed towards. This finding demonstrated a lack of transparency about the amount and use of PD funds at both school sites. Outside of two

teachers, five teachers were frustrated they did not know how many funds were going towards PD and where they were going. Many teachers expressed their view that they had the right to know because these funds were going towards their own PD.

While there different viewpoints in some areas regarding research question two amongst principals and teachers, teachers agreed along with one principal (School A) that PD has effected student achievement. Overwhelmingly teachers believed the PD they have participated in has helped their students test scores go up. On that note, teachers and principals at both School A and School B also agreed traditional and non-traditional PD helped instructional strategies.

Furthermore, while there may be some disagreement between teachers and principals regarding PD funding, effectiveness of PD on student achievement, and the transparency of their PD programs, the majority of the teachers rated the quality of PD they received very highly. While teachers were unsure of the functional details of their school's PD programs, the vast majority of teachers rated their PD very highly.

Additional Observations. The following observations outlined in this section are related to this study. This section is presented by the researcher so that the information may be used to help develop recommendations and aid to further research into this topic.

First, it was concluded that both participating schools did not have a PD plan in place. During the principal interviews, there was no comprehensive PD provided by the principals. Instead, the researcher looked at various reports online that each school provided regarding student achievement. These reports included the School Accountability Report Card, Single Plan for Student Achievement and a Single Plan for Student Achievement. Within these reports, a small area was dedicated that outlined their schools PD plan.

Specifically, for School A, since no written comprehensive plan was given to the researcher during the principal interview, the researcher was able to find School A's School Accountability Report Card (SARC). Within School A's SARC, it discusses how the school can improve student achievement. In regards to PD, only three short paragraphs in the SARC discusses the school's PD. While the plan describes its major facets of PD program, it does not describe how PD programs would be initiated. Outside of Professional Learning Communities (PLC's), there was little detail on how PD programs would be initiated and what types would be included. Also, the SARC did not outline any PD funding.

Similarly, during the principal interview process for School B, no comprehensive written plan was given to researcher. Upon further research, researcher found a Single Plan for Student Achievement (SPSA) for School B that outlines the schools goals for improving student achievement. Within the SPSA, there was no detailed PD plan. Instead, there were several standards given for PD but there were no details given on how PD programs would be initiated and what types of PD. In addition, the SPSA did not outline any PD funding.

In regards to PD funding, while conducting the interviews, the principals at both schools did not show whether there was a comprehensive log outlining the days teachers were replaced by substitutes (substitutes were paid by using PD funds) while they went to a PD event. This was concerning because there is uncertainty of where/what event the teacher was going to for PD. Thus, without knowledge of whether there was a comprehensive log outlining this information, it may demonstrate a need for a log created by principals to keep teachers accountable.

Implications

The implications from this study demonstrate several major areas of discussion and concern. In regards to the first research question, the findings indicated that the total amount of PD funding may not directly correlate with higher CAHSEE scores. The saying “money doesn’t always buy happiness” resonates in the findings because a negative relationship at School A along with a weak relationship at School B was found regarding the relationship between the amount of PD funding and CAHSEE test scores. Since there was a small sample size of schools (only two participating schools), this may not be a full representation of all the schools in the area. However, the findings indicated in this instance that the amount of funds used for PD was not a major factor contributing to CAHSEE scores. As a result, schools must look towards spending their funds on programs that present opportunities for teachers to participate in quality PD programs.

Furthermore, the next major area of discussion relates to the second research question findings outlining the disconnect in transparency between administrators and teachers regarding how much funds are being used for PD and what PD programs those funds are going to. Based on the results, the majority of teachers were unsure on both of these fronts. This was alarming to the researcher because teachers should know as professionals where funds are going that were to be used to aid them become better at their profession. There was a lack of transparency and communication at both schools between the principal and the teachers on campus regarding this issue.

Moreover, based on the results from the teacher survey, teachers believed PD was important to their continuing development as professionals as well as helped contribute to

student achievement. While the teachers surveyed for this study were very active in PD, teachers believed buy-in from administrators and their teacher colleagues was extremely important to having a successful PD program. However, at both School A and B, the teachers interviewed stated the levels of buy-in by teachers was not at the levels needed for their schools PD program to be effective on a school wide level. Many teachers believed teachers need to be held accountable for attending PD as well as be required to attend a certain amount of PD events each year. Coincidentally, School A and B's PD was mostly voluntary.

Even with the problems teachers have outlined regarding their schools PD program, teachers at both schools rated their PD highly. This result demonstrated that even with the lack of transparency regarding PD funding, it did not affect the way teachers perceived the actual PD they were participating in at their school. Thus, knowing how many funds go to PD along with what programs those funds are going may be a moot point to teachers if the PD they are receiving is deemed worthwhile by them.

Another implication from this study revolves around the principal's answer regarding whether PD funds were being distributed according to the principal's visions for their school. By having one school (School A) state the funds were not distributed to the principal's vision, it suggests that a policy exists between the school and the district and is not aligned with the principal's vision. This researcher concluded that if a principal feels as if they need more funding for PD, they should be concerned as well as put forth an effort to campaign for their school to get more funds from the district.

In addition, a comment made by School B's principal during this question must be noted. While answering this question, School B's principal questioned whether there were any adequate

measures to show how PD can effectively demonstrate how teacher improvement can effect student achievement. With further study, the researcher concluded that under the current credentialing program, principals should learn to use test scores to create mechanisms to keep teachers accountable for their PD as well as see how PD reflects student achievement. As a result, this would help them evaluate whether the PD they are conducting at their school site effects student achievement. Therefore, this comment demonstrated to the researcher that this principal by pursuing different avenues about measuring the effects of PD and student achievement in the future, they will learn and incorporate procedures to be able to analyze the effects of teachers PD on school achievement to appropriately evaluate whether the PD was effective or not.

To conclude, the implications derived from this study offer opportunities for positive changes. There are many challenges found at each of the schools. However, on a positive note, the challenges in each of these schools can be solved. Within the recommendations section of this study, there will be a set of steps to address the challenges outlined in this section.

Recommendations

How the Results Affect the Schools. The results derived from this study are opportunities for growth for these schools because the PD programs at their schools could be at a higher level. In this section, there will be a short discussion of how the results of this study affect the participating schools.

Due to the lack of a direct relationship between the amount of PD funding and CAHSEE scores, one may question whether the amount of funding may be a relevant variable to effecting CAHSEE score performance. Therefore, each school should review and determine the focus on

how it is distributing its funding to PD programs that have shown to help teacher performance instead of asking for more funding.

By taking the step to review and focus on PD effective programs as a group, the information will be shared with all the stakeholders. As evident in the results, both schools lacked transparency between the principals and teachers regarding how many funds were used on a yearly basis to fund PD as well as what PD programs the funds were going to. When the vast majority of teachers were unsure on this issue, it was alarming because teachers should know (like the public) how much funding is used to fund their own PD.

The last major concern derived from the results pertains to each school not having a comprehensive log in place to indicate where teachers were going during the times in which a substitute was placed in a class while they were attending a PD event. During the interview process there were no indications of such a log in place that goes back beyond one school year. Thus, without any evidence of such a log, accountability and a process to evaluate the best use of funds at a school site will be difficult to determine by staff. Without a log in place, there is no way to track where teachers are going for PD as well as the funds used to pay for substitutes to replace teachers while at PD events.

How the Results of this Study can help other Schools PD Programs. From this study there are important facets of information schools and school districts can use to help fund as well as facilitate transparency throughout their PD program. First, schools must work towards spending their PD funds efficiently and direct it towards quality programs. This study indicated the amount of PD funding and CAHSEE scores showed a negative relationship which demonstrated it did not have an effect on raising the test scores. Thus, the more funding one

school receives for PD does not mean it will raise their CAHSEE test scores. As a result, schools and districts should direct their attention towards other variables of PD effecting student achievement like the quality of PD programs that the schools funding, PD buy-in by teachers, and the transparency of the PD program between teachers and administrators.

Next, the results have demonstrated schools need to have transparency amongst its principals and teachers. The study showed the majority of teachers interviewed were unsure of how many funds were spent on PD and what PD programs those funds were going to. The consensus from the interviews concluded that teachers should know how schools invest in them. Therefore, to address this item, schools and school districts should provide teachers with the PD budget to demonstrate they are using these funds effectively to help them develop as professional educators.

Finally, schools should work to create better comprehensive PD plans and logs to keep track of where teachers are going for PD events. The results indicated there were not any logs to keep track of where teachers were going for PD. Thus, by keeping such a log that goes back throughout the school and several years back, it will establish an accountability system for teachers as well as keep principals up to date on their faculty's development as educators.

Action Plan

In order to mitigate the problems derived from the results of this study, there are several strategies and mechanisms that can be put in place to help create more effective and transparent PD programs. Within this action plan there is a three-pronged plan schools can follow.

First, schools must develop a comprehensive PD plan. In this plan schools need to outline their goals for student achievement and display the PD that can be put into place to put teachers in the position to achieve those goals. When describing PD programs for their school, principals need to discuss the particular programs purpose, what it looks like (tradition or non-traditional PD), how will it be put into practice, cost, and how it will help meet the schools goals for student achievement. This plan must be comprehensive in writing as well as broken down in an easy to read table. As a result, principals will have a blueprint in place that can be given to administrators and teachers alike.

In Figure 22, an outlined PD blueprint for one PD program is given as an example for principals to follow. Each year principals can follow this template as their student achievement goals change as well as their PD programs. By having this blueprint in place, it allows principals to be transparent and gives them the ability to remain consistent.

PD Program	Traditional/Non-traditional:	How will it be put into practice:	Cost: State cost and explain where PD funds were derived from.	How this program will help meet the schools goals for student achievement:
1. Professional Learning Communities	Non-traditional	Each week teachers from all academic departments will meet on Monday mornings from 8:00am-9:00am. During this time, teachers will discuss curriculum, assessments, collaborate, and prepare for upcoming events.	Projected Cost: \$3,000 Funds have been derived from Title I funding (\$1,200) and state discretionary funding (\$1,800).	This program will help meet the schools achievement goal because it will provide teachers time to collaborate and refine curriculums and assessments. In addition, it will allow teachers to have transparency in their academic department to ensure standards are being met.

Figure 22. Proposed PD program template for principals.

Second, in addition to the proposed PD program template, principals should create a log that establishes the overarching goal for student achievement and lists PD programs that will help them achieve the goals. By having a log, it will allow principals to organize PD at their schools in a more organized matter. Below in Figure 23, it breaks down the PD programs, type of PD initiated, cost of the PD, and date of the PD event. Like the PD program template described above in Figure 22, this is a simplified model that can be used to organize the costs and dates of the PD event to ensure principal's are on top of their PD program. Most importantly, it can be given to teachers to direct them to when a PD event is scheduled and keep them up to date on how much it is costing the school. This will ensure transparency in regards to the schools PD program between the administration and the teachers because all of the information will be easily accessible and given to teachers.

Overarching Goal: (Insert here)			
<u>PD Program</u>	<u>Type of PD</u>	<u>Cost</u>	<u>Date of Event</u>
PLC	Non-Traditional	(Insert Cost)	(Insert Date of Event)
Google Technology	Non-Traditional	(Insert Cost)	(Insert Date of Event)
AP by the Sea	Traditional	(Insert Cost)	(Insert Date of Event)
District Training	Traditional	(Insert Cost)	(Insert Date of Event)
SD County Training	Traditional	(Insert Cost)	(Insert Date of Event)

Notes:

Figure 23. Proposed comprehensive PD plan template for administrators and teachers.

Third, in order to keep teachers accountable, multiple logs can be created to keep track of teacher participation in PD. In Figure 24, principals can create a PD log that displays all of the schools PD events throughout the year and the dates in which they occurred. Then, principals

will keep track of the teachers who attended a particular event(s) during the course of the school year. This will help ensure accountability between principals and teachers. Also, principals can keep track of teachers who are attending particular PD events to help evaluate whether the new techniques/strategies they have learned are being initiated into their classroom. Finally, principals can evaluate what PD programs are popular amongst teachers and determine which PD programs/events have a high buy-in rate from teachers.

PD Event and Date	Teacher(s) Attending
Google Technology, 4/5/15	Mr. Smith, Ms. Apple, and Mr. Gray
SD County Training, 5/25/15	Ms. Bell, Ms. Love, Ms. Apple
AP by the Sea, 7/7/15-7/14/15	Mr. Black, Ms. Red, Ms. Bell

Figure 24. Proposed teacher PD accountability log.

On top of the proposed teacher PD accountability log, principals can create an individual teacher accountability log. In this log (See Figure 25) it will outline all of the events a particular teacher attends during the school year. This log establishes accountability in regards to the teacher's participation in PD which will allow principals to track their development as educators. In addition, principals should have this log be ongoing throughout the entire tenure of the teacher teaching at their school to see how motivated they've been in becoming a better educator. This will show whether they are continuing their PD as well as taking their profession seriously by improving their teaching. Similarly, like the above log in Figure 24, principals can evaluate and determine whether a teacher has altered their instruction as a result of the PD they've received.

Finally, a log like Figure 25 that tracks the number of PD events a teacher attends can be used as an incentive structure for schools. Teachers who actively participate in PD could be given pay incentives, more classroom funds, and the freedom to choose the classes they would like to teach. Policymakers and district officials need to reward teachers for this continued

development. Thus, through incentivizing PD, it could create a mechanism that may motivate more teachers to participate in PD as well as help promote a school wide culture among teachers that seek improvement.

Teacher Name	PD Event and Date	Number of PD Events Attended in 2015
Mr. Smith	Technology Forum 8/5/15, SD County 9/9/15, District Training 11/1/15, On-site Technology Training 2/8/15, District Training 6/1/15.	5

Figure 25. Proposed individual teacher accountability PD log.

To conclude, this action plan attempts to create transparency amongst principals and teachers. By establishing a comprehensive plan that can be given to teachers that is readily accessible, it streamlines communication and puts everyone at a school on the same page. Also, it leaves everything on the table by describing the PD programs as well as its funding. Finally, it allows principals and teachers keep themselves accountable for their PD to ensure that it is organized, efficient, and transparent.

Limitations of the Study

Throughout this study there were several areas that have affected its findings. In this section, it will outline how a few variables that affected the study's findings as well as the studies limitations.

Variables that Affected Findings. There are several major variables that affected this study's findings which include the following: the small sample size of participants, number of

years in which PD funds and CAHSEE test scores were analyzed, and the personalities of the participating principals and teachers.

First, the sample size of the schools, teachers, and principals participating in this study was small. In this study, only two high schools, two high school principals, and seven high school teachers participated. Therefore, due to the small sample size of participants in this study, the results may not be a fair representation of the high schools in San Diego County, California, or nationwide. However, the insights gained from the participants provide an insight of trends that could be occurring in schools throughout the state and country.

Next, the years in which PD funds and test scores were analyzed spanned over the course of three years, making it a relatively small sample size. Since the years of 2012-2015 were analyzed, the trends in PD funding found at each school could reflect the recovering state and federal economy. In addition, School A received a large amount of state PD funding in 2014-2015 for initiating Common Core at its school. The Common Core funding School A received was a one year deal. Thus, this large influx of PD funding School A received was an anomaly. On the other hand, School B's district received a large PD fund for Common Core. Yet, in School B's district, the district did not district those funds to individual schools. Rather, the district used those funds to pay for PD events that were held at the school districts offices. As a result, we see the implication of different mechanisms in which the districts used state funding.

Additionally, like PD funds, CAHSEE test scores were analyzed over a three period from 2012-2015. Therefore, the trends displayed in the findings of this study do not reflect a very long time period. As a result, the trends outlined in this study only reflect a short time period and do not demonstrate a long term trend in the participating school's CAHSEE test scores.

The last major variable affecting this study's findings were the personalities of the participating high school principals and high school teachers. The high school principals at each participating school had differing personalities that likely affected their vision for the school as well as their PD program. In addition, their personalities shaped whether there was transparency and coherency within their schools PD program. Also, the experiences each high school principal has had with PD have affected the way in which they lead their respective programs. This variable could reflect School B's principal questioning whether there was an accurate measurement to demonstrate whether the PD teachers were receiving were effecting student achievement.

For high school teachers, each high school teacher interviewed had a personality that allowed them to be very motivated to participate in PD. The high school teachers participating in this study were handpicked by the principals at each site. Thus, the personalities of the teachers involved in this study were concerned about their own PD as well as the school's PD. Thus, the sample of high school teachers that participated in this study only reflects a very active portion of the faculty in terms of PD participation.

Changes in the Study

Over the course of this study, a number of things changed its direction. At the onset of the study, this study only focused on federal funds and Academic Performance Index (API). When the researcher learned School B was not a Title I school, state funds for PD had to be incorporated into the study because School B's PD funds could not be analyzed without incorporating state funds since they did not receive federal funds. In addition, a major change occurred at the beginning of the study when API was to be used as the second indicator to

measure student achievement. However, since the API ranking system was suspended by the state of California beginning in 2014, it could not be incorporated into the study because this study was looking at 2014-2015. Therefore, since API was suspended by the state, it could not be an accurate measure to measure student achievement in any year beyond 2013.

Who do the Results Apply to?

The results of this study apply to policymakers, school districts, administrators, and teachers because there must be cooperation at all levels of education to create transparent and effective PD programs. In order to create effective PD programs, educators must take these results and analyze whether similar trends are occurring in their schools.

Results of this study indicated there must be transparency and communication between teachers and principals in order for them to be on the same page regarding what PD funds are being used and what PD programs they are directed to. Thus, educators at all levels need to take initiative and ensure teachers and principals are on the same page regarding this topic and work towards creating an open environment where finances are shared.

Similarly, the results demonstrated that more PD funds each school accumulated did not affect student achievement. Thus, policymakers, district officials, and administrators need to create PD programs that focus on the quality instead of the quantity of PD. The results from this study should help motivate these individuals to make strides to improving PD initiatives and programs at school sites and at the district level.

Future Research

Future research for this topic should delve into several areas. First, research should investigate the types of administrator and teacher communication and accountability in regards to PD. Research should look towards whether and how administrators are keeping teachers accountable for attending PD as well as its initiation in the classroom. This is an important avenue to research because many teachers at schools do not take PD seriously or initiate PD in their classroom. As a result, due to these behaviors, schools lose money on PD programs that aren't being utilized by teachers.

Next, future research should see whether and how schools have developed a transparent PD plan in place that is shared by administrators to teachers. In this type of research, the school PD plans would be analyzed as well as whether teachers know of the schools PD plan and if it has been shared to teachers by administration. This research is critical because this study found a lack of transparency regarding PD funding at both participating schools. Therefore, an investigation in more schools and districts would allow us to see if this problem is systematic within our school system.

Furthermore, research needs to investigate what makes PD quality PD. Further research would help schools develop PD programs that are effective, efficient, and transparent. In many cases, quality PD may not be predicated on its cost. Rather, an effective plan and buy-in from administrators and teachers alike may deliver a program that yields better results. This research would be important because funds spent on PD should be evaluated to determine that it is being spent on effective PD programs that are developing teachers. By initiating in this research, PD funds may have the ability in the future to be spent more efficiently.

Final Thoughts

This study has demonstrated there needs to be a focus at both district and site-level to help facilitate better PD programs at high schools. The findings indicated funds were not used to support student achievement. Instead, a variety of other variables may be far more responsible for student achievement than PD funding. As the study outlined, even when PD funds went up, there was a negative relationship between PD funding and CAHSEE test scores. In addition, the perceived disconnect between principals and teachers exemplified a need for transparency and the sharing of information by both parties to establish more effective PD programs.

While the sample size of participants was small, the results at each school site were similar. As a result, with further research, the findings found in this study may be occurring at many schools throughout the county, state, and nation. Thus, the studies recommendations ask for detailed comprehensive PD plans that outline where and what is being funded by PD funds, sharing of the PD plan amongst principals and teachers to create transparency, and procedures put into place to keep administrators and teachers accountable for their PD.

Overall, further research and the initiation of these recommendations and action plan may help turn around struggling PD programs that are not affecting student achievement. As long as PD programs are not being successful, teachers will be ill-prepared to teach students through new instructional strategies and techniques to better prepare them for the problems they may face in the world. Thus, it is critical PD is evaluated and taken seriously as a major mechanism in place that can be used to better our schools with the goal in mind to facilitate higher levels of student achievement.

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Appendix A: PD Budgets of Participating Schools from the years 2012-2015

School A

Year	Total Funding Amount	Source(s)
2012-2013	8,000	Title I + State (General Fund)
2013-2014	11,600	Title I + State (Economic Impact Aid + Discretionary Funds)
2014-2015	96,500	Title I + State (Discretionary Funds)

Year	Source (Federal/State)		Amount (Federal/State)	
2012-2013	Title I	State	\$5,700	\$1,300
2013-2014	Title I	State	\$11,000	\$600
2014-2015	Title I	State	\$3,500	\$93,000

School B

Year	Total Funding Amount	Source(s)
2012-2013	\$9,970	State (General Fund)
2013-2014	\$10,000	State (General Fund)
2014-2015	\$9,000	State (General Fund)

Year	Source (Federal/State)		Amount (Federal/State)	
2012-2013	N/A	State	0	\$9,970
2013-2014	N/A	State	0	\$10,000
2014-2015	N/A	State	0	\$9,000

Appendix B: CAHSEE Scores of School A and B from 2012-2015**School A**

Year	CAHSEE Scores (English/Math)	
2012-2013	99.06%	99.44%
2013-2014	98.87%	98.06%
2014-2015	96.99%	95.04%

School B

Year	CAHSEE Scores (English/Math)	
2012-2013	88%	93%
2013-2014	87%	93%
2014-2015	86%	95%

Appendix C: Administrator Interview Form

Administrators Interview: Script

Introduction:

Matt: Thank you for taking the time for this interview. I appreciate the time you've taken out of your busy schedules to work with me on this thesis project. My goal is to provide administrators, schools, districts, and policymaker's data to help them effectively fund PD programs. This interview will be recorded. Please let me know when you are ready to begin so I can start the audio recording.

Document Analysis:

Matt: To begin, let's review the financial documents you have brought to this interview. My goal is to thoroughly review and understand these documents before I can analyze them later on. Please describe to me what funds you are using and how the funds are directed towards PD.

Answer:

Matt: Thank you for showing me the documents. Let's move on to the interview portion of this session. Since you've had time to answer these questions, please provide your answers. We will discuss your answers and I will ask you to elaborate/expand your answers to gather a detailed response.

Interview Questions:

Matt: Here is the first question:

1. How many years have you been an administrator at the school site?

Answer:

Matt: Thank you. Let's move on!

2. What initiatives do you have in place currently for PD at your site?

Answer:

Matt: Thank you. Let's move on!

3. What is the effectiveness of traditional professional development at your site?

Answer:

Matt: Thank you. Let's move on!

4. What is the effectiveness of non-traditional profession development at your site?

Answer:

Matt: Thank you. Let's move on!

5. Specify what funds you receive from the state and federal government for PD at your site?

Answer:

Matt: Thank you. Let's move on!

6. What is the total amount of your school budget for PD? Do have them separate in non-tradition and traditional funds?

Answer:

Matt: Thank you. Let's move on!

7. Are PD funds being distributed according to your vision as a principal for this school or is it a standard amount to particular academic departments?

Matt: Thank you. Let's move on!

Appendix D: Teacher Survey and Interview Form

Teacher Professional Development Survey

Part 1: Survey

Directions: Please fill out the following survey below before our meeting time.

Name: _____

Date: _____

School: _____

Subject you Teach: _____

Number of Years Teaching: _____

1. How many professional development courses, meetings, or/and conferences did you attend this year?

None

1 to 5

5 to 10

10 or More

2. Please rate how much you agree with the following statements regarding the professional development activities you have participated in this year.

	Strongly Disagree	Disagree	Agree	Strongly Agree
(a) The professional development content I have learned is relevant to my current job functions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Do you believe the professional development funds at your school are being adequately spent to better improve your teaching?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) The professional development activities I have participated in have helped my instructional strategies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) The professional development activities I have participated in have helped me increase	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

student achievement (test scores) in my classroom.				
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3. Overall, what grade would you give for the quality of the professional development sessions/meetings/conferences that you collectively attended this year? Please use the scale from A to F, where "A" denotes outstanding, "C" is average, and "F" is failure.

- A
- B
- C
- D
- F

Part 2: Interview Questions

Directions: Please review these questions. We will be discussing them during our interview.

1. What does your school do for Professional Development (PD)? Is it manifested in meetings, conferences, mentoring, coaching, and/or collaboration?
2. Do you believe PD is necessary for your own Professional Development? Has it helped you improve your teaching?
3. Are you motivated to participate in PD activities at your school site?
4. Do you believe your school has distributed PD funds effectively? Is the money allocated to PD going to the right programs? Please explain your answer.
5. How much money do you believe your school spends each year on PD activities for its faculty?
6. How much time/money should be spent on PD each year by your school?

7. Any particular instructional strategies you've learned in PD activities that have improved your teaching? Please explain.
8. How do you think PD can lead to increased student achievement?
9. Have you seen any evidence of increased student achievement (in the form of test scores) as a result of instructional strategies you've learned in school sponsored PD activities?
10. What conversations have you had with your co-workers regarding PD at your school? Do they have a positive or negative outlook to the school sponsored PD activities?

PLNU IRB

Expedited Review

#1402 Professional Development Fund Distribution...

DATE: 4.20.15

PI: Matthew Rhoads

Additional Investigators: N/A

Faculty Advisor: Jennifer Lineback

The research proposal was reviewed and verified as an expedited review under category 7 and has been approved in accordance with PLNU's IRB and federal requirements pertaining to human subjects protections within the **Federal Law 45 CFR 46. 110**. Your project will be subject to approval for one year from the date of approval.

If your project is being conducted in an educational setting, please note that you must also comply with the Family Educational Rights and Privacy Act regulations 20 U.S.C. 1232g(b)(1)(F) of the setting. Please consult the host school for FERPA or other internal policies that may apply to your project.

After completion of your study or no later than the same month and day in 2015, you must submit a summary of your project or a request for continuation to the IRB. If any changes to your study are planned or you require additional time to complete your project, please notify the IRB chair.

For questions related to this correspondence, please contact the IRB Chair at IRB@pointloma.edu. To access the IRB to request a review for a modification or renewal of your protocol, or to access relevant policies and guidelines related to the involvement of human subjects in research, please visit the PLNU IRB web site.

Best wishes on your study,

Holly Irwin, Ph.D.
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