

Shifting Educator's Paradigm from the Practice of Implementing Standards Based Learning and Assessments to Project Based Learning and Assessments for the Common Core State Standards

by

Zara E. Navarro

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Fight on!

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## ABSTRACT

The purpose of this study was to evaluate educator's knowledge of standard based learning/assessments (summative tests) versus project based learning/assessments (formative assessments) and determine gaps in that knowledge for the ensure the successful implementation of the Common Core State Standards (CCSS) at their school sites. This study also identified perceived organizational barriers that could impede this paradigm shift as well as what would help educators the criteria of a 21<sup>st</sup> century classroom. The current literature on instructional change - including the research on CCSS - focuses on the standards but not on the "21<sup>st</sup> Century Skills" (Wagner, 2008) that the teacher is expected to incorporate in the curricula. These include the implementation of project based learning and assessments. This study used a mixed-methods approach in which 40 elementary teachers from an urban, Southern California Unified School District completed a survey. This was followed by semi-structured interviews with four of the surveyed 40 elementary teachers. Through the process of triangulation, the study's findings indicate that teachers believe that standard based leaning and assessments represent a viable means to document and analyze student achievement in the course of study. However, project based learning and assessments based on the CCSS standards must be incorporated in the learning process. This will require collaboration with the district office to build the internal capacity of staff, increasing the knowledge and skills of teachers through the creation of CCSS and leadership teams as well as district and site professional development opportunities.

## CHAPTER ONE

### OVERVIEW OF THE STUDY

#### **Introduction**

Most educators agree that global changes in raising learning standards need to occur (Black & Wiliam, 1998; Shmidt, 2005). Learning is driven by what teachers and students accomplish in the classroom and should be interactive (Black & Wiliam, 1998). In order for learning to be successful, school accountability mechanisms must be in place to increase student performance by improving the functions of the school organization (O'Day, 2002). Unfortunately, the methodology most often used to measure the accountability of student knowledge (i.e. learning standards) is centered around student performance on statewide assessments that are specifically developed for states or purchased commercially rather than interactive, formative lessons (O'Day, 2002).

There are many different accountability factors which may affect teachers' paradigms in regards to learning and teaching. One factor which may be a potential contributor is known as bureaucratic accountability. Rules and regulations specify how districts, schools, and teachers are to behave (Stecher & Kirby, 2004). Additionally, professional accountability may contribute to this role in educator's learning culture. Professional accountability is built upon the assumption that teachers are professionals who possess sufficient expertise to determine the best ways of meeting the individual needs of their students (Stecher & Kirby, 2004).

Largely due to professional accountability, most educators think that they provide a crucial role in regards to being responsible for adding value to society, instilling a moral purpose, helping children learn and watching them become productive citizens (Fullan, 2010; Tamir, 2009). The willingness to accept their own profession accountability in the classroom setting

may contribute both to the attainment of learning goals and providing a framework which may assure sustainability over time (Sketcher & Kirby, 2004). This responsibility has been attempted through a variety of pedagogical methods. However, as Fullan (2005) notes, implementing changes is different than having the ability to sustain them over time.

Consequently, sustainability of innovation and school improvement remain pressing issues in educational reform (Coburn, 2003; Datnow, 2005). One of the most notable failures in obtaining sustainability is the No Child Left Behind Act (No Child Left Behind, 2001). No Child Left Behind (NCLB) provided for specific performance measures, required each state to monitor schools' progress in both reading and math through the administration of annual tests aligned to individual state standards, and allowed students who were enrolled in failing schools the opportunity to transfer. Its purpose was to also increase school accountability via standardized testing (NCLB, 2001). President Obama, in a September 23, 2011 speech, acknowledged that these accountability measures, while noble in their intent to raise standards, were unattainable (Obama, 2009).

The adoption of the Common Core State Standards (CCSS) may help to achieve these attainability measures by implementing "21<sup>st</sup> Century Skills" (Wagner, 2008) through project based learning and assessments (Common Core State Standard Initiative [CCSSI], 2010b). The CCSS, which Obama (2009) mentions later in the speech, are the new educational standards by which states will guide local educational agencies, schools, and teachers in developing curricula that will align our students' learning with skills necessary to compete in the modern, global economy.

The CCSS emphasize the use of utilize project based learning and assessments in the classroom. There are three design principles that are crucial to effective project-based pedagogy:

(1) the use of an authentic problem with a goal that is meaningful and interesting to students to contextualize learning, (2) the inclusion of a sequence of learning events that are driven by the project goals, and (3) the opportunity for students to apply what they learned to the project goal (Rivet & Krajcik, 2003; Edelson, 2007). Project based curriculum materials should facilitate these connections because they are based on design approaches constructed to engage learners and support deeper learning (Edelson, 2007). They include the development of rigorous, relevant and engaging instructional projects that require the integration and application of various disciplines, such as mathematics, social science, science, and literature to real world problems. If implemented correctly, a project based learning curriculum should help to foster student's self-esteem and motivation, and help to develop student's problem solving abilities, high-order thinking skills, and the appreciation of life-long learning (Boaler, 1999; Thomas, 2000).

### **Background of the Problem**

Fifty years ago, the United States of America was almost unanimously regarded as having the best schools in the world, producing the most highly educated labor force. Now, the United States has been exposed as deficient, especially when compared to student academic achievement of other countries (Schleicher, 2006).

In a report on international scholastic comparisons, Bracy (1996) states that there is little ambiguity about what the results show:

American students are performing at much lower levels than students in other industrialized nations; international examinations designed to compare students from all over the world usually show American students at or near the bottom, and even

America's best ranked high school students, as international comparisons reveal, rank far behind students in countries challenging us in the multinational marketplace.

The United States is one of the few developed countries that lack implemented national educational standards. Currently, standards vary widely from state to state. This is due, in part, to the No Child Left Behind (NCLB) initiative which left it to the individual states to determine what students ought to be learning in reading, math, and science; how they ought to be tested; and what level of achievement (proof of understanding curriculum) determined proficiency. Consequently, many states lowered their proficiency levels in recent years to make it easier for schools to avoid sanctions under NCLB (CCSSI, 2010b).

For American children and youth, student achievement as defined by academic subject-based exams is largely viewed as inadequate in terms of international assessments such as the Trends in International Mathematics and Science Study (TIMSS) and the Program for International Student Assessment (PISA) (Gonzales, 2007). This type of student achievement is referred to as standards-based academic subject matter knowledge. Standard based knowledge and assessment went from being strongly encouraged to federally mandated with the assessment scores made public due to NCLB (Hursh, 2005). Many districts replaced performance assessments with textbook publishing company tests as a further way to measure student progress (Goertz & Duffy, 2003). Under NCLB, the validity and reliability of standardized and commercially produced assessments outweighed the subjectivity of teacher created tests, particularly innovative, authentic performance assessments designed to test student application, analysis, and synthesis of knowledge (Hursh, 2005; Sloane & Kelly, 2003).

The CCSS are designed to help rectify this situation (CCSSI, 2010b). Students need to acquire knowledge, skills, and perspectives relevant to their success as citizens, life-long

learners, and participants in the economy of the 21<sup>st</sup> century. This focus typically includes complex problem-solving, new forms of literacy, working collaboratively, and new ways of acquiring and communicating knowledge. These skills have been packaged together and defined as “21<sup>st</sup> Century Skills” (Wagner, 2008).

Key factors in the adaptation of the new CCSS in California are (1) they are aligned with college and work expectations, (2) are clear, understandable and consistent, (3) include rigorous content and application of knowledge through high-order skills, (4) build upon strengths and lessons of current state standards, (5) are uniform with other top performing countries, so that all students are prepared to succeed in our global economy and society, and (6) are evidence-based (CCSS, 2010b). In order for students to reach the higher achievement requirements stated previously, the CCSS will be used to revise curricula and state tests to make learning more uniformly rigorous across the country (Klieger & Yakobovitch, 2010). This will provide what educational legislation views as appropriate benchmarks for all students, regardless of where they live (International Center for Leadership in Education [ICLE], 2010).

A major pedagogical change within the CCSS is the implementation of project based learning/assessments within the curricula. For over a century, educators such as John Dewey have espoused the benefits of experimental, student-directed learning opportunities (Buck Institute for Education [BIE], 2002). Despite the inevitable variations in the implementation of project based learning/assessments, both practitioners and researchers affirm that project based learning provides many important benefits for student learning and achievement. In particular, project based learning facilitates students’ mastery of the curriculum, fosters students’ self-esteem and motivation, and develops students’ problem-solving abilities, higher order thinking skills, and appreciation of life-long learning (Boaler, 1999; Thomas, 2000). Unfortunately,

despite the numerous benefits of project-based learning, few educational environments have been focused on such holistic curricular innovations in light of the quantitative federal standards that have been used with NCLB to evaluate schools (Wagner, 2008). In order to further the investigation of promising practices such as project based learning, it is imperative to identify and document those educational environments that continue to innovate in this era of accountability (Welsh, 2006).

### **Statement of the Problem**

The aim of this study is to evaluate educators' knowledge of project based learning and assessments versus standard based learning and assessments for the implementation of the CCSS in urban, Southern California elementary schools. This analysis will help determine gaps in the educator's knowledge base and suggest how these gaps should be addressed in order to help elementary educators fulfill the teaching requirements and curriculum development for the CCSS implementation. Presently, research and analysis on elementary school educators' understanding of CCSS, information on organizational barriers which might impede the implementation of CCSS, and ways in which Professional Development should be utilized to help with this transition process within the classroom is lacking.

### **Purpose of the Study**

The purpose of this study is twofold. First, it is necessary to evaluate the understanding that elementary educators possess between implementing standard based learning/assessments versus project based learning/assessments. This is necessary in order for administration, teachers and students to meet the new learning goals established by the CCSS. These standards provide goals of what students should know, understand and be able to accomplish in order to become successful in both college and the workplace (Eilers & D'Aminco, 2012). By determining

knowledge gaps, professional development or training can occur which will lead to improved accountability within the organization and the requested paradigm shift towards project based learning and assessment. This shift may also help teachers feel that they responsible for improving student achievement by establishing curriculum which reflects the CCSS (Clark & Estes, 2008).

Secondly, in order for learning goals and assessments to be successful, department faculty may want to be involved in (1) defining learning outcomes for students, (2) developing tools to access learning, (3) identifying, discussing and rectifying organizational barriers in order to meet the implementation requirements, and (4) making program changes based on the research methodology findings (Clark & Estes, 2008; Shulock & Moore, 2002). Elementary school teachers will need to have information about what is expected of them in order to proceed with the development of project based learning curriculum which reflects CCSS goals. Furthermore, elementary school educators should have the knowledge to incorporate these learning activities into lesson plans and the curriculum and be able to demonstrate what they contribute to the promotion of student learning (Elmore, 2002). Some of this learning may be established through the utilization of Professional Development (PD) which does more than just present the facts of the CCSS. The PD needs to be focused on improving student learning through the incorporation of the concepts within the CCSS (Elmore, 2002).

Each elementary school educator's target should incorporate the motivational goal(s) needed to achieve the curriculum development objective. This directly relates to professional accountability measurements and the common-good ethic approach to learning and teaching. People want to believe they are a community of professionals, working diligently and with integrity to help increase student learning (Clark & Estes, 2008; Goldberg & Morrison, 2003;



Velasquez, Andre, Shanks, & Meyer, 1996). Furthermore, educational accountability must be reciprocal, everyone must “buy in” for this goal to be achieved (Elmore, 2002).

This study focuses on how elementary school educators may need to shift their paradigms from standard based learning/assessments to project based learning/assessments for the implementation of the CCSS curricula within the classroom.

### **Research Questions**

The research questions were explored in this study:

- (1) What is the extent of elementary school educator’s knowledge of standard based learning/assessments in developing curriculum?
- (2) What is the extent of elementary school educator’s knowledge of project based learning/assessments in developing curriculum?
- (3) What organizational barriers might hinder the implementation of project based learning and assessments?
- (4) What will help elementary school educators achieve a 21<sup>st</sup> century (project based) classroom for the implementation of the CCSS?

### **Importance of the Study**

The question of what to teach and how to teach it is a deeply philosophical question that warrants educators, educational leaders and lawmakers to choose what knowledge needs to be distributed to students so they can be more successful in the future. In the past, curricula were designed around the concept of what students should know (National Education Association [NEA], 1993). Today, Magner, Soule and Wesolowski (2011) believe that curricula must be designed around what students need to know and what might be applicable to help solve problems in the future. The implementation of project based learning/assessments for the CCSS

will play a vital role in this adoption. In order for successful implementation to occur, three problematic areas need to be examined which currently have gaps in the literature. Clark and Estes (2008) explain that these areas need to be examined and analyzed in order for solutions to take place. They are (1) the understanding of educators' knowledge and skills, (2) their motivation to achieve goals, and (3) the organizational barriers that may deter them from reaching the curriculum implementation.

For this reason, studies of urban districts successfully implementing project based learning/assessment curricula for the CCSS and supporting their achievement in nationwide testing programs should be added to the literature. This Southern California, urban school district case study could serve as a blueprint for similar school districts, acting as a bridge between the theoretical and the practical. Superintendents, assistant superintendents, school board members, and community organizers are the district-level stakeholders who can utilize the conclusions from this study. Individual school instructional leaders could also apply the findings on a smaller scale.

### **Limitations**

There are about 15,000 school districts in the United States. This case study focuses on one of those districts. This project produces a limited sample size and presents but a glimpse in the history of the Southern California, urban school district's goal to implement project based learning/assessments for the CCSS. Additionally, there are many differing viewpoints on how to best implement the standards defined in the CCSSI since there are no formative (project based) assessments developed to measure student achievement at this time. Therefore, the findings of this case study can only be generalized to the specific population and subsequent implementation of project based learning/assessment in that district rather than on a state scale.

### **Delimitations**

The data for this study came from participants from elementary schools in an urban school district in Southern California who willing participated in this research. Although other districts throughout the United States may face similar challenges in the implementation of CCSS, there was no attempt in this study to substantiate external validity with regards to the generalization of responses. A broader spectrum of project based learning/assessment implementation for the CCSS at the state or national level could be analyzed using the same methodology for both elementary and secondary school settings.

### **Definition of Terms**

*21<sup>st</sup> Century Skills* – The skills needed by students in order to compete in a global economy and go beyond standards-based academic content knowledge (Wagner, 2008).

*College and career ready standards*- Content standards for kindergarten through 12th grade that build towards college- and career-ready graduation requirements (as defined in this document) by the time of high school graduation. A state's college and career ready standards must be either (1) standards that are common to a significant number of states; or (2) standards that are approved by a state network of institutions of higher education, which must certify that students who meet the standards will not need remedial course work at the postsecondary level (Education Northwest, 2013).

*Common Core State Standards (CCSS)*- A state led effort that establishes a single set of clear educational standards for kindergarten through 12th grade in English Language Arts and mathematics that states voluntarily adopt. The standards are designed to ensure that students graduating from high school are prepared to enter credit bearing entry courses in two or four year

college programs or enter the workforce. The standards are clear and concise to ensure that parents, teachers, and students have a clear understanding of the expectations in reading, writing, speaking and listening, language and mathematics in schools (CCSSI, 2010b).

*Community of Practice (COP)* - In a COP, individuals gather (community) to discuss and explore a shared topic (domain) and produce new knowledge, products or practice) (Wenger, McDermott, & Snyder, 2002).

*Global Achievement Gap* – The gap between the educational quality provided by even the best American schools and what all students will need to know and be able to do today and in the future (Wagner, 2008).

*No Child Left Behind (NCLB)* – No Child Left Behind is the latest reauthorization of Elementary and Secondary Education Act (ESEA) and requires states to set goals for all students to be at least proficient on statewide standardized assessments based on statewide academic content standards by the 2013-2014 school year (NCLB, 2001).

*Program for International Student Assessment (PISA)* – This is an assessment which is administered to 15 year-olds in 43 countries and purports to assess critical thinking and problem-solving skills by seeing how well students can apply knowledge to real world situations (Gonzales, 2007).

*Project based assessments* – Includes student's participation in the design of rubrics, expert participation in the evaluation process, and frequent assessment through methods such as exhibitions and portfolios (Thomas, 2000).

*Project based learning and teaching*- Involves the examination of authentic, simulated problems, and teaching requires the application of knowledge without unpredictable nature and complexity

of open ended projects. Elements include authenticity, academic rigor, applied learning, active exploration, adult relationships and assessments (Baron et al., 1998).

*Standards-based assessments*- Dependent on a set of pre-defined statements outlining different levels or standards of achievement in a program, course or assessment component, and normally expressed in terms of the stated assessment criteria (Welsh, 2006).

*Standards-based academic subject matter* – The academic knowledge specifically identified by each State’s Department of Education that must be taught in specific subjects at specific grade levels. Every state has different standards-based academic subject matter. Textbook companies and testing agencies attempt to tailor their programs and products to these standards (Welsh, 2006).

*Student based academic learning* – Student-centered learning is focused on each student's needs, abilities, interests, and learning styles, placing the teacher as a facilitator of learning (Welsh, 2006).

*Trends in Mathematics and Science Study (TIMSS)* – This is administered by the International Association for the Evaluation of Educational Achievement (IEA) and is a comparative analysis of educational achievement, curriculum, and instructional delivery in mathematics and science by testing students in the fourth and eighth grades (Mullis & Martin, 2006).

### **Organization of the Study**

This study is organized into five chapters, with an overview, context, and purpose of the study in the first chapter. A review of current literature on NCLB and CCSS, standard based learning/assessments and project based learning/assessments, and their effects on educator’s paradigms is included in the second chapter. The methodology for surveying educators in California in regards to their viewpoints of standard based and project based

learning and assessments is outlined in Chapter Three, and the data gathered through this process is discussed in Chapter Four. The study concludes in Chapter Five with a discussion of findings, implications, and recommendations regarding how to shift educator's paradigms from standard based learning/assessments to project based learning/assessments for the implementation of CCSS.

## CHAPTER TWO

### LITERATURE REVIEW

#### **Introduction**

“School is dead,” wrote Reimer, (1971) a prominent educator and school reformist of the 20<sup>th</sup> century. The title of this book was designed to challenge his international readership to examine their most fundamental assumptions about how education should be provided (Broadfoot, 2000). No longer should student achievement be measured on student performance on statewide assessments that are specifically developed for states or purchased commercially rather than interactive, formative lessons (O’Day, 2002). Students will need to acquire knowledge, skills, and perspectives relevant to their success as life-long learners, citizens and participants in the economy of the 21<sup>st</sup> century. Wagner has defined the skills needed to accomplish this as complex problem solving skills, new forms of literacy, students and teachers working collaboratively, and implementing new ways of acquiring and communicating knowledge and they are packaged simply as “21<sup>st</sup> Century Skills” (2008).

The Common Core State Standards (CCSS) define the knowledge and skills students should have within their K-12 educational careers so they will graduate from high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs. These educational standards aim to ensure that all students, no matter where they live, are prepared for success in post-secondary education and the workforce. CCSS will help to ensure that students are receiving a high quality education consistently, from school to school and state to state. However, these standards do not direct the teachers on how to teach (CCSSI, 2010b). Henceforth, many in education pitch the battle between academic content standards and “21<sup>st</sup> Century Skills” (Wagner, 2008) as an either/or proposition, when in reality, the most

effective instructional programs integrate the two (Dede, 2007). With prior focus on standard based assessments (summative assessments) due to stipulations of NCLB, student creativity and interest may have suffered. Teachers had to augment instructional time previously spent on culturally relevant, extended learning opportunities that promoted student thinking, with testing strategies sessions (Causey-Bush, 2005).

This chapter begins by laying out a multifaceted framework which guides the exploration of the literature and its relation to the study. Within that framework, the review will provide an analysis on the background of the conceptual framework of the CCSS. Then, the literature review will investigate how educators' knowledge and pedagogical practices of using standard based learning and assessments versus project based learning and assessments may help or hinder the incorporation of "21<sup>st</sup> Century Skills" (Wagner, 2008) in the classroom. A discussion of potential organizational barriers will follow, along with the task of incorporating professional development in order to shift educators' paradigms toward the direction of more closely reflecting the 21<sup>st</sup> century learning vision of the CCSS.

### **Conceptual Framework of the CCSS**

In order to understand the premise behind the CCSS, one should first understand why educators value the importance of educational standards. Educational standards help teachers ensure their students have the skills and knowledge they need to be successful by providing clear goals for student learning. Educational standards are necessary to ensure that all students, no matter where they live, are prepared for success in post-secondary education and for the workforce. Common standards will help ensure that students are receiving a high quality education consistently, from school to school and state to state. They will also provide a greater



opportunity to share experiences and best practices within and across states which may improve our ability as educators to best serve the needs of students (CCSSI, 2010b).

As stated previously, standards do not tell teachers how to teach, but they do help teachers understand the knowledge and skills their students should have in order to build best lessons and environments for their classrooms. Standards also help students and parents by setting clear and realistic goals for success. They provide an accessible roadmap for teachers, parents and students to achieve academic success (CCSSI, 2010b).

The idea that project based assessments should be used to evaluate not only individual students' progress, but also the quality of instruction and the performance of educators more generally, is one with longstanding roots. Edward Thorndike, who published pioneering books on educational measurement in the first decades of the 20<sup>th</sup> century, viewed his work as useful in part, because it would provide principals and teachers with a tool for improving student learning. Ralph Tyler, known for innovative work in educational evaluations in the 1940s, posed the idea that objectives ought to drive curriculum and instruction and new kinds of assessments (beyond paper and pencil tests) were needed to transform learning and the nature of educational programs. Other contributions to thinking about evaluation include Benjamin Bloom's 1956 taxonomy of educational objectives, the development of criterion referenced testing in the 1950s, master learning in the 1960s and 1970s, minimum competency in the 1970s and 1980s and performance assessment in the 1990s. All of these educators may have presented relevant ideas, but the ideas have not had the effects that had been hoped for (Beatty, 2010).

The process of adoption of the CCSS is different because it is state-led. It also has the support of educators across the country as well as prominent education, business, and state leaders' organizations, including the Council of Chief State School Officers (CCSSO), the

National Governor's Association (NGA), Achieve, the College Board, the National Association of State Boards of Education, the Alliance for Excellent Education, the Hunt Institute, the National Parent Teacher Association, the State Higher Education Executive Officers, the American Association of School Administrators and the Business Roundtable (CCSSI, 2010b). This support means that advocates understand the importance of 21<sup>st</sup> century skills and will work together with states and educators to ensure their application in educational settings (Pearlman, 2013).

The CCSS represent a coherent progression of learning expectations in English Language Arts and mathematics designed to prepare K-12 students for college and career success. The standards define the knowledge and skills students should have in their K-12 education, emphasize learning goals, describe end of year expectations and focus on results, leaving room for teachers to determine how these learning goals should be achieved (Education Northwest, 2013). The English Language Arts and mathematics standards were the first subjects chosen for the CCSS because they teach competences upon which students build skill sets in other subject areas. Literacy, including reading, writing, and speaking and listening standards, although emphasized in English language arts, will be taught across the curriculum. Furthermore, one of the criteria by which the standards have been evaluated is whether or not they include rigorous content and application of knowledge through high order thinking skills (CCSSI, 2010b). This rigorous criteria can be better understood by reviewing the Hess Matrix. This matrix incorporates the revised Bloom's Cognitive Dimensions Matrix and Webb's Depth of Knowledge Chart which is used to determine text complexity for the CCSS criteria. The examples of rigor which these standards indicate are geared towards project based learning and assessment and are exhibited in this matrix. It depicts what educators in all subject areas should

work to incorporate into lesson plans as they reflect the principles for “21<sup>st</sup> Century Skills” (CCSSI, 2010b; Wagner, 2008). These curricular examples will be applied in all subjects as they emphasize reading and writing skills for evidence based analysis (Hess, 2009).

Additionally, most of the states that have agreed to adopt these standards have also committed to work together in one of two consortia to develop a shared assessment system. These assessments will include required summative assessment (which may be performance/project based), combined with performance tasks and/or formative assessments given throughout the year (Education Northwest, 2013). A summative assessment is an assessment used to document students’ achievement at the end of a unit or course or an evaluation of the end product. Final exams would be an example of an end product. In order to demonstrate “21<sup>st</sup> Century Skills” (Wagner, 2008), there should be both multiple choice, context analysis, and short answer type of test questions (Education Northwest, 2013). Formative assessments and performance tasks encompass a variety of strategies for revealing students’ understanding, allowing teachers to pinpoint and address any impediments to a student’s progress. The process is much like a coach setting short exercises to assess a runner’s stride, speed, and equipment and then making appropriate adjustments so that the runner can improve. Teachers use formative data to decide how much and what kind of learning, support, and practice a student needs to reach the goal. When formative assessment is employed before, during, and after instruction, both teachers and students have a measurement of progress in learning (Greenstein, 2010, p. 2).

The implementation of the CCSS is a rare, state- led, student- centered opportunity to improve outcomes throughout the entire educational pipeline and achieve the ultimate goal of academic success for all students (Beatty, 2010). These standards are: (1) aligned with college

and workforce expectations, (2) are clear, understandable and consistent, (3) include rigorous content and application of knowledge through high order skills, (4) build upon strengths and lessons of current state standards, (5) are informed by standards in other top performing countries, so that all students are prepared to succeed in or global economy and society and (6) are evidence based (CCSSI, 2010b).

### **Standard Based and Project Based Learning and Assessments**

The CCSS is a nationally adopted set of standards which promote the incorporation of learning “21<sup>st</sup> Century Skills” (Wagner, 2008) in the classroom. The combination of incorporating both project based learning and assessments in the classroom is part of this adoption (CCSSI, 2010b). This may require a paradigm shift for some teachers. The new CCSS are not a curriculum. They are a clear set of shared goals and expectations of what knowledge and skills will help students succeed both in higher education and in the workforce (CCSSI, 2010b).

### **Standards Based Learning and Assessments**

The past several decades has seen education emphasize standard based learning and assessments. Standards based comprehensive school reform was adopted in the United States in the 1990s. The reform included a number of key elements: state standards- based assessments, an accountability system linked to school specific progress in improving schools on the state assessments, and curricular alignment to state assessments (Datnow, 2005). The federal government emphasized the creation of school and district-based accountability systems which could be measured by these assessments (Hursh, 2005). This was due in part to response to poor student achievement both on a national and international scale (Causey-Bush, 2005; Goertz & Duffy, 2003). The United States has long reacted to inferior student achievement with reactive

policies and wide sweeping initiatives. The most current of these initiatives was No Child Left Behind (NCLB) which was the eight reauthorization of the 1965 Elementary and Secondary Education Act (ESEA) (Kantor & Lowe, 2006). The original ESEA was enacted by President Lyndon B. Johnson was in response to not only the external incidents of Russian launching the spacecraft's Sputnik in 1957 and Vostok 1 in 1961, but also due to the national war on poverty and the growing civil rights movement which in turn, set up the governments expanded role in educational policy (Kanter & Lowe, 2006). *Goals 2000* tied funding to the implementations of provisions in the act by mandating that states design a comprehensive improvement plan whereby statewide testing programs assessed clear academic standards (Kanter & Lowe, 2006). A sanction for poor performance on the testing against those standards was the emphasis of NCLB. The implementation of NCLB was the first time that the federal government held schools accountable for ensuring that all racial, ethnic, and socioeconomic subgroups were improving in relation the academic standards. A school or district that missed the target as a whole or as an individual subgroup was now labeled a "program improvement" school or district (Kanter & Lowe, 2006). Furthermore, the formation of standards and statewide testing programs went from being strongly encouraged to federally mandated with the assessment scores made public (Hursh, 2005).

The alignment of statewide testing with the established state standards caused districts and schools to rethink the way courses were structured, students tested, and the way teachers were trained. Teacher's professional development was refocused on how to use data from district provided pacing guides and student assessment data to revamp instruction. Tests were aligned to district objectives, which were aligned to state testing targets, the results being that teachers taught to the test (Goertz & Duffy, 2003). According to Wilson and Peterson,

“Research on learning has often been conducted independently of research on teaching, leading to a gap in understanding between the two communities of researchers who understand and work on learning and those who understand and work on teaching” (2006, p. 9). This achievement tactic became an unintended effect of high stakes testing. Similarly, Grant (2004) summarized a wide body of research that focused on the impact that high-stakes tests had on classroom instruction and concluded that teachers, themselves, are the main forces that help to assist students with increasing their achievement levels, not the tests that the students must actually take throughout a school year. No evidence existed within Grant's (2004) review of pertinent research that when students' tests scores rise, they are, ultimately, receiving a "better" education. According to this research, tests do not lead to the development of "better" skills or "better" learners. Yet, teachers have been required to perform many variations for instructing their students to get ready for such high-stakes testing demands (Grant, 2004).

While teachers make specific instructional decisions, there were no research studies in the literature review that created any clear link between a high-stakes testing learning environment and increased positive levels of student learning in any content area, especially within the domain of teaching writing in an English/Language Arts classroom. Thomas (2000) views high-stakes tests as a type of "closed circuitry" for generating closed-ended, rather than mastery-based student learning opportunities:

These standards and tests have overshadowed decades of research on the most effective best practices for teaching reading and writing. The cyclical nature of scope-and-sequence standards, isolated instruction, and isolated test items only creates a closed system that has no authentic system of purposeful learning beyond the 'academic' hallways of schools (p. 64-65).

Students' perceptions about high-stakes tests have also been uncovered and valued by researchers in identifying feelings of the "acceptance of failure if they do not pass [state assessments], along with denouncing how schools place significant importance on high-stakes tests by creating a testing hype for their students" (Hughes & Bailey, 2002, p. 76). Impacts on some of the outcomes linked to high-stakes testing for students include retention, increased dropout rates, seeking alternative degrees, and incurring diminished motivation for students who truly want to learn and attend school (Amrein & Berliner, 2003, p. 33).

This literature review validates that few resources were targeted at students who already achieved proficiency on academic continent standards and no time was spent advancing those students by providing them with the skills needed to be literate and successful in a 21<sup>st</sup> century society (Wyner, Bridgeland, & Diulio, 2007). Currently, effective districts are noticing such gaps and are beginning to establish systems to empower teachers, support the connection of the two communities, and integrate "21<sup>st</sup> Century Skills" (Wagner, 2008) as the pedagogy for curriculum reform (Delandshere & Petrovsky, 2004).

### **Project Based Learning and Assessments**

One area of focus is the incorporation of project based learning and assessments into the curriculum for CCSS. Project based learning is a model that organizes learning around projects. According to the definitions found in Project Based Learning Handbooks for Teachers, projects are complex tasks, based on challenging questions or problems, that involve students in design, problem-solving, decision making, or investigative activities; give students the opportunity to work relatively autonomously over extended periods of time; and culminate in realistic products or presentations (Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999). Other defining features for project based learning found in the literature include authentic

content, authentic assessment, teacher facilitation but not direction, explicit educational goals, cooperative learning, reflection, and incorporation of adult skills (Diehl, Grobe, Lopez, & Cabral, 1999). Additionally, particular models of project based learning add a number of unique features to this design (Moursund, 1999). Definitions of project-based instruction include features relating to the use of an authentic (driving) question, a community of inquiry and the use of cognitive (technology-based) tools (Krajcik, Blumenfeld, Marx, & Soloway, 1994; Marx, et al, 1994 ); and expeditionary learning adds features of comprehensive school improvement, community service, and multidisciplinary themes (Moursund, 1999).

Literature analysis suggests there might be some gaps in teacher knowledge of project based learning instruction and this literature review further proposes several criteria that are designed to answer the question, "What should projects have in order to be considered an example of project based learning?" The five criteria are centrality, driving questions, constructive investigations, autonomy, and realism (Thomas, 2000).

Project based learning projects are central, not peripheral to the curriculum. This criterion has two corollaries. First, according to this defined feature, projects are the curriculum. In project based learning classrooms, the project is the central teaching strategy; students encounter and learn the central concepts of the discipline via the project. There are instances where project work follows traditional instruction in such a way that the project serves to provide illustrations, examples, additional practice, or practical applications for material taught initially by other means. However, these "application" projects are not considered to be instances of project based learning, according to this criterion. Second, the centrality criterion means that projects in which students learn things that are outside the curriculum ("enrichment" projects) are also not examples of project based learning, no matter how appealing or engaging (Thomas, 2000).



Project based learning projects are focused on questions or problems that drive students to encounter (and struggle with) the central concepts and principles of a discipline. This criterion is a subtle one (Thomas, 2000). The definition of the project (for students) must be crafted in order to make a connection between activities and the underlying conceptual knowledge that one might hope to foster and is usually done with a driving question (Blumenfeld et al., 1991) or an ill-defined problem (Stepien & Gallagher, 1993). Project based learning projects may be built around thematic units or the intersection of topics from two or more disciplines, but that is not sufficient to define a project. The questions that students pursue, as well as the activities, products, and performances that occupy their time, must be orchestrated in the service of an important intellectual purpose (Blumenfeld et al., 1991).

Project based learning projects involve students in a constructive investigation. An investigation is a goal-directed process that involves inquiry, knowledge building, and resolution. Investigations may be design, decision-making, problem-finding, problem-solving, problem-based learning, expeditionary learning, and project-based instruction that conforms to the above criteria (Thomas, 2000). The project may be based on discovery or model-building processes. But in order to be considered as a project based learning project, the central activities of the project must involve the transformation and construction of knowledge (by definition: new understandings, new skills) on the part of students (Bereiter & Scardamalia, 1999). If the central activities of the project represent no difficulty to the student or can be carried out with the application of already-learned information or skills, the project is an exercise, not a project based learning project. This criterion means that straightforward service projects such as planting a garden or cleaning a stream bed are projects, but may not be project based learning projects (Thomas, 2000).

Project based learning projects are student-driven to some significant degree. Project based learning projects are not mainstream, teacher-led, scripted, or packaged. Laboratory exercises and instructional booklets are not examples of project based learning, even if they are problem-focused and central to the curriculum. Project based learning projects do not end up at a predetermined outcome or take predetermined paths. Project based learning projects incorporate a good deal more student autonomy, choice, unsupervised work time, and responsibility than traditional instruction and traditional projects (Thomas, 2000).

Project based learning projects are realistic, not school-like. Projects embody characteristics that give them a feeling of authenticity to students. These characteristics can include the topic, the tasks, the roles that students play, the context within which the work of the project is carried out, the collaborators who work with students on the project, the products that are produced, the audience for the project's products, or the criteria by which the products or performances are judged (Thomas, 2000). Gordon (1998) makes the distinction between academic challenges, scenario challenges, and real-life challenges. Project based learning incorporates real-life challenges where the focus is on authentic (not simulated) problems or questions and where solutions have the potential to be implemented.

In order to successfully implement CCSS, schools should embrace a project based learning and assessment pedagogy that will engage 21<sup>st</sup> century students and enable them to acquire and master “21<sup>st</sup> Century Skills” (Pearlman, 2013; Wagner 2008). Designing 21<sup>st</sup> century schools and new learning environments start with defining the outcomes. One must ask, “What knowledge and skills do students need for the 21<sup>st</sup> century?” Real design, according to Pearlman (2013), must go much further and address the following questions as well: (1) What pedagogy, curricula, activities, and experiences foster 21<sup>st</sup> century learning? (2) What

assessments for learning, both school-based and national, foster student learning of the outcomes, student engagement, and self-direction? (3) How can technology support the pedagogy, curricula and assessments of a 21<sup>st</sup> century collaborative learning environment? (4) What physical learning environments (classroom, school, and real world) foster 21<sup>st</sup> century student learning?

Moreover, the majority of research literature emphasizes the degree to which the teaching method of project based learning enhances student motivation. Various studies have documented increased student motivation as a result of implementing project based learning instructional techniques (Curtis, 2005; Liu & Hsaio, 2002). This is not surprising given the number of factors that influence motivation and characterize problem based learning practices. One example is a model which explains seven features of instruction that support student motivation, the TARGETT model (Woolfolk, 2004). While certain elements of the TARGETT model are not determined by the nature of the learning activity, many others are also reflected in project based learning criteria. These include the acronym which represents T, challenging and interesting learning tasks; A, opportunities for autonomy and self-regulation; R, rewards and recognition that focus on student progress and effort; G, groupings that encourage positive collaboration; E, frequent and variable methods of evaluation; T, flexible time structures that allow for individual pacing; and T, teacher expectations that hold high standards for all students (Woolfolk, 2004). Therefore, the inherent instructional design properties of project based learning, as well as the conclusions of previous research, suggest that project based learning enhances student motivation (Welsh, 2006). Project based learning methodology also provides the opportunity to work in an effective domain that encourages both teacher and student motivation (Welsh, 2006).

Given that authentic learning opportunities lend themselves to authentic interpersonal interactions, it is inevitable that teachers be required to address a variety of issues related to the habits of mind such as flexibility, persistence, responsibility, and creativity (Fleming, 2000). Since the project based learning process involves active cooperation and is initiated by students rather than the imposition of tasks by the teacher, students are able to practice important socio-emotional skills that were not previously required by traditional instructional environments (Fleming, 2000). Subsequently, project based learning lends itself not only to academic benefits but also to socio-emotional development, a growing concern of schools and educators when implementing the CCSS and the vision of “21<sup>st</sup> Century Learning Skills” (Wagner, 2008).

However, the literature likewise suggests that there are potential problems with teachers being motivated into incorporating project based learning into the classrooms. Marx et al. (1994) summarized findings from their research on motivation under three headings: challenges, enactment, and change.

Challenges grew out of difficulties teachers had in accepting the ideas that: (1) effective collaboration among students requires more than involvement, it requires exchanging ideas and negotiating meaning; (2) effective use of technology requires that technology be used as a cognitive tool, not merely as an instructional aid; and (3) effective Project-Based Science requires not that all the concepts and facts of the curriculum are covered, but that students construct their own understanding by pursuing a driving question (Wollfolk, 2004, Welsh, 2006).

Furthermore, Marx et al. (1994) delineate teachers' enactment problems for project based learning as follows: (1) Time. Projects often take longer than anticipated. District guidelines need to take into account the time necessary to implement in-depth approaches required by project based learning. (2) Classroom management. In order for students to work productively,

teachers must balance the need to allow students to work on their flow of information while at the same time believing that students' understanding requires that they build their own understanding. (3) Support of student learning. Teachers may have difficulty scaffolding students' activities, sometimes giving them too much independence or too little modeling and feedback. (4) Technology use. Teachers may have difficulty incorporating technology into the classroom, especially as a cognitive tool. (5) Assessment. Teachers may have difficulty designing assessments that require students to demonstrate their understanding.

Finally, the review of literature established that change in teachers' learning and behavior tends to take certain forms (Marx et al., 1994). Teachers tend to prefer to explore those aspects of project based learning related to their professional needs and current capabilities (e.g., technology). Teachers' efforts to change their teaching strategies incline to focus on one or two aspects of the new approach (only) and one or two new strategies designed to cope with new challenges. Teachers may be apt to modify their practices in idiosyncratic ways, mapping new behaviors onto old behaviors and moving back and forth between old and new practices, sometimes successfully, sometimes not so successfully. In addition, modifying their practices may cause teachers to become novices again, which often results in awkward classroom management behaviors and shortcomings associated with orchestrating the multiple features of project based learning in a classroom environment (Thomas, 2000).

### **Potential Organizational Barriers**

Accountability in education refers to the practice of holding educational systems responsible for the quality of their products – students' knowledge, skills and behaviors. It is neither a new idea nor a new practice. The accountability system has three major components: (1) goals, explicit statements of desired student performance, to convey clear and shared

expectations for all parties; (2) assessments, need to measure attainment of goals and judging success; and (3) consequences (rewards or sanctions) to motivate administrators , teachers and students to maximize effort and effectiveness (Stecher & Kirby, 2004).

For the purpose of this literature review, two types of accountability will be discussed as they may affect teachers' paradigms in regards to learning and teaching. One type is bureaucratic accountability. Rules and regulations specify how districts, schools, and teachers are to behave. Various public agencies review school performance and monitor compliance. Bureaucratic accountability makes implicit assumptions that both policy and practice can be standardized, i.e., policymakers can devise general rules and create broad program initiatives that make sense for all schools, and teachers can apply general instructional principles that make sense for all students (Stecher & Kirby, 2004).

Several authors also discuss the professional accountability model type, which holds the professionals within the organization accountable to each other, making sure that they are following recognized professional practices (Fuhrman, 1999; O'Day, 2002; Stecher & Kirby, 2004). These professionals should possess sufficient expertise to determine the best ways of meeting the individual needs of their students and consequently, professional competence and standards for professional practice become important. Professional teacher organizations have a major role in establishing such standards. Quality is ensured through accreditation of teacher preparation schools, certification and licensure of teachers, and requirements for continuous professional development (Darling-Hammond, 2004; O'Day, 2002; Stecher & Kirby, 2004).

Based on published research, the role of the school leader (being second only to effective teachers) is an important factor for bringing about school progress and influencing pupil learning (Stewart, 2008). Certainly, it is arguable that school leaders assist with teachers becoming

effective professionals in the first place, but the emphasis on what these school leaders should do, however, has more to do with demonstrating not just the technical skills of being a leader, but acquiring the understanding that leadership is also a matter of culture and reflection (Fullen, 1991).

Additionally, professional accountability may contribute to this role in educators' learning culture. Professional accountability is built upon the assumption that teachers are professionals who possess sufficient expertise to determine the best ways of meeting the individual needs of their students (Stecher & Kirby, 2004). Teacher quality, according to Darling-Hammond (2004) goes far beyond issues of being certified versus uncertified, being intellectual versus being static, or being a reflective versus non-reflective practitioner (p.16).

Teacher-functions within the intellectual professional community can be professionalized attitudes for improving instruction outside the status quo (Darling-Hammond, 2004). Framed as a special education policy construction context for conducting research on identifying potential influences that lead to school leaders' behaviors within an accountability culture, Trider and Leithwood (2007) introduce general topics that might very well be relevant to not only special education policy, but for the organizational barriers that may present themselves during the CCSS implementation. This study found that school leaders' problem-solving skills were greatly affected by the policies that were constructed, along with noticing the task environment changes that resulted from the special education policy practices.

Furthermore, it was evident that the perceptions of various school leaders within the research conducted by Trider and Leithwood (2007) were more positive when the presence of central office support existed. The desire to make localized decisions was a top priority so long as upper administration demonstrated value, support, and empowerment for the school leader to

function within the constructs of these policies. Support would only take place if the school leaders possessed a special knowledge of policy and decision-making tied to these special education policy constructions. Policy implementation, then, shapes school leaders' behaviors and even their most immediate practices:

Discrepancies between principals' values and beliefs and those assumed by policy are likely to become major obstacles to policy implementation. This suggests that implementation plans should provide for the discovery of such discrepancies and the explicit resolution of conflicts in beliefs and values (Trider & Leithwood, 2007, p. 305).

From the influence that policy construction has on leadership behaviors, Egley's (2003) research of 67 Florida school districts included conducting a massive survey of classroom teachers in order to understand their perceptions about school leaders' behaviors and practices within a high-stakes testing culture. Findings included reporting a high correlation between school leaders' invitational leadership characteristics and increased job satisfaction and motivation for teachers, building an overall positive school climate, and achieving higher school ratings. Invitational leadership has been defined by Purkey and Siegel (2003) as leadership where positive organizational leadership can best be defined as a theory of practice that addresses the total environment in which leaders function, insomuch that it is a powerful process of communicating caring and appropriate messages. These messages are intended to summon forth the greatest human potential as well as identifying and changing those forces that defeat and destroy potential.

Fuhrman (1999) notes that one of the distinguishing characteristics in educational reform is that the "who" responsible is usually the educators at the school. In addition, schools as collective entities are accountable to the higher levels of the educational system (i.e. district or



state agencies). However, this bureaucratic accountability differs from traditional forms in one aspect; educational systems do not hold schools and school personnel accountable for delivering designated and educational inputs and processes but for producing specific levels or improvements in student outcome (Fuhrman, 1999). O'Day (2002) argues that the combination of administrative and professional accountability presents a much more promising approach for implementing lasting and meaningful school reform.

The discussion of school improvement when implementing the incorporation of “21<sup>st</sup> Century Skills” (Wagner, 2008) has implications for how the potential relationship between policies and school improvement will affect successful outcome of the implementation of the CCSS. More specifically, there are implications about the organizational barriers that accountability polices must overcome in order to foster successful adaptation. These potential barriers center on the generation, interpretation, and use of information for school and system improvement (O'Day, 2002). For example, Demoss (2002) looked closely at various Chicago schools through case-study research methods and found that successful schools were the result of school leaders who were committed to teachers' meaningful participation in making instructional decisions. They led their schools with empowerment and had discourses about curriculum rather than about high-stakes tests versus project based learning.

A suggested framework for analyzing the potential impact of accountability based interventions on school improvement may be successful to the extent that those interventions are able to generate and focus attention on information relevant to teaching and learning and to changes in that information as it is continually fed back into and through the system. This focus should not only occur at the school level, but at the level of individual teachers as well (O'Day, 2002).

Motivation of educators and others to attend to relevant information and to expend the effort necessary to augment or change strategies in response to this information is imperative. Motivation should ultimately occur at the individual level, but it is likely to be dependent in part on the structures of the school as well as on individual characteristics of educators and students. There may be a need to develop the knowledge and skills to promote valid interpretation of information and appropriate attribution of causality at both the individual and system levels. This should occur in the short run, but should also be applied to establish mechanisms for continued learning (O'Day, 2002).

### **Professional Development**

Demoss (2002) offers insights into the importance of focusing on staff involvement. He contends concentrating on a more holistic approach within the entire process of creating a comprehensive curriculum, along with seeking differentiated instructional approaches at the school level while receiving district-wide support from other district leaders will help to ensure success. This would also include providing professional staff development to school leaders for building professional communities. These recommendations advise school leaders to promote a relationship-based culture, not a test-based culture.

In order for the implementation of CCSS to be successful, teachers will play an important role as leaders in the development and planning of incorporating 21<sup>st</sup> century skills in the classroom (CCSS Initiative, 2010b). Two examples of professional development programs that put teachers in the roles of both learners and leaders of educational reform are the Crista McAuliffe Institute (CMI) fellowship program and the Quality Education for Minorities Teacher Leadership Corps (TLC). The CMI fellows attend seminars in which they share ideas about what is or is not working in their classroom. They also design a two week institute in which they

work with university staff and other experts to design and field test innovative programs to implement in their home schools. To maintain ongoing collaboration and planning, the teachers have established an electronic network. These teachers are working together to design programs to make schools more effective for all students and work on establishing the incorporation of “21<sup>st</sup> Century Skills” (Wagner, 2008) in the classroom (Futrell, 1999). The TLC is made of elementary and secondary minority teachers. They experience continuous professional development opportunities through seminars, conferences and workshops. TLC teacher leaders, however also provide professional development opportunities by sponsoring mini-conferences for their peers and interested members of the community. In addition, they conduct in-service programs for the staff in their schools and use their classrooms as models for the implementation of reform initiatives related to their discipline, Like the CMI teachers, they also use electronic networking to plan future activities (Futrell, 1999).

Independent evaluations of the Christa McAuliffe and Teacher Leadership Corps programs reveal that all students have benefited academically from the professional development opportunities provided to their teachers. Teachers participating in these programs were better motivated in the classroom, had more confidence in their ability to work with culturally diverse student population, had higher expectations for their students, understood the importance of collaboration, and emerged as strong advocates of linking education reform and teacher preparation and professional development (Futrell, 1999).

Finally, it is suggested that school leaders should examine the strengths and weaknesses related to promoting the school learning climate, defining the school mission, and self-reflecting on their own leadership behaviors (Demoss, 2002). All of the above studies and findings illustrate how effective schools build trusting relationships that focus on collaboratively inclusive

instructional planning. This is necessary when implementing new educational programs within an accountability culture (O'Day, 2000).

### **Gaps in the Literature**

A vast array of theoretical literature has already been discussed in this section on how school districts can best support the use of 21<sup>st</sup> Century skills as a pedagogy for the implementation of CCSS. However, few, if any, case studies examine how educators may need to shift their paradigms from incorporating standard based learning/assessments to project based learning/assessments within the complete framework of this study. This dissertation will bridge that gap.

### **Conclusion**

The criterion established within the CCSS is an ongoing topic of conversation throughout many educational environments. While the rigor and depth of complexity of the CCSS is based on standards, the implementation of the knowledge based goes beyond standards based learning and assessment. The CCSS aims to implement 21<sup>st</sup> century learning skills within the classroom in order to prepare students for higher education and be career ready upon the completion of high school.

In order for this to be achieved, educators will need to move beyond teaching rote memorization and teaching to the test. Students will need to be able to apply “21<sup>st</sup> Century Skills” such as complex problem solving skills, new forms of literacy, students and teachers working collaboratively and analytically to solve real word problems, and implementing new ways of acquiring and communicating knowledge (Wagner, 2008). This focus then becomes embedded within the curriculum. In order for students to attain the depth of knowledge at a level they need in order to be successful in college and the work world, districts will have to promote

rigorous curriculum, relevant instruction, and mentoring relationships which align to the CCSS. Successful implementation of this framework produces student achievement as measured with new forms of assessments, such as performance tasks, student portfolios, public exhibitions, or research reports which are considered project based learning and assessments (Welsh, 2010).

This will require educators to become familiar with project based learning and assessment as it represents many of the attributes of the “21<sup>st</sup> Century Learning Skills” (Wagner, 2008) for the CCSS. According to the definitions found in Project Based Learning Handbooks for Teachers, projects are (a) complex tasks, based on challenging questions or problems, that involve students in design, problem-solving, decision making, or investigative activities, (b) give students the opportunity to work relatively autonomously over extended periods of time and (c) culminate in realistic products or presentations (Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999). These concepts should become an integral part of the curriculum rather than an additional activity.

There may be organizational barriers, in addition to knowledge acquisition that educators may need to address. These include both bureaucratic and professional accountability issues in regards to the roles of both teachers and educational leaders and how to address teacher’s motivation in the implementation of project based learning and assessments (Sketcher & Kirby, 2004). In turn, this may require a shift in paradigms towards project based learning/assessment rather than standards based learning/assessment.

In order to help promote this change, implementation issues should be addressed. Clark and Estes (2008) explain that the following areas need to be examined and analyzed in order for solutions to take place. They are (1) the understanding of educators’ knowledge and skills, (2) their motivation to achieve goals, and (3) the organizational barriers that may deter them from

reaching the curriculum implementation. Additionally, professional development will have to occur at both the individual, site and district level. The framework of this study will address the following four questions in order to determine what areas the chosen school district needs to focus on.

- (1) What is the extent of elementary school educator's knowledge of standard based learning/assessments in developing curriculum?
- (2) What is the extent of elementary school educator's knowledge of project based learning/assessments in developing curriculum?
- (3) What organizational barriers might hinder the implementation of project based learning and assessments?
- (4) What will help educators achieve a 21<sup>st</sup> century (project based) classroom for the implementation of the CCSS?

Once issues related to knowledge, potential organizational barriers and subsequent professional development are addressed, it is hoped that "21<sup>st</sup> Century Skills" (Wagner, 2008) which feature project based learning and assessment will be incorporated as an integral portion of the curriculum for the CCSS implementation process.

## CHAPTER THREE

### METHODOLOGY

#### **Introduction**

This study focuses on how elementary school educators may have to shift their paradigms from standard based learning/assessments to project based learning/assessments for the implementation of the Common Core State Standards (CCSS) curriculum within the classroom. This chapter describes the research design, sampling method, and data collection and analysis methods used to address the following research questions which guided this study:

- (1) What is the extent of elementary school educator's knowledge of standard based learning/assessment in developing curriculum?
- (2) What is the extent of elementary school educator's knowledge of project based learning/assessment in developing curriculum?
- (3) What organizational barriers might hinder the implementation of project based learning and assessment?
- (4) What will help elementary school educators achieve a 21<sup>st</sup> century (project based) classroom for the implementation of the CCSS?

#### **Restatement of the Problem**

A major pedagogical change with the CCSS is the implementation of project based learning/assessments within the curricula. For over a century, educators such as John Dewey have espoused the benefits of experimental, student-directed learning opportunities (Buck Institute for Education [BIE], 2002). Unfortunately, despite the numerous benefits of project-based learning, few educational environments have been focused on such holistic curricular

innovations in light of the quantitative federal standards that have been used with NCLB to evaluate schools.

The aim in this study was to evaluate 40 urban, Southern California, elementary educators' understanding of the necessary knowledge of project based learning/assessments for the implementation of the CCSS and to identify any organizational barriers which might impede the educators' learning processes. Additionally, this study aimed to determine what might help elementary school educators implement "21<sup>st</sup> Century Skills" (Wagner, 2008) which include project based learning/assessments in the classroom.

### **Restatement of the Purpose of the Study**

The purpose of this study was twofold. First, it was necessary to evaluate the understanding that elementary school educators possessed between implementing standard based learning/assessments versus project based learning/assessments. This was necessary in order for administration, teachers and students to implement the new learning goals established by the CCSS. These standards provide guidelines of what students should know, understand and be able to accomplish in order to become successful in both college and the workplace (Eilers & D'Aminco, 2012). By determining knowledge gaps, professional development or training could occur which would lead to improved accountability within the organization and the requested paradigm shift towards project based learning and assessment. This shift may help teachers feel that they are responsible for improving student achievement by establishing curriculum which reflected the CCSS vision (Clark & Estes, 2008).

Secondly, in order for learning goals and assessments to be successful, department faculty should be involved in (1) defining learning outcomes for students, (2) developing tools to access learning, (3) identifying, discussing and rectifying organizational barriers in order to meet the



implementation requirements, and (4) making program changes based on the research methodology findings (Clark & Estes, 2008; Shulock & Moore, 2002). Elementary school teachers should be furnished with information about what was expected of them in order to proceed with the development of project based learning curriculum which reflects CCSS guidelines. Furthermore, elementary school educators should have the knowledge to incorporate these learning activities into lesson plans and the curriculum and be able to demonstrate what they contributed to the promotion of student learning (Elmore, 2002). Some of this learning may have been established through the utilization of professional development which did more than just present the facts of the CCSS. The professional development needs to be focused on improving student learning through the incorporation of the concepts within the CCSS (Elmore, 2002).

Each elementary school educator's target suggested the motivation needed to achieve the curriculum development goal. This directly relates to professional accountability measurements and the common-good ethic approach to learning and teaching. People want to believe they are a community of professionals, working diligently and with integrity to help increase student learning (Clark & Estes, 2008; Goldberg & Morrison, 2003; Velasquez, Andre, Shanks, & Meyer, 1996). Furthermore, educational accountability must be reciprocal, everyone must "buy in" for this goal to be achieved (Elmore, 2002).

### **Research Design**

The design of this study was guided by Creswell's (2009) six steps for conducting research. The steps are:

- (1) Identify the research problem.
- (2) Review the literature.

- (3) Specify the purpose of the research.
- (4) Collect the data.
- (5) Analyze and interpret the data.
- (6) Report and evaluate the data.

This study has been built around these six steps, with chapter three specifically addressing steps four, five, and six. The methodology employed in this research included quantitative data from surveys using electronic questionnaires and qualitative data from semi-structured interviews, gathered from elementary school teachers in an urban school district in Southern California.

Based on prior research for both project based learning/assessments, the tools required for the implementation of a 21<sup>st</sup> century classroom, the literature review and the subsequent gaps in literature for this area, it was determined that best methodology for this study was a mixed methods design.

Mixed-methods designs combine theoretical and technical elements of quantitative and qualitative approaches. A mixed-methods design can be both inductive and deductive, employing one or more of the following five models: triangulation, concurrent embedded, explanatory, exploratory, and sequential embedded. The mixed methods design unites both the procedural and theoretical approaches and in this study; triangulation of the findings were used to check for consistency (Creswell, 2009). Creswell (2009) states that triangulation helps the researcher to maximize the strength of the quantitative research by providing descriptive information and helps the researcher to maximize the strength of qualitative research by providing an explanation of the depth of the understanding of the issue by the participants. Furthermore, since an appropriate design depends on the research questions, the data types, and the implementation

timeline, (Teddlie & Tashakkori, 2011) a mixed-methods research can provide richer, more in-depth analysis and is accepted by the broader research community (Bergman, 2008).

First, a quantitative approach was used for this study because the researcher wanted to measure the attitudes and knowledge base of the participants in regards to CCSS and provide demographic data for the participants. In research of this type, it is generally accepted that the researcher is measuring the participants' opinions in regards to the research question, i.e. CCSS (Patton, 2002). Quantitative data was collected through survey questionnaires. There were both close ended on the survey questionnaire. For the purpose of this study, all of the close ended questions were considered to be comprised of equal interval data. Equal interval data indicated where respondent's choices were placed on a numerical scale (Likert) that had equal intervals among the score points. These surveys were distributed through the use of Qualtrics.com to the respective teachers.

Secondly, qualitative data provided more in-depth information of educators' viewpoints and knowledge base on project based learning/assessments, 21<sup>st</sup> century classrooms, and how professional development may affect CCSS implementation. The qualitative methodology answers were collected by a follow up, semi structured interview within a subcategory of participants based on responses to the survey.

### **Sample Population and Criteria**

The study was considered a people-centric study. The participants were elementary teachers in an urban Southern California Unified School District. People-centric is a model used for studying individuals who have common experience within the same location (Patton, 2002). Based on Patton's recommendation, the minimum sample size was identified as 40, elementary

school teachers for the survey questionnaires and four, elementary school teachers from the 40 who responded for the interviews.

The sample was drawn from a population of 20 schools within a Southern California School Unified District. Although some districts within a city are designated as “unified”, other communities are served by several school districts (elementary, high school). A “unified” school district is a district serving K-12 and adult education students. Elementary school districts generally provide services to K-8 students. High school districts provide services to grades 9 – 12 and adult education (CTC, 2010).

The researcher was aware that all of the schools within the Southern California Unified School District were in the beginning phase of implementation of CCSS. However, it was noted that the Southern California school district chosen had been involved with various training provided by both independent companies and the County Office of Education. The district was subsequently selected based on the focus on this research study and the Southern California Unified School District’s exposure to CCSS.

### **Data Collection Process**

The acquisition of consent must be well thought out as it provides the initial groundwork for good rapport with study participants in a qualitative study (Bodgen & Biklen, 2007). The intent of the research, the participants who may be involved, and a letter providing assurance of the autonomy of the participants was discussed and approved by the selected Southern California school district office.

Then, an email with general information about the study’s intent was sent to the participants along with an invitation to participate in the study (Appendix A), and a link to the survey questionnaire (survey items can be found in Appendix B). The email stated that the

questionnaire would take approximately between 10-20 minutes to complete. The researcher followed the recommendations of Creswell (2009) on the effectiveness of sending follow up emails to the participants to help ensure a high response rate and reliable results. As such, after the survey questionnaires were completed, the participants received a thank-you email for their participation from the researcher (Appendix C).

For the semi-structured interview, an initial email was distributed to the elementary teachers within the district who participated in the electronic survey invitation. This email reintroduced the researcher, described the purpose of the study, central research questions, projected length of the interview and asked permission to record the interview (Appendix D). It was explained that this would help the researcher avoid recording notes during the interview and would allow more engagement in the conversation (Merriam, 2009). These interviews were transcribed by the researcher from the audio recording.

Finally, once the participants agreed to the interview, via email response, the participants were asked to determine which day and time would work best for them to complete the interview. According to Bodgen and Bilken (2007), this strategy helps the participant feel more at ease and may promote more thoughtful and honest answers from the participant.

Appointments were confirmed and the interviews began on the designated place and time (interview questions can be found in Appendix E). Again, once the participants had completed the interviews, a follow up thank you email was sent (Appendix F).

To avoid sampling bias, the complete population of elementary teachers within this district was emailed the invitation to participate in the study (Creswell, 2009), along with information about the survey questionnaire and possible subsequent interviews. This population was comprised of 160 elementary school teachers. Of the individual elementary school teachers

who were emailed the invitation to participate in the study, the first 40 who completed the survey by accessing the link on Qualtrics.com were designated as participants.

The data from the survey questionnaire was reviewed and commonalities were noted which provided the basis for the selection of the interview participants. These participants were randomly chosen from the first 40 elementary school teachers' responses. The first criterion was whether the participant indicated a willingness to be interviewed as a follow up for the research project. Another criterion was the knowledge base of the participant about the vision statement for the CCSS, standard based learning/assessments and project based learning/assessments.

The next phase of data collection was semi-structured interviews in which a conversation is focused on the questions related to the research study (Merriam, 2009). Four interviews with elementary school teachers from the chosen Southern California Unified School District were conducted. Interviews allowed the researcher to address the research questions in depth thus, maximizing both the time of the researcher and the participants (Patton, 2002).

### **Instrumentation**

Creswell's (2009) recommendations on how to create an effective survey instrument was used. Questions on background, knowledge of standard based assessment/learning, project based assessment/learning, 21<sup>st</sup> century classrooms and professional development, which may help with understanding, were then developed by the researcher. The survey questions were also developed based on the literature review and gaps present in the literature which were considered relevant to the study.

The initial approach involved the collection of data through the use of a survey instrument developed by the researcher specifically for this study. Data was analyzed from the results of the mean, median and mode established from the Likart scale questions and the open

ended questions which were relative to a specific hypotheses or research questions. Qualitative data was then gathered from a subgroup of respondents, through either a face-to-face or telephone. This semi-structured interview process is designed to provide in-depth analysis (Patton, 2002). Concisely, by collecting and analyzing quantitative data first and qualitative data second, this study followed an implicit design path, testing variables using a large sample before organizing data for more in-depth exploration which is noted in Chapter Two (Creswell, 2009). As a result of this sequential or two-phased approach to the study design, quantitative and qualitative analyses were completed separately and then integrated into the final discussion.

The procedures for the quantitative data analysis in this inquiry were based on Creswell's Six Step Model (2011). The steps which comprise this six step model are listed in Table 1.

Table 1

*Creswell's Six Step Model*

<b>Model Instructions</b>	<b>Instruction Details</b>
1. Organize and prepare data	
2. Read through Data for a general sense of information	
3. Code data **	**1. List predetermined codes 2. Read through everything; make list of topics for underlying meaning. 3. Compile topics and make descriptive codes. 4. Go back and put codes next to sections of text. 5. Revisit/revise code list 6. Make final code list 7. Add additional documents and recode documents in necessary
4. Analyze data – Use codes to create description	
5. Write a narrative about findings of analysis	
6. Interpret the data (lesson learned)	

Semi-structured interviews were used as a means to collect data. Interviews that are considered semi-structured provide flexibility with the questions and allow the interviewer to follow the lead of the respondents. The interview is still being guided by a list of questions and

issues to be explored (Merriam, 2009), however, the less structured design allows the researcher to stay focused without disrupting the conversation flow (Bogdan & Biklen, 2007).

The following data was gathered from 40 elementary teachers through semi-structured interviews: educational background and teaching experience of the teachers, understanding of standard based learning and assessment, comprehension of project based learning and assessment, current understanding of the CCSS, perceptions about how current pedagogical knowledge may influence the implementation of the CCSS, how to acquire knowledge acquisition on implementation (CCSS), implications of the new CCSS initiative, awareness about what a 21<sup>st</sup> century classroom encompasses, and professional development requisites which might be needed in order to better implement CCSS.

The topic of CCSS implementation is still in the initial planning phase and most educators have unique experiences and understanding of how the CCSS will affect their classrooms. Therefore, the interview instrument was comprised of a list of guided questions. Having a guided list of questions was a necessity to gather specific information from the participants without allowing researcher's input to be present throughout the interviews (Merriam, 2009).

In order to produce a meaningful interview instrument, a pilot interview protocol was created based on the research questions and the data that the researcher wanted to collect based on the research questions were considered. A list of interview questions was developed and reviewed with USC colleagues who were also researching CCSS. According to Maxwell (2013), testing the questions before the interview is crucial. Adjustments were made and the final protocol included questions about the educator's viewpoints, knowledge and perceptions, as well as background questions.



Additionally, Merriman (2009) states that probing questions are essential to acquire details, clarifications and examples. This allows the researcher the flexibility to explore and expand on important themes which emerge from the data (Patton, 2002). Furthermore, as probing is a skill that increases with practice, (Merriman, 2009) probes were added to certain questions to help the researcher and the participants remain on task.

### **Data Analysis**

The goal of this study was to analyze if and how educators may need to shift their paradigms from standard based learning/assessments to project based learning/assessments in the classroom for the implementation of the CCSS. This was accomplished through both quantitative and qualitative research methodology.

After collection of data from the online questionnaire and semi-structured interviews, separate reports were written documenting findings from each data source. Time was spent coding and analyzing the data from both the quantitative and qualitative instruments in addition to a comparison to the literature review. Prior categorization of survey and interview protocol with the research questions and their relationship with the literary review and/or gaps in literature allowed for more efficient use of time in the categorization process. Additional codes within each of these question based areas led to a further (subcategory) coding of the data.

Quantitative data was analyzed using descriptive statistics such as those referencing central tendencies: mean, median and mode. Statistical analysis was completed to find the frequency distributions (per question) on the ordinal data. This data was used to determine if the mean or median was to be used for the average. The mean was used as the average for equal interval data that was roughly symmetrical. The median was used as the average for the equal interval data that was highly skewed or more extreme scores (Salkind, 2011). Analysis of such

central tendencies was used to develop and understanding of the demographic and professional experiences of the educators. In addition, the participants' answers also represented knowledge bases of the educators in regards to informational goal provided by the application of the research questions.

Analysis of the qualitative data from the semi-structured interviews was conducted from a grounded theory approach. The grounded theory approach validates and acknowledges the complexities of the concepts being studied and systematically and rigorously explores and generates a theory regarding a phenomenon (Creswell, 2009; Patton, 2002). The raw data from transcribed interviews were coded as field notes, knowledge, and professional development information. Transcripts of the interviews were read through many times whereas the researcher continually adapted codes for the data.

Prior categorization of survey and interview protocol with the research questions allowed for more efficient use of time in the categorization process. Subcategory codes within each of these question based areas led to a further coding of the data.

After a systematic method of coding the data had been performed, a visual model of the themes and emerging theories was constructed. Then, this information was analyzed, categorized and triangulated with the literature review and its relationship to the research questions. Triangulation occurred between the quantitative findings of the survey instrument, the qualitative findings on the interviews, the literature review, and the research questions. The purpose of triangulating the data was to find points of convergence and divergence between the data sets and data sources (Patton, 2002).

### **Ethical Considerations**

The researcher successfully completed the Collaborative Institutional Training initiative offered through the University of Southern California (USC) Institution Review Board (IRB), which maintains and enforces appropriate guidelines for research (APPENDIX G). Participation in this research study was entirely voluntary, and no information was reported without the written consent of the participant (s) from whom the information was elicited.

All interviewees were also reminded before the interview that they had signed the consent form as well as that all interviews would be held in the strictest of confidence. All names are actually aliases, if included in the Chapters Four or Five. The recording device was left in plain view and any request to comment “off the record” was granted. All data collected, including survey questionnaire results, audio recordings, and transcribed interviews, were stored in a secure location, and access was limited to the researcher, chairperson, and the USC IRB. The researcher will destroy all data in 2017 according to UCS policy guidelines.

### **Conclusion**

This study used a mixed-methods approach that incorporated quantitative data from survey questionnaires and qualitative data from responses to open-ended questions on the surveys as well as semi-structured interview. Quantitative data was analyzed using descriptive statistics, while qualitative data was analyzed through content analysis. Connections and analysis was performed using triangulation between the quantitative findings of the survey instrument, the qualitative findings on the interviews, the literature review, and the research questions. In addition, triangulation between qualitative sources was conducted through analysis of multiple interview participants and the open-ended responses from the survey instrument.

This methodology allowed the researcher to find points of convergence and divergence between the data sets and data sources (Patton, 2002). The results of these findings will be discussed in Chapter Four.

## CHAPTER FOUR

### RESULTS

#### **Introduction**

A major pedagogical change with the Common Core State Standards (CCSS) is the implementation of project based learning/assessments within the curricula. For over a century, educators such as John Dewey have espoused the benefits of experimental, student-directed learning opportunities (Buck Institute for Education [BIE], 2002). Unfortunately, despite the numerous benefits of project-based learning, few educational environments have been focused on such holistic curricular innovations in light of the quantitative federal standards that have been used with NCLB to evaluate schools (CCSSI, 2010b).

This study focuses on how 40, elementary school educators in an urban, Southern California Unified School District may have to shift their paradigms from standard based learning/assessments to project based learning/assessments for the implementation of the CCSS curriculum within the classroom. This chapter presents the findings from a mixed-methods study consisting of a quantitative survey completed by 40 elementary educators and four qualitative interviews conducted with aforementioned educators. The questions for the survey and the interviews were aligned to the following research questions:

- (1) What is the extent of elementary school educator's knowledge of standard based learning/assessments in developing curriculum?
- (2) What is the extent of elementary school educator's knowledge of project based learning/assessments in developing curriculum?
- (3) What organizational barriers might hinder the implementation of project based learning and assessments?

(4) What will help elementary school educators achieve a 21<sup>st</sup> century (project based) classroom for the implementation of the CCSS?

### **Purpose of the Study**

The aim of this study was to evaluate the understanding of project based learning and assessments versus standard based learning and assessments for the implementation of the CCSS. The study also determined ways in which any learning gaps should be addressed and any organizational barriers which might impede the educators' learning processes. Additionally, this study aimed to determine what might help elementary school educators implement the 21<sup>st</sup> Century learning competencies of project based learning/assessments in the classroom.

### **Response Rate**

Based on the selection criteria for this study as described in Chapter 3, 40 elementary teachers in an urban Southern California School Unified School District participated in the study. This sample was drawn from a population of 20 schools within the district. Five schools were contacted with four agreeing to participate in the study. The four schools within the district were selected based on the Southern California Unified School District's exposure to CCSS. Table 2 indicates that of the 79 potential participants, 42 elected to participate, with a response rate of 53%. This pool surpassed the goal of the researcher, which was a response rate of 50%. However, two surveys were incomplete resulting in 40 completed surveys for a final response rate of 50%. This reflected a minimum sample size based on Patton's (2002) recommendation and these teachers exemplified the goal of attaining a people-centric model, used to study individuals who have common experience within the same location (Patton, 2002). Since it had been determined that all participants from the four schools had been involved with various training provided by both independent companies and the Ventura County Office of Education

and subsequently had a knowledge base about the vision statement for CCSS, standard based learning/assessments and project based learning/assessments, interviews were based on participants who wished to participate via confirmation from the survey. Subsequently, the four participants for the qualitative interviews were selected from the quantitative survey and are consistent with the sampling criteria.

Table 2

*Quantitative Survey: Participants Response*

Measure	Number of Survey Emailed	Number Participated	% Participated
Teachers	79	40	53%

Of the 40 teachers who participated in the survey, eight agreed to a follow-up qualitative interview via the survey. Of these eight, only four responded when contacted by a follow-up email. Consistent with the sampling criteria described in Chapter Three, each respondent indicated a willingness to be interviewed, had been involved with various training provided by both independent companies and the Ventura County Office of Education, had a knowledge base about the vision statement for CCSS and standard based learning/assessments and project based learning/assessments.

### Quantitative Demographic Data

As the study reflects the knowledge base that educators need in regards to the implementation of standard based learning/assessments and project based learning/assessments for CCSS, the demographic data that was considered for this study includes basic personal and professional information. Personal and professional information was limited to the educator's age, number of years teaching, and degrees and credentials obtained. These demographic

questions function as a foundation on which to understand the experience, training, and depth of knowledge these educators may have about pedagogy in order to implement CCSS in the classroom.

Table 3 shows the degrees held by teachers. The survey question asked teachers to select the highest degree held. Table 3 lists the information as reported in the survey for all respondents.

Table 3

*Quantitative Survey: Degrees Obtained*

<b>Measure Credential</b>	<b>Teachers Number</b>	<b>Percentage %</b>
B.A. or B.S	9	22%
Master's Degree	29	72%
Ed.D. or Ph.D.	1	.025%
Currently pursuing a Master's Degree	1	.025%
Currently pursuing a Doctorate Degree	0	0%

The majority of the teachers (72%) had obtained a master's degree. The second most prevalent degree earned was the bachelor's degree at 22%. Only .025% of the teachers had earned a doctorate degree and while .025% of the teachers were currently pursuing a master's degree, 0%, were pursuing a doctorate degree.

Table 4 outlines the credentials held by the respondents. Choices included Multiple Subject Credential or Elementary Teaching Credential, Single Subject Credential or Secondary Teaching Credential, Emergency Teaching Credential, and Substitute Teaching Credential.



The Elementary Teaching Credential allows the holder to teach in any self-contained classroom most commonly associated with Elementary Schools (California Commission on Teacher Credentialing [CTC], 2010). However, those with this credential can teach in any multiple subject self-contained classrooms as well as in a core or team teaching setting (CTC, 2010).

The Secondary or Single Subject Credential authorizes the holder to teach the specific subject or subjects listed on the credential (CTC, 2010). This credential is most often associated with middle school and high school settings.

The Emergency Cross-cultural Language and Academic Development (CLAD) Service Permit authorizes the holder of the permit: Instruction for English language development (ELD) in preschool, grades K-12, and in classes organized primarily for adults, except when the prerequisite credential or permit is a Designated Subjects Adult Education Teaching Credential, or a Children's Center or Child Development Permit, in which case instruction for English Language development is limited to the programs authorized by that credential or permit, specially designed academic instruction delivered in English (SDAIE) in the subjects and at the levels authorized by the prerequisite credential or permit (CTC, 2010).

The Emergency Substitute Teaching Permit for Prospective Teachers authorizes the holder to serve as a day to day substitute teacher in any classroom, including preschool, kindergarten, and grades 1-12 inclusive or in classes organized primarily for adults. The holder may serve as a substitute for no more than 30 days for any one teacher and may only serve for a maximum of 90 days during the school year. In a special education classroom the holder may serve for no more than 20 days for any one teacher during the school year. The permit is valid for one year and may be renewed only once (CTC, 2010).

Of the 40 respondents, 36 hold a Multiple Subject Teaching Credential. Eight of the 40 respondents indicated that they had a Single Subject Teaching Credential. The question asked teachers to select all that apply; however, there were inconsistent responses—notably that 4 respondents only held a Single Subject Teaching Credential and subsequently could not teach in an elementary classroom. This led the researcher to infer that respondents misunderstood the question and, therefore, all respondents must have earned a Multiple Subject Teaching Credential. No teacher held either an Emergency Permit or a Substitute Teaching Credential.

Table 4

*Quantitative Survey: Credentials Obtained*

Measure Credential	All Principals Number	Percentage %
Multiple Subject Credential	36	90%
Single Subject Credential	8	20%
Emergency Service Teaching Credential	0	0%
Substitute Teaching Credential	0	0%

The teachers surveyed have a wide range of years spent in the classroom. Table 5 shows that based on survey results, the most prevalent amount of years are between 10-15 years, 28%, followed closely by 15-20 years classroom experience, 25%, and then teachers who have been in the classroom for over 20 years, 18%. The majority of surveyed teachers have been in the classroom for 10 or more years and have experienced multiple change initiatives in education—from the state standards initiative and NCLB to CCSS. Since the CCSS are not part of a set curriculum and are instead a set of shared goals and expectations on what knowledge and skill will help students succeed, (CCSSI, 2010b) experience in previously designed curriculum may help with the initial planning process for CCSS. As this shift will require change, it infers that

change, especially deep-seated change, takes time to develop and requires an ongoing commitment exemplified by the numbers of years in the classroom (Marzano et al., 2005).

Table 5

*Quantitative Survey: Years in Current Position*

<b>Measure Time Period</b>	<b>Teachers Number</b>	<b>Percentage %</b>
1-5 years	6	15%
5-10 years	6	15%
10-5 years	11	28%
15-20 years	10	25%
More than 20 years	7	18%
Total	40	100%

As noted previously, deep-seating change requires an ongoing commitment (Marzano et al., 2005). The researcher therefore wanted to investigate the age groups of the respondents. Given that authentic learning opportunities lend themselves to authentic interpersonal interactions, it is inevitable that teachers be required to address a variety of issues related to the habits of mind such as flexibility, persistence, responsibility, and creativity (Welsh, 2006). This could be a positive or negative attribute based on age group. Additionally, there are potential problems with teachers being motivated into incorporating project based learning, as emphasized in CCSS into the classrooms (Marx et al., 1994) once their role has been established. Table 6 reflects that 45% of teachers were between 45-55 years old, followed by the 35-45 year old bracket. Respondents who were in the 25-35 year bracket (18%) were followed by respondents who were 55 years old at 10% and finally the respondents which between 21-25 years old tallied the 3% mark.

Table 6

*Quantitative Survey: Age Groups of Teachers*

<b>Measure</b> Age Group	<b>Teacher</b> Number	<b>Percentage</b> %
21-25 years old	1	3%
25-35 years old	7	18%
35-45 years old	10	25%
45-55 years old	18	45%
55 or older	4	10
Total	40	100%

In conclusion, since schools are held accountable for student knowledge through student performance on standardized tests, mandates such as federal policies require schools to take action and implement change not only at the district or school level but also in each classroom (Burke, 2004; Flett & Wallace, 2005; O'Day, 2002). Change is occurring two-fold at the site level: at the schools as a whole and in each individual classroom managed by an individual teacher. This twice-occurring change lends to both issues of urgency as teachers harbor their own beliefs and values regarding educational reform as well as a whole school sense of urgency to accomplish the task at hand (Brighton, 2003; Datnow & Castellano, 2000; Flett & Wallace, 2005). Professional education, credentials held, number of years in the classroom, and age groups all contribute to how individuals manage and cooperate with one another to make this change feasible.

### **Qualitative Demographic Data**

Interview data was collected during thirty to forty-five minute sessions with the respondents either by phone or in person. Interviews were audiotaped and transcribed verbatim in order to ensure reliability of responses. The transcripts were then coded for patterns and

themes that relate to the research questions described previously. Once data was collected, an open coding system guided by Creswell (2009) was used. Creswell's six-step process, which is described in Chapter Three, helped the researchers to manage the data and make sense of the emergent themes that allow for analysis:

- (1) Organize and prepare the data for analysis
- (2) Read through all the data
- (3) Code the data
- (4) Generate description
- (5) Create narrative
- (6) Interpret the data

### **Teachers Exposure to CCSS**

Teachers were asked via the survey, to what extent they had been exposed to CCSS. This was deemed necessary in order to assure that all potential interviewees had sufficient background knowledge of CCSS to objectively answer the interview questions. As California transitions to CCSS, many schools have and will institute curricular and instructional changes in order to prepare teachers for these new demands. The new focus for CCSS will not simply be “the what” of curriculum but also on the “the how” of new curriculum implementation. Understanding this process will assist teachers in providing the instructional techniques that lend themselves to assuring success for all students (Causey-Bush, 2005).

All of the respondents replied that they either had some (60%) or a lot (40%) of exposure to CCSS. Table 8 reflects this statistic. As schools are held accountable for student knowledge through student performance on standardized tests, mandates such as federal policies require schools to take action and implement change not only at the district or school level but also in

each classroom (Burke, 2004; Flett & Wallace, 2005; O'Day, 2002). Furthermore, since teachers are responsible for making the change to CCSS within their classrooms, it was imperative that the respondents who participated in the interview process could speak to the implementation process for CCSS from its initial phase to the present. This exposure is necessary to understand the changes which may need to occur for the planning and actual implementation of CCSS.

Subsequently, based on the survey information, participants who had begun the planning process and had received some training in CCSS were qualified to participate in the follow up interview. Since the survey indicated that all participants had some degree of exposure to CCSS, the first four educators who agreed to the follow up interview were deemed interview participants.

Table 7

*Quantitative Survey: Exposure to CCSS*

<b>Measure Exposure</b>	<b>Teachers Number</b>	<b>Percentage %</b>
None	0	0%
Some	24	60%
A Lot	16	40%
Total	40	100%

Table 8 details the demographic profile of each elementary teacher who participated in a qualitative interview. This information provides a contextual foundation for the teachers interviewed and reflects the sampling criteria for this study.

Table 8

*Qualitative Interview: Characteristics of Elementary Educators*

<b>Elementary Teachers</b>	<b>Gender</b>	<b>Highest Degree Obtained</b>	<b>Credentials Held</b>	<b>Years as Teacher</b>	<b>Years at Site</b>
1	Female	Bachelor's Degree	Multiple Subject	7	4
2	Female	Bachelor's Degree	Multiple Subject; S/A English	11	4
3	Female	Master's Degree	Multiple Subject	7	2
4	Male	Master's Degree	Multiple Subject	9	9

Consistent with the findings in Table 5, the elementary teachers interviewed have been teaching and have been educators at their sites long enough that the conditions for change implementation exist. On average, these teachers had been teaching for eight and one half years and worked at their site five years. While time spent teaching at the site is not the definitive factor to predict success for change implementation, the ability to implement change does have some relationship to time spent at the school site. After two years, Earley and Weindling (2007) suggest that teachers are familiar and comfortable enough with school culture and organizational socialization to feel comfortable implementing change. One of the distinguishing characteristics in educational reform is that the “who” responsible is generally the school unit (i.e. teachers) and are held accountable for producing specific levels or improvements in student outcome (Fuhrman, 1999). The data suggests that teachers consider themselves a unit, due to the time spent at the school site.

Additionally, in order for learning goals and assessments to be successful, the teachers need to be involved in defining learning outcomes for students and making program changes based on the research methodology findings (Clark & Estes, 2008; Shulock & Moore, 2002).

This comes through having gained the knowledge to incorporate learning activities into lesson

plans and the curriculum. The credential (s) acquired demonstrates that the teachers have had the training to contribute what they have learned to promote student learning (Elmore, 2002).

The demographic data gleaned from the survey and the interview lays the foundation for the research questions findings. It provides a framework which reflects the knowledge base on which the elementary teachers have planned and implemented instructional change for CCSS.

By understanding this and their underlying beliefs in regards to change incorporation, discussions about their perceptions and motivation to implement this change reflect their identity as reform advocates for CCSS implementation.

### **Research Question One:**

#### **What is the extent of elementary school educator's knowledge of standard based learning/assessments in developing curriculum?**

The alignment of statewide testing with the established state standards for NCLB caused districts and schools to rethink the way courses are structured, students tested, and the way teachers were trained. Teacher professional development was refocused on how to use data from district provided pacing guides and student assessment data to revamp instruction. (Darling-Hammond, 1990).

Table 9 presents the disaggregated survey responses of educators to research question number 1. Educators were asked to indicate their level of knowledge using a Likert-type scale in which *strongly agree, agree, neither agree or disagree, disagree strongly disagree* were respondents choices. For all survey items, data was self-reported, and the Likert-type scale remained consistent for all items in the remaining sections of Chapter Four.



Table 9

*Educator Responses to Levels of Knowledge about Standard Based Learning and Assessments*

<b>1. Standard based learning and assessments represent a viable means to document and analyze student achievement in the course of study.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
4	24	4	8	0	2.40	40
<b>2. Standard based learning and assessments lends that curriculum is geared to teach to the test.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
9	19	9	3	0	2.15	40
<b>3. Teachers must understand the components of standard based learning and assessments in order to establish a curriculum which represents the elements of this type of teaching and learning.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
3	20	3	9	0	2.33	40
<b>4. Standard based learning and assessments should be the focal point for the implementation of CCSS in classrooms.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
5	10	8	14	3	3.00	40

**Student Achievement Documentation**

Current research and documentation on CCSS focuses on the standards themselves and their alignment to current standards and the purpose of education (Jenkins & Agamba, 2013; Kirst, 2013; Tienken, 2011). Since these standards focus on analytical thinking and justifying reasoning, teaching practices and the overseeing of them, the documentation of student achievement may require significant overhaul (Causey-Bush, 2005; Dee & Jacob, 2011; Kirst, 2013; Linn, 2005).

Twenty four teachers believe that standard based learning and assessments represent a viable means to document and analyze student achievement in the course of study. The teachers who were interviewed, however, also believe that a summative assessment should not be the “end all” for measuring student achievement. Each elementary school educator’s target should incorporate the motivational goal(s) needed to achieve the curriculum development objective. Teacher 2 said, “This should be an ongoing process.” Formative assessments and performance tasks encompass a variety of strategies for revealing students’ understanding, allowing teachers to pinpoint and address any impediments to a student’s progress. Teachers use formative data to decide how much and what kind of learning, support, and practice a student needs to reach the goal. When formative assessment is employed before, during, and after instruction, both teachers and students have a measure of progress (Greenstein, 2010, p. 2). Teacher 4 acknowledged that it is imperative when planning curriculum, the documentation must reflect what standards are being measured and how that achievement is being measured in an empirical manner.

### **Teach to the Test**

Tests have been aligned to district objectives, which were aligned to state testing targets, the results being that teachers taught to the test (Goertz & Duffy, 2003). Each of the teachers interviewed spoke about how the CCSS offered an opportunity for the students to attain an application of knowledge rather than just assuring that student test scores are high. Teacher 1 emphasized that this initiative offers “a more varied instructional approach to meeting the standards, rather than only being concerned about a test”.

Many in education pitch the battle between academic content standards and “21<sup>st</sup> Century Skills” (Wagner, 2008) as an either/or proposition, when in reality the most effective

instructional programs integrate the two (Dede, 2007). Teacher 1 clarified, “You have to understand the requirements before you design projects and assessments. We have to realize that there should be multiple ways to do this. Summative assessments are not the only answer.” Teacher 3 echoed that thought. One of the strategies that her grade level used was aligning CCSS to curricula and programs already in place, effectively easing the transition by linking prior knowledge and experience.

Given that assessments, such as standardized tests, do not measure higher-order thinking skills, such assessments are generally not aligned with the goals of reforms such as the CCSS. For this reason, Fleming (2000) emphasized that teachers must be careful to design curriculum around projects that focus on standards and align the activities, rather than the tests, accordingly.

### **Component Understanding**

The lack of curriculum development from educational agencies has led to concerns from Teacher 1 that CCSS is just another standards roadmap rather than true educational reform. While most teachers agree that one needs to understand the components of the standards (50%) , the focus should not be on simply designing assessments which test the knowledge of those standards. The emphasis, rather than teaching for the mastery of the standards, should be the application of these standards into real world situations. In order to achieve this goal, Teacher 4 alluded that “All teachers need to understand the concepts behind standard based learning and assessments and how they apply to CCSS ... or decide if they do.”

The alignment of projects to the standards will assure greater depth of knowledge for the student (BIE, 2002; Fleming, 2000). Teacher number 3 asserted that altering the negativity that is associated with standard based learning and assessment is necessary for successful implementation of Common Core since standards are a major benchmark for the assuring the

success of student learning goals. She stated, “Standards are not a bad thing. It is the way that we have been teaching them which will need to change.” The teachers that were interviewed recognized that this change in thinking will be difficult as it will ask some teachers to go beyond their comfort zone.

However, this change is not optional. CCSS is a federal initiative adopted by California. It will alter not only what is taught but most importantly, how it is taught.

### **Focal Point**

Standard based knowledge and assessment went from being strongly encouraged to federally mandated with the assessment scores made public due to NCLB (Hursh, 2005). A vast amount of teachers were trained as required under NCLB and lack the depth of teaching practices and learning pedagogy that consider the day-to-day complexities inherent in teaching deep structures in various cultural contexts and communities (Cochran-Smith & Lytle, 1999, p. 22; NCLB, 2001). Under NCLB, the validity and reliability of standardized and commercially produced assessments outweighed the subjectivity of teacher created tests, particularly innovative, authentic performance assessments designed to test student application, analysis, and synthesis of knowledge (Hursh, 2005; Sloane & Kelly, 2003). Teacher 3 believes that this has been a disservice to the students and does not give the teacher enough “professional credit” to the extent that they did not have input into how the tests were designed and no consensus was given to how the tests were to be implemented. Teacher 3 also hopes that CCSS will provide the teachers with more opportunity to design curriculum, appropriate assessments and participate in feedback about the aforementioned testing during CCSS implementation phase.

The CCSS provides the teachers with a guideline on the knowledge that students need in order to acquire knowledge, skills, and perspectives relevant to their success as citizens, life-long

learners, and participants in the economy of the 21<sup>st</sup> century. All four teachers think that educators are in a precarious situation in applying their own knowledge to better serve the students. Thusly, most of the teachers agreed that teaching to a test only for the implementation of standard based assessments, should not be the main focus of CCSS implementation. Teacher 2 juxtaposed, “We have no real curriculum maps. During the planning stages, we should just use these standards to develop teaching parameters.” Teacher 1 emphasized that achievement on a test should not be the main parameter that that is implemented for CCSS. Rather, student learning should be the parameter that is measured by the CCSS in multiple venues.

Based on the research as presented in Chapter Two, it is evident that demands from the community represent more than test scores alone. Although standard based learning and assessments are present with CCSS, these standards reflect the expectation that schools will serve to educate the next generation of citizens to succeed in a 21<sup>st</sup> century world and economy.

### **Research Question Two:**

#### **What is the extent of elementary school educator’s knowledge of project based learning/assessments in developing curriculum?**

One area of focus is the incorporation of project based learning and assessments into the curriculum for CCSS. Project based learning is a model that organizes learning around projects. According to the definitions found in Project Based Learning Handbooks for Teachers, (Pearlman, 2013) projects are complex tasks, based on challenging questions or problems, that involve students in design, problem-solving, decision making, or investigative activities; give students the opportunity to work relatively autonomously over extended periods of time; and culminate in realistic products or presentations (Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999). In addition to the measurable qualitative benefits of

project-based learning, such as motivation, self-esteem, and cooperative learning skills, research has demonstrated gains in students' standardized test scores in schools where project-based learning reforms have been implemented (Thomas, 2000).

The second research question sought to determine how teachers perceived project based learning and assessments. This knowledge base is crucial because modifying teaching practices may cause veteran teachers to become novices again, which often results in awkward classroom management behaviors and shortcomings associated with orchestrating the multiple features of project based learning in a classroom environment (Thomas, 2000). Table 10 depicts the educators views in regards to the levels of knowledge about project based learning and assessments.

Table 10

*Educator Responses to Levels of Knowledge about Project Based Learning and Assessments*

<b>1. Project based learning and assessments represent a viable means to document and analyze student achievement in the course of study.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
10	16	11	3	0	2.18	40
<b>2. Project based learning and assessments enable students to develop critical thinking skills, collaborate, and analyze material in more detail than direct instruction or summative assessments.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
15	20	4	3	0	1.72	40
<b>3. Teachers must understand the components of project based learning and assessments in order to establish a curriculum which represents the elements of this type of teaching and learning.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
20	17	2	1	0	1.60	40
<b>4. Project based learning and assessments should be incorporated into the implementation of the CCSS in classrooms.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
12	26	2	0	0	1.75	40

**Student Achievement Documentation**

The CCSS represents a comprehensive set of national standards to be used by all states that have adopted them with individual state standards to supplement and reflect context (NGA & CCSSO, 2010a; NGA & CCSSO, 2010b; Porter et al., 2011). The hope is that the CCSS will provide an equitable education and equally rigorous standards for all students—effectively promoting “fewer, clearer, and higher standards” that will prepare students for college and the workforce (Marzano et al., 2013, p. 6; NGA & CCSSO, 2010a; NGA & CCSSO, 2010b; Porter et al., 2011).

All the teachers noted that there are fewer standards but they seem more generic. Teacher 1 thinks that it will be easier to incorporate these standards across all disciplines but worries that understanding, both by students and faculty, may become convoluted in the process. Given that summative assessments, such as standardized tests, do not measure higher-order thinking skills, such assessments are generally not aligned with the goals of reforms such as project-based learning (Wagner, 2008). Teacher 4 emphasized that it does not mean that tests are not valid measurements of student learning. However, formative tests should be given throughout the unit to check for understanding in addition to only a summative test at the end of the unit.

Since projects can be time-consuming, standards must be taken into consideration when designing projects. Teacher 3 knows this is the case but worries "just how much time we will be given" to actually design the projects. Nevertheless, it has been proven that this method will help to ensure that students are provided with meaningful learning opportunities that involve important grade-level skills (Fleming, 2000). Teacher 2 asserted:

Project based learning and assessments are an effective way to teach, but it is not a license for teachers to teach whatever they want. There must be solid rubrics that validate the student is meeting the requirements of the standard being taught. Right now, we have generic rubrics supplied by testing companies. These will need to be modified. This may take additional training and planning on what to measure, how to measure and how to communicate the requirements to the student.

Challenges may grow out of difficulties teachers have in accepting the idea that effective collaboration among students requires more than involvement, it requires exchanging ideas and



negotiating meaning and determining learning outcome based on that negotiation (Marx et al., 1991).

Three teachers have concerns that this is a more subjective than objective approach to learning and wonder if students are mature enough to take on that challenge of responsibility, especially in the elementary grades. Teacher 1 feels that the responsibility lies with the stakeholders in the entire community to reinforce these social expectations for further generations of students, but most importantly, individuals in order to meet 21 century learning goals.

### **Provides Students with Opportunities for Analysis**

Project based learning projects are student-driven to some significant degree. Likewise, the projects are not mainstream, teacher-led, scripted, or packaged. Most incorporate a good deal more student autonomy, choice, unsupervised work time, and responsibility than traditional instruction and traditional projects (Thomas, 2000). Teacher 1 thinks that this is fine as long as the students are mature enough to stay on task. This may not always be the case. Teachers 1 and 2 are concerned that in addition to teaching the required subject matter, now they will have to teach students how to manage their time and be more self- disciplined in achieving learning goals. Teachers 3 and 4 agree that this is not an issue until there are overcrowded classrooms with fewer teachers or teacher assistants present. Teacher 4 is concerned that more students will “fall through the cracks” simply due to the sheer volume of classroom size.

Various studies have documented increased student motivation as a result of implementing project based learning instructional techniques ( Curtis, 2005; Liu & Hsaio, 2002). Teacher 4 believes working with CCSS may achieve that, but only if students have enough time to reflect on the outcome of projects and have the ability to rework any mistakes or substandard

thinking patterns. This may prove difficult if achievement levels are still measured by the breath rather than the depth of student understanding. Students will need to apply the knowledge and concepts gained from one lesson to other lessons throughout the disciplines and through the duration of their academic experience.

### **Component Understanding**

The implementation change for CCSS will be significant and challenging, and will require change in instruction, curriculum, teacher preparation, resources and accountability measures (Grossman et al., 2011; Jenkins & Agamba, 2013; Kirst, 2013; Sawchuk, 2012). One of the central questions asked from the teachers interviewed was, "What should projects have in order to be considered an example of project based learning?" The five criteria recommended for project based learning and assessments are centrality, driving questions, constructive investigations, autonomy, and realism (Thomas, 2000).

However, this recommendation often creates an additional challenge for teachers who must facilitate the development of an investigation that addresses both students' interests and required curriculum standards (Curtis, 2005; Thomas, 2000). Teacher 1 deemed this will be possible, but time will be needed to plan and collaborate with other teachers. Those interviewed agreed that teachers need to know what is expected of them and how much guidance will they receive in order to implement CCSS goals.

Research indicates the first step in planning a high-quality instructional project is the identification of specific learning goals, or standards that will be covered by the project (Bolman & Deal, 2003; Thomas, 2000). It is important to understand that project-based learning is not an instructional accessory but rather a central part of classroom curriculum. While project-based learning does not replace other teaching methods, such as direct instruction, it should be used as

a thoughtful and deliberate complement to other forms of instruction (BIE, 2002; Hennes, 1921). Teacher 2 stated, "I wish we could just see some examples of projects and curriculum that other schools are using. This would just make it easier to know if we are on the right track."

While there has been scant documentation provided as examples, Teacher 2 verified that there had been opportunities to participate in training where teachers come together to collaborate at the district and then return to their school sites to share these learning experiences with others. This provides the scaffolding for site committees, teams, and learning opportunities to take CCSS from a set of standards to instructional practice, which includes project based learning.

### **Incorporation into CCSS Implementation**

Past studies by Thomas (2000) have shown that teachers tend to prefer to explore those aspects of project based learning related to their professional needs and current capabilities (e.g., technology). Teacher 2 does not understand how student achievement is supposed to be measured by project based learning and assessments when administration does not have the means to ensure materials are accessible to all. "We don't have the tools for students to complete projects that require advanced technological requirements. How are we supposed to plan and compete with those that do?" Teacher 4 maintained that things will remain status quo in the regards that schools that are at a socioeconomic disadvantage will remain under par in attaining higher student achievement levels.

Subsequently, teachers' efforts to change their teaching strategies incline to focus on one or two aspects of the new approach (only) and one or two new strategies designed to cope with new challenges. Teachers may be apt to modify their practices in idiosyncratic ways, mapping new behaviors onto old behaviors and moving back and forth between old and new practices,

sometimes successfully, sometimes not so successfully (Thomas, 2000). While this may not be a detriment to teaching practices, teachers will need to strive to ensure that old practices incorporate the goals of the CCSS. Teacher 3 noted:

CCSS incorporates more than academic knowledge and understanding and consequently, teachers will no longer be able to use one universal, descript lesson plan. Most lessons will have to be reworked based on the need for students to attain a greater depth of knowledge and for teachers to achieve a 21<sup>st</sup> century classroom. This will take time and effort from all stakeholders in the teaching community.

In order for students to work productively, teachers must balance the need to allow students to work on their flow of information while at the same time believing that students' understanding requires that they build their own understanding. Teachers also must realize that there will be a learning curve for them. Many may have difficulty scaffolding students' activities, sometimes giving them too much independence or too little modeling and feedback (Thomas, 2000).

Consequently, project based learning should end itself not only to academic benefits but also to socio-emotional development, a growing concern of schools and educators when implementing the CCSS and the vision of 21<sup>st</sup> century learning skills (Wagner, 2008).

**Research Question Three: What organizational barriers might hinder the implementation of project based learning and assessments?**

CCSS is a relatively recent initiative, whose directives and resources have been distributed from the framers of the standards to the district and finally to individual sites and teachers in the classrooms. As described in Chapter Two, there is scant research on how best to implement CCSS at the site level (i.e. classrooms); rather the scholarly research has focused on

the standards themselves. The change process is often hampered during the implementation phase by various external and internal pressures, demands, and a lack of communication or vision (Bolman & Deal, 2003; Darling-Hammond, 1990; Elmore, 2002; Fowler, 2009; Fullan, 1991; Kotter, 2012; Kotter & Cohen, 2008; Marzano et al., 2005).

Yet successful change implementation, as previously described, is possible when the right decisions, resources, and people are made, mobilized, and supported. In the context of education, Elmore (2002) argues, capacity building is rooted in instruction and involves interaction amongst teachers, students, and content. Teachers—in addition to administration—are critical players or team members in the implementation of curricular and instructional change. Moreover, these top-down decisions have bottom-up solutions as developing internal capacity leads away from “power over” and moves to “power with” (Elmore, 2002; Darling-Hammond, 1990; Hargreaves & Fullan, 2012, p. 14).

Table 11 presents the disaggregated survey responses of educators to research question number 3.

Table 11

*Educator Responses to Organizational Barriers*

<b>1. Organizational barriers may hinder the successful implementation of the CCSS into the curriculum.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
0	6	19	12	3	3.30	40
<b>2. Organizational barriers which may occur outside of the classroom will be addressed in a timely manner.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
0	6	19	12	3	3.30	40
<b>3. Collaborative discussions about any organizational barriers which may occur will be crucial to the successful implementation of the CCSS into the curriculum.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
13	19	6	2	0	1.93	40

**Hindrance from Internal and External Barriers**

Research Questions One and Two focused on the perceived notions that teachers had in regards to organizational barriers would hinder the implementation of CCSS. The largest percentages for each question were the strongly agree and the agree columns (2/3). This percentage verifies that teachers are not certain organizational barriers will be taken into consideration and overcome during the implementation phase. These organizational barriers can be delineated as resources. Resources include both tangible and intangible entities such as time and funding while lack of communication is both a cause and result of a resistance to change (Sketcher & Kirby, 2004).

Kotter (2012) believes that the key to taking action is to provide people opportunities to remove any barriers that will hinder the implementation process. Teacher 2 thinks that it will be difficult to “get everyone on board ,” a concept that is reflected in the professional accountability

model. The professional accountability model holds the professionals within the organization accountable to each other, making sure that they are following recognized professional practices. These professionals should possess sufficient expertise to determine the best ways of meeting the individual needs of their students and consequently, professional competence and standards for professional practice become important (Stecher & Kirby, 2004). All four teachers believed that it will be difficult to know if their colleagues have the pedagogy knowledge based on the new set of standards. There are no models to emulate. Everyone will have to share what they learn, as they go. This may mean adopting a new philosophy for some teachers and may prove stressful for others who feel as though they have become novices again. Teacher 1 stressed, “Communication throughout this process will be paramount.” Through communication, collaboration, alignment, training, and maintaining focus, people will be empowered through their knowledge, skills and motivation gained via involvement (Bolman & Deal, 2003; Fullan, 2012; Kotter, 2012; Senge, 1990).

During implementation, effective change begins with communication of the goals and need for change. This creates buy-in and support and leads to mobilizing efforts by all stakeholders to embark on the change journey. Communication serves as a task-oriented and direct leadership strategy and behavior in which leaders communicate the change vision, make the change vision universally known, motivate constituents, and promote teamwork (Battilana et al., 2010; Gilley et al. 2009a; Gilley et al. 2009b). Teacher 3 clarified “communication is not the key; effective communication is the key.” It can manifest itself in nonverbal modalities including trust, visibility, accessibility, and a willingness to allow others to lead and experiment; each demonstrated by the principals interviewed. Teacher 1 stated, “We have to believe that we

are good at our jobs. We want the students to achieve great things. We just have to work together to accomplish this at all levels.”

Thus communication and trust is a pyramid under which all other strategies—both direct and indirect—exist. Communication and trust promote professional accountability and a culture of inquiry in which a community of learners—including teachers and principals—form a collaborative, productive environment focused on a single goal: student learning (Dowd, 2005).

### **Collaborative Discussion**

Teacher 3 realizes that this development of a community of leaders is easier said than done. As evidenced by Research Question Three, most teachers do not think that organizational barriers outside the classroom will be addressed in a timely manner (15 teachers) and 19 teachers said they neither agreed nor disagreed with this statement. This suggests an uncertainty in role that outside influences may have in the classroom. Cultural models—the shared schema of how the world works—influence the setting and therefore shape the culture through often “inimical” ways that can be counterproductive to school reform and change (Gallimore & Goldenberg, 2008). Teacher 1 acknowledged there have been numerous debates between school boards, parents and administration. While some of these debates are planned in an organized forum setting, it is apparently obvious there is still a lot of negativity towards the implementation of CCSS and if it will truly enhance student achievement.

Organizational change can be deeply personal despite many working toward a shared goal; it is also a deeply human endeavor that can lead to significant tensions between those who support the cause and those who resist it (Bolman & Deal, 2003; Calabrese, 2002; Fowler, 2009; Kotter, 2012; Senge, 1990). Three teachers said that they do not always feel comfortable voicing their views to disgruntled participants. This may be due to the lack of communication in regards



to the vision of CCSS to all stakeholders. Educational reform is rooted in new ways of thinking, believing, acting and leading. It is more than a re-culturation of the organizational structures and tasks; it is also a re-culturation of the people and stakeholders (Marzano et al., 2005).

#### **Research Question Four:**

#### **What will help elementary school educators achieve a 21<sup>st</sup> century (project based) classroom for the implementation of the CCSS?**

Accountability is a practice of continuous improvement, and research suggests that the impetus for such change is on school leadership to promote a continued effort toward the education of teachers who must also implement change (Elmore, 2002; Flett & Wallace, 2005; Harpell & Andrews, 2010; Norton Grubb & Badway, 2005; Smit & Humpert, 2012).

Educators were asked to indicate their level of knowledge using a Likert-type scale with *not at all, occasionally, and frequently* as choices. The response mean and total respondents are also reported. For all survey items, data was self-reported. Teachers surveyed responded to Likert-style questions regarding the extent they have been given tools and have begun the implementation process for CCSS, as shown in Table 12.

Table 12

#### *Implementation of CCSS*

<b>Question</b>	<b>Not at all</b>	<b>Occasionally</b>	<b>Frequently</b>	<b>Response Mean</b>	<b>Total Responses</b>
To what extent have you begun to implement CCSS lessons you're your classroom?	0	24	16	2.40	40
To what extent have you been given your been given tools to help implement CCSS lessons into your classroom?	13	24	3	1.75	40

## Extent of Implementation of CCSS

While little research has been done on how best to implement the standards at the site level, research through the Center on Educational Policy (CEP) has listed possible routes for implementation at the state level that are echoed by organizational change literature (Kober & Rentner, 2011a; Kober & Rentner, 2011b; Kober & Rentner, 2012; Rentner, 2013). Teachers are aware of this, however, most want feedback on new lessons that they are planning for CCSS and want to know if their vision is in line with the national implementation goals. As evidenced by Table 12, all of the teachers are beginning to implement CCSS in the classroom.

Motivation of educators and others to attend to relevant information and to expend the effort necessary to augment or change strategies in response to this information is imperative. Motivation should ultimately occur at the individual level, but it is likely to be dependent in part on the structures of the school as well as on individual characteristics of educators and students. (O'Day, 2002). All four teachers believe that both teachers and administrators in their district are working towards successful implementation. However, there may be a need to develop the knowledge and skills to promote valid interpretation of information and appropriate attribution of causality at both the individual and system levels. This should occur in the short run, but should also be applied to establish mechanisms for continued learning (O'Day, 2002). Teacher 4 stressed:

Right now, there is a huge learning curve for everyone. Most feel that the community needs to be aware that there may be a drop in test scores implemented by the national testing agency. Tests have been rewritten to go beyond basic knowledge and skills to asking student to apply that knowledge and the skills associated with it to analyzing and deconstructing other concepts.

## **Tools for Implementation**

All of the teachers believe that the district office plays an integral role in the implementation of instructional change, especially with CCSS. Several of the publications and much of the research surrounding implementation of CCSS has been directed at the district level, describing the policy, directives, and the implications to districts and states (Kober & Renter, 2011a). Once more, all four teachers are concerned this is a very broad view to effective curriculum planning and implementation.

In the beginning of the implementation process, Teacher 2 thought that there was no place to find resources for CCSS. Teacher 3 described it as “putting the cart before the horse.” This situation is beginning to change. In the past two years, more publications have centered on the implementation process, noting the alignment between CCSS planning and programs with Professional Development (PD) and other training opportunities. Myriad companies and websites have published books and resources to increase teacher knowledge. Teachers have been directed to national websites, teacher websites and textbook companies are renaming lessons as Common Core compliant. While Teachers 1,2, and 3 agree that in most cases, the lesson plans are not project based, it is a place to start. They are hoping that as more collaboration happens between educators at both the site, district and state levels, there will be a database to extract information from to unify the district’s implementation of CCSS.

## **Professional Development**

One way to mitigate these potential learning and organizational barriers is by having teachers attend Professional Development (PD) for CCSS. PD in education is often synonymous with training, workshops, and conferences that seek to provide continuous learning opportunities for in-service teachers (Borko, 2004; Desimone, 2009; Elmore, 2002; Fenstermacher & Berliner,

1985; Fullan, 1991). Both on-site and off-site, through the district and through independent consultants, PD takes shape through formal and informal meetings, staff development, and specialized conferences or workshops that seek to enhance knowledge and improve student learning. PD is both a program and a strategy that may be used to build internal capacity and implement curriculum for CCSS.

Table 13 presents the disaggregated survey responses of educators to research question number 4 in regards to professional development. Educators were asked to indicate their level of knowledge using a Likert-type scale in which *strongly agree*, *agree*, *neither agree or disagree*, *disagree* *strongly disagree* were respondents choices.

Table 13

*Professional development concerns for CCSS*

<b>1. Professional development for CCSS will be necessary for teachers to understand the new curriculum requirements.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
23	13	3	1	0	1.55	40
<b>2. The district will provide sufficient professional development for teachers in order to help them meet the requirements of implementing CCSS in the classroom.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
4	12	7	12	4	3.00	39
<b>3. Professional development will need to be adapted based on the needs of the teachers.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
14	21	5	0	0	1.78	40
<b>4. The viewpoints reflected in a 21<sup>st</sup> century classroom will need to be addressed in professional development.</b>						
Strongly Agree	Agree	Neither	Strongly Disagree	Disagree	Response Mean	Total Responses
11	19	8	2	0	2.03	40

In order for the implementation of CCSS to be successful, teachers will play an important role as leaders in the development and planning of incorporating 21<sup>st</sup> century skills in the classroom (CCSS Initiative, 2010a) and reflect what is known as internal capacity. Internal capacity speaks to the ability of teachers to transform into change agents acting as “conduits for instructional policy” (Bolman & Deal, 2003; Darling-Hammond, 1990, p. 345; Elmore, 2002).

Teacher 1 verified:

Teachers and the practices implemented in the classroom will be the focal point for ensuring that students experience a 21<sup>st</sup> learning experience. Since students are with teachers every day, what they learn will be reflected in the teaching practices they experience in the classroom.

All teachers were very clear on this point. Teacher 4 added, “There can be no exceptions in regards to making certain that our students are learning skills both for college and for the workforce. This is what CCSS is all about.”

Teacher education will be at the forefront of the debate as teachers are changing the way in which they teach and assess student’s subject matter knowledge (Jenkins & Agamba, 2013; Kirst, 2013; Kober & Rentner, 2011b; Kober & Rentner, 2012; Tienken, 2011). It is hoped that PD will be focused on improving student learning through the incorporation of the concepts within the CCSS (Elmore, 2002). Each of the four teachers acknowledged the opportunities that the district was providing them to become familiar with CCSS. These PDs include taking time off to attend training sessions, quarterly in service meetings for collaboration in regards to best practices and collaboration time during staff meetings. The district has also provided the teachers information about national, state and county webinars and websites which offer insights into CCSS. This has provided teachers with choices, based on their own knowledge base for

which learning areas they would like to focus on in each particular class (i.e. project based learning).

PD, above all, connected to particular issues of content and pedagogy that are tied to student learning and achievement (Elmore, 2002; Guskey, 2000). By viewing PD as ongoing, focused, and a part of the institutional and instructional structure of the school, the barriers that often hamper the implementation of effective PD are lessened. Teacher 4 verifies this thought by saying:

“It is not a question on whether teachers want to learn or not...that is what we do. If we all go into this new thought process with a positive attitude and being open to suggestions on new teaching approaches, I have no doubt that we will succeed in implementing the concepts behind a 21<sup>st</sup> century classroom.”

Concurrently, PD and capacity building must be sustained and woven into the fabric of a school's identity. This maintenance and sustainability of change and improvement can be integrated into a school's identity through the reculturing of teacher learning as a learning culture (Elmore, 2002; Desimone, 2009; Fenstermacher & Berliner, 1985; Gallimore & Goldenberg, 2008). This has been accomplished, in part, by having a shared CCSS disc drive with lessons, websites, new ideas and individual experiences which is accessible to all teachers in the district. CCSS will require a change in behaviors and beliefs as well as a commitment to continuous improvement (Elmore, 2002; Helsing et al., 2008). The four teachers think the opportunities for this learning is a really positive move on the part of the district. Both successes and failures in the implementation of newly designed curriculum can be shared. This provides administration with opportunities to focus on problem areas, promote teacher growth and help to initiate PD sessions that are geared to teacher input.

Moreover, schools become environments for continuous, collaborative and productive professional learning that are focused on student achievement (Elmore, 2002; Good & Gassenheimer, 2004; Hargreaves & Fullan, 2012).

### **Summary**

Students need to acquire knowledge, skills, and perspectives relevant to their success as citizens, life-long learners, and participants in the economy of the 21<sup>st</sup> century. This focus typically includes complex problem-solving, new forms of literacy, working collaboratively, and new ways of acquiring and communicating knowledge. These skills have been packaged together and defined as “21<sup>st</sup> Century Skills” (Wagner, 2008). While much of the emphasis is placed on the acquisition of knowledge in regards to students, teachers also face a complex paradigm shift in regards to implementing new teaching practices in the classroom.

The adoption of the CCSS may help to achieve this shift of implementing “21<sup>st</sup> Century Skills” (Wagner, 2008) through project based learning and assessments (Common Core State Standard Initiative, 2010a). In order for learning goals and assessments to be successful, department faculty may want to be involved in (1) defining learning outcomes for students, (2) developing tools to access learning, (3) identifying, discussing and rectifying organizational barriers in order to meet the implementation requirements, and (4) make program changes based on the research methodology findings (Clark & Estes, 2008; Shulock & Moore, 2002). This change process will become sustainable over time by making them an inextricable part of the school’s culture (Kotter, 2012). As Teacher 1 theorized:

If implemented correctly, CCSS will make teaching fun again. We will be able to spend more time on conceptualization with the students and create projects that will teach life

lessons in addition to history lessons. [CCSS] will help the entire educational community bond over viewing things from a different angle.

In order for this to happen, the teachers surveyed and interviewed for this study indicated that a number of issues need to be addressed in order to successfully implement instructional change. The data suggests the following findings for elementary teachers related to the four research questions.

Research question one asks, *What is the extent of elementary school educator's knowledge of standard based learning/assessments in developing curriculum?* Twenty four teachers believe that standard based learning and assessments represent a viable means to document and analyze student achievement in the course of study and the teachers agreed that curriculum needs to be designed with standards in mind. While most teachers agree that one needs to understand the components of the standards (50%) , they felt that student achievement should no longer be measured on student performance on statewide assessments that are specifically developed for states or purchased commercially rather than interactive, formative lessons (O'Day, 2002). The emphasis, rather than teaching for the mastery of the standards, should be the application of these standards into real world situations. Since these standards focus on analytical thinking and justifying reasoning, teaching practices and the overseeing of them, the documentation of student achievement may require significant overhaul (Causey-Bush, 2005; Dee & Jacob, 2011; Kirst, 2013; Linn, 2005).

Research question two asks, *What is the extent of elementary school educator's knowledge of project based learning/assessments in developing curriculum?* This knowledge base is crucial because modifying teaching practices may cause veteran teachers to become novices again, which often results in awkward classroom management behaviors and



shortcomings associated with orchestrating the multiple features of project based learning in a classroom environment (Thomas, 2000). This may take additional training and planning on what to measure, how to measure and how to communicate the requirements to the student.

Challenges may grow out of difficulties teachers have in accepting the idea that effective collaboration among students requires more than involvement, it requires exchanging ideas and negotiating meaning and determining learning outcome based on that negotiation (Marx et al., 1997). Most project based learning lessons incorporate a good deal more student autonomy, choice, unsupervised work time, and responsibility than traditional instruction and traditional projects (Thomas, 2000). Teachers worry that students are not mature enough to stay on task and in addition to teaching the required subject matter, now they will have to teach students how to manage their time and be more self- disciplined in achieving learning goals.

Research question three asks, *What organizational barriers might hinder the implementation of project based learning and assessments?* These organizational barriers can be delineated as resources. Resources include both tangible and intangible entities such as time and funding while lack of communication is both a cause and result of a resistance to change. Most felt even with communication, they were expected to possess sufficient expertise to determine the best ways of meeting the individual needs of their students and consequently, professional competence and standards for professional practice became important (Stecher & Kirby, 2004). All four teachers believe that it will be difficult to know if their colleagues have the pedagogy knowledge based on the new set of standards. There are no models to emulate. The fear of failure stems from the newness of CCSS, but with more time, the respondents felt teachers will gain confidence in their skills.

Research question four asks, *What will help elementary school educators achieve a 21<sup>st</sup> century (project based) classroom for the implementation of the CCSS?* All respondents indicated that training—whether onsite or offsite—were integral for preparing teachers for implementing CCSS. The structure of that training differed across sites, but the need for knowledge and resources did not. All of the teachers utilized PD from the district office. It was emphasized that the resources they received from various outside sources needed to be shared and discussed. This concept centers around a cultural shift which makes student directed learning opportunities the emphasis of the curriculum development and a paradigm shift from “teaching to the test” will be needed for the project based curriculum to be successful.

In the Chapter Five, a summary of the research will be provided along with final conclusions, implications, and recommendations for further research.

## CHAPTER FIVE

### CONCLUSIONS

#### **Introduction**

The implementation of the Common Core State Standards (CCSS) is a rare, state- led, student- centered opportunity to improve outcomes throughout the entire educational pipeline and achieve the ultimate goal of academic success for all students (Beatty, 2010). These standards are (1) aligned with college and workforce expectations, (2) are clear, understandable and consistent, (3) include rigorous content and application of knowledge through high order skills, (4) build upon strengths and lessons of current state standards, (5) are informed by standards in other top performing countries, so that all students are prepared to succeed in or global economy and society and (6) are evidence based (Common Core State Standards Initiative, 2010a).

The CCSS define the knowledge and skills students should have within their K-12 educational careers so that they will graduate from high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs (i.e., “21<sup>st</sup> Century Skills”), (Wagner, 2008). These educational standards aim to ensure that all students, no matter where they live, are prepared for success in post-secondary education and the workforce. The implementation of the CCSS has affected all aspects of teaching and learning in the K-12 continuum. CCSS has and will change not only what and how curriculum is taught, but how that knowledge is gained and leveraged for students and teachers (Jenkins & Agamba, 2013; Kirst, 2013; Sawchuk, 2012).

It is the duty of the educator—the teacher—to implement the change in both teaching practices and the thought process that accompanies it. However, while the implementation phase

of CCSS has offered broad guidelines for teachers, the possibility of the necessity of a shift in paradigms in the teaching process has been overlooked in the literature on CCSS. Therefore, this study sought to interpret how teachers felt about standard based learning and assessments versus project based learning and assessments and the subsequent redesign of the curriculum to meet the goals of the CCSS. In doing so, this study explored the viewpoints, planning, strategies and barriers elementary school teachers faced during this change process.

This final chapter provides a summary of the study, including a statement of the problem, purpose of the study, research questions, and a review of the literature and methodology used, followed by findings related to the three research questions. In closing, implications and recommendations for future study will be explored.

### **Statement of the Problem**

A major pedagogical change within the CCSS is the implementation of project based learning/assessments within the curricula. For over a century, educators such as John Dewey have espoused the benefits of experimental, student-directed learning opportunities (Buck Institute for Education [BIE], 2002). Unfortunately, despite the numerous benefits of project-based learning, few educational environments have been focused on such holistic curricular innovations in light of the quantitative federal standards that have been used with NCLB to evaluate schools (Wagner, 2008; Welsh, 2006 ). Today, Magner, Soule and Wesolowski (2011) believe that curricula must be designed around what students need to know and what might be applicable to help solve problems in the future. The implementation of project based learning/assessments for the CCSS will play a vital role in this adoption.

Research on CCSS has focused on the standards themselves and the role of the district and state in implementing this top-down directive (Jenkins & Agamba, 2013; Kirst, 2013; Linn,

2005; Teinkin, 2011) but there have been few guidelines and directives to help teachers understand what needs to change in order to establish a 21<sup>st</sup> century classroom. Much of the CCSS literature stops short of site-level descriptions for implementation and instead focuses on suggestions for implementation at the district and state level (NGA & CCSSO, 2010a; NGA & CCSSO 2010b). Many in education pitch the battle between academic content standards and “21<sup>st</sup> Century Skills” (Wagner, 2008) as an either/or proposition, when in reality the most effective instructional programs integrate the two (Dede, 2007).

Fleming (2000) emphasizes that teachers must be careful to design curriculum around projects that focus on standards and align the activities, rather than the tests, accordingly. This recommendation often creates an additional challenge for teachers who must facilitate the development of an investigation that addresses both students’ interests and required curriculum standards (Curtis, 2002; Thomas, 2000). Consequently, this problem of defining the role of the teacher who is responsible for implementing CCSS and the subsequent instructional change persists.

### **Purpose of the Study**

The purpose of this study was to evaluate educators’ knowledge of project based learning and assessments versus standard based learning and assessments and determine gaps in that knowledge for the implementation of the CCSS at their school sites. This study also identified perceived organizational barriers that may impede this paradigm shift as well as what will help educators achieve the criteria of a 21<sup>st</sup> century classroom.

### **Research Questions**

The following four research questions were explored for this study:

- (1) What is the extent of elementary school educator's knowledge of standard based learning/assessments in developing curriculum?
- (2) What is the extent of elementary school educator's knowledge of project based learning/assessments in developing curriculum?
- (3) What organizational barriers might hinder the implementation of project based learning and assessments?
- (4) What will help elementary school educators achieve a 21<sup>st</sup> century (project based) classroom for the implementation of the CCSS?

### **Review of the Literature**

The review of the literature sought to capture relevant knowledge as it related to educators' background, understanding, potential organizational barriers, and instructional strategies in the context of the adoption of CCSS goals to promote student achievement reform. Three major themes related to CCSS implementation emerged from the literature: (1) the need to understand the educators' knowledge and skills, (2) their motivation to achieve goals, and (3) the organizational barriers that may deter them from reaching the education goals of CCSS. Clark and Estes (2008) explain that these areas need to be examined and analyzed in order for solutions to take place. In addition, the need for project based learning and assessment training—whether onsite or offsite—are integral to prepare teachers for implementing CCSS and to develop a 21<sup>st</sup> century classroom.

The CCSS provides the teachers with a guideline on the knowledge that students need in order to acquire knowledge, skills, and perspectives relevant to their success as citizens, life-long

learners, and participants in the economy of the 21<sup>st</sup> century. The review of literature established that change in teachers' learning and behavior tends to take certain forms (Marx et al., 1997).

Teachers tend to prefer to explore those aspects of project based learning related to their professional needs and current capabilities (e.g., technology). Teachers' efforts to change their teaching strategies incline to focus on one or two aspects of the new approach (only) and one or two new strategies designed to cope with new challenges. Teachers may be apt to modify their practices in idiosyncratic ways, mapping new behaviors onto old behaviors and moving back and forth between old and new practices, sometimes successfully, sometimes not so successfully. In addition, modifying their practices may cause teachers to become novices again, which often results in awkward classroom management behaviors and shortcomings associated with orchestrating the multiple features of project based learning in a classroom environment (Thomas, 2000).

The implementation change for CCSS will be significant and challenging, and will require change in instruction, curriculum, teacher preparation, resources and accountability measures (Grossman et al., 2011; Jenkins & Agamba, 2013; Kirst, 2013; Sawchuk, 2012). The change process is often hampered during the implementation phase by various external and internal pressures, demands, and a lack of communication or vision (Bolman & Deal, 2003; Darling-Hammond, 1990; Elmore, 2002; Fowler, 2009; Fullan, 1991; Kotter, 2012; Kotter & Cohen, 2008; Marzano et al., 2005).

Records delineate teachers' enactment problems for project based learning, which is critical for the implementation of CCSS, as follows: (1) Time. Projects often take longer than anticipated. District guidelines need to take into account the time necessary to implement in-depth approaches required by project based learning. (2) Classroom management. In order for

students to work productively, teachers must balance the need to allow students to work on their flow of information while at the same time believing that students' understanding requires that they build their own understanding. (3) Support of student learning. Teachers may have difficulty scaffolding students' activities, sometimes giving them too much independence or too little modeling and feedback. (4) Technology use. Teachers may have difficulty incorporating technology into the classroom, especially as a cognitive tool. (5) Assessment. Teachers may have difficulty designing assessments that require students to demonstrate their understanding (Marx, et al., 1997).

Accountability is a practice of continuous improvement, and research suggests that the impetus for such change is on school leadership to promote a continued effort toward the education of teachers who must also implement change (Elmore, 2002; Flett & Wallace, 2005; Harpell & Andrews, 2010; Norton Grubb & Badway, 2005; Smit & Humpert, 2012). In order for the implementation of CCSS to be successful, teachers will play an important role as leaders in the development and planning of incorporating “21<sup>st</sup> Century Skills” (Wagner, 2008) in the classroom (CCSS Initiative, 2010a).

One way to mitigate these potential learning and organizational barriers is by having teachers attend Professional Development (PD) for CCSS. PD training in education is often synonymous with training, workshops, and conferences that seek to provide continuous learning opportunities for in-service teachers (Borko, 2004; Desimone, 2009; Elmore, 2002; Fenstermacher & Berliner, 1985; Fullan, 1991). For the implementation of CCSS, PD and teacher learning has become a way to unite teachers as a coalition of learners committed to implementing instructional change. However, research on CCSS has focused on the standards, the extent to which instruction will change, and the lack of learning opportunities for teachers



rather than on what CCSS PD should look like, or the process of building a coalition of learners (Fullan, 2014, p. 25; Jenkins & Agamba, 2013; Kirst, 2013; Sawchuk, 2012).

### **Methodology**

This study used a mixed-methods research design that included a survey and interviews and it was considered a people-centric study. The participants were elementary teachers in a urban, Southern California Unified School District. People-centric is a model used for studying individuals who have common experience within the same location (Patton, 2002). The researcher was aware that all of these districts were in the beginning phase of implementation of CCSS. However, it was noted that the Southern California Unified School District chosen had been involved with various training provided by both independent companies and the County Office of Education. The district was subsequently selected based on the focus on this research study and the Southern California Unified School District's exposure to CCSS.

The methodology employed in this research included quantitative data from surveys using electronic questionnaires and semi-structured interviews, gathered from 40 elementary school teachers in an urban school district in Southern California Unified School District. Fulfillment of the criteria for the interview process was determined by the participant's responses to the survey. Four elementary teachers were selected for a qualitative interview.

The online survey solicited information regarding the teachers' demographic data, school site data, background and knowledge of CCSS and a willingness to participate. It included a 25-item, Likert-style survey that queried specifically about a teacher's knowledge of, preparation for, and receptivity to CCSS (including project based learning/assessments) at their individual sites. The qualitative interviews were conducted using a semi-structured protocol. All interviews were recorded and transcribed.

Instrument design, data collection, and data analysis were informed by the scholarly literature and were aligned to the research questions in order to ensure reliability and validity. Each instrument was analyzed using research-supported methods such as the Creswell Method (2009) which was discussed in Chapter Four.

### **Findings**

The findings of this study related not only to teacher understanding of standard based learning/assessment and project based learning/assessment but also to how best incorporate both these practices into the design of curricula for the implementation of CCSS. Teacher education will be at the forefront of the debate as teachers are changing the way in which they teach and assess student's subject matter knowledge (Jenkins & Agamba, 2013; Kirst, 2013; Kober & Rentner, 2011b; Kober & Rentner, 2012; Tienken, 2011). Therefore, teachers not only identified themselves as classroom mentors but also as change agents during the CCSS implementation process. All teachers emphasized that this is a shared goal between teachers, administrators, community members and students. In order to achieve this educational reform goal, communication, collaboration, support and motivation within all units must be maintained.

#### **Research Question One:**

#### **What is the extent of elementary school educator's knowledge of standard based learning/assessments in developing curriculum?**

Teachers believe that standard based learning and assessments represent a viable means to document and analyze student achievement in the course of study. The teachers who were interviewed, however, also believe that a summative assessment should not be the "end all" for measuring student achievement. Each elementary school educator's target should incorporate the motivational goal(s) needed to achieve the curriculum development objective. This will include

assessments based on standards, but these assessments should be formative and other projects based on standards need to be applied in the classroom.

This may mean that altering the negativity that is associated with standard based learning and assessment is necessary for successful implementation of CCSS since standards are a major benchmark for the assuring the success of student learning goals. Based on the research as presented in Chapter Two, it is evident that demands from the community represent more than test scores alone. Although standard based learning and assessments are present with CCSS, these standards reflect the expectation that schools will serve to educate the next generation of citizens to succeed in a 21<sup>st</sup> century world and economy with a multitude of achievement indicators.

### **Research Question Two:**

#### **What is the extent of elementary school educator's knowledge of project based learning/assessments in developing curriculum?**

The elementary teachers interviewed identified the incorporation of project based learning/assessment as one of the most significant CCSS strategies that will need to be utilized. This knowledge base is crucial because modifying teaching practices may cause veteran teachers to become novices again, which often results in awkward classroom management behaviors and shortcomings associated with orchestrating the multiple features of project based learning in a classroom environment (Thomas, 2000).

While various studies indicate that the employment of these teaching strategies increase student motivation and hence, student achievement, teachers are worried that the time allotment to understand, design, and implement these strategies is insufficient. Therefore, they relied on prior knowledge and experience to draw connections between established instructional practices

and the instructional practices required under CCSS. For example, most projects incorporate a good deal more student autonomy, choice, unsupervised work time, and responsibility than traditional instruction and traditional projects (Thomas, 2000). There are concerns that students are not mature enough to stay on task. Teachers are concerned that in addition to teaching the required subject matter, now they will have to teach students how to manage their time and become more self-disciplined in achieving learning goals.

In order for students to work productively, teachers must balance the need to allow students to work on their flow of information while at the same time believing that students' understanding requires that they build their own understanding. Teachers also must realize that there will be a learning curve for both students and themselves during the implementation process.

### **Research Question Three:**

#### **What organizational barriers might hinder the implementation of project based learning and assessments?**

The change process is often hampered during the implementation phase by various external and internal pressures, demands, and a lack of communication or vision (Bolman & Deal, 2003; Darling-Hammond, 1990; Elmore, 2002; Fowler, 2009; Fullan, 1991; Kotter, 2012; Kotter & Cohen, 2008; Marzano et al., 2005 ). All interviewed teachers discussed resources such as time and lack of communication as a major barrier. During implementation, effective change begins with communication of the goals and need for change. This creates buy-in and support and leads to mobilizing efforts by all stakeholders to embark on the change journey. While teachers are at the center of this mobilization, the goals of CCSS must be communicated efficiently and consistently to motivate team work and to motivate all constituents.

Organizational change can be deeply personal despite many working toward a shared goal; it is also a deeply human endeavor that can lead to significant tensions between those who support the cause and those who resist it (Bolman & Deal, 2003; Calabrese, 2002; Fowler, 2009; Kotter, 2012; Senge, 1990). Teachers sometimes do not feel entitled or comfortable to debate with those who do not agree with the overarching goals of CCSS. This may be due to the lack of communication in regards to the vision of CCSS to all stakeholders. Educational reform is rooted in new ways of thinking, believing, acting and leading and administration must be the models of instructional leadership for these teacher mentors to emulate. This will require an amount of trust for all involved, as trust promotes professional accountability and a culture of inquiry for a community of learners (Marzano et al., 2005).

#### **Research Question Four:**

**What will help elementary school educators achieve a 21<sup>st</sup> century (project based) classroom for the implementation of the CCSS?**

Most teachers want feedback on new lessons that they are planning for CCSS and want to know if their vision is aligned the national implementation goals. In the past two years, more publications have centered on the implementation process, noting the alignment between CCSS planning and programs with PD and other training opportunities. Many companies and websites have published books and resources to increase teacher knowledge. Teachers have been directed to national websites, teacher websites and textbook companies are renaming lessons as Common Core compliant. While all teachers agree that in most cases, the lesson plans are not project based, it is a place to start. They are hoping that as more collaboration happens between educators at both the site, district and state levels, there will be a database to extract information from to unify the district's implementation of CCSS.

One way that this collaboration may happen is through the use of PD. By viewing PD as ongoing, focused, and a part of the institutional and instructional structure of the school, the barriers that often hamper the implementation of effective PD are lessened (Borko, 2004; Desimone, 2009; Elmore, 2002, Fenstermacher & Berliner, 1985). These PDs include taking time off to attend training sessions, quarterly in service meetings for collaboration in regards to best practices and collaboration time during staff meetings. The district has provided the teachers information about national, state and county webinars which offer insights into CCSS. This has provided teachers with choices, based on their own knowledge base for which learning areas they would like to focus on in each particular class (i.e. project based learning).

### **Implications**

The findings of this study contribute to the body of scholarly literature on teachers' paradigm shifts in instructional change. This shift may be necessary for the implementation of CCSS in schools throughout the nation. Using the visions of a 21<sup>st</sup> century classroom as a vehicle to discuss change, the major findings shed light on the conversion to project based learning and assessments as a viable mean to measure student achievement. While current CCSS research and the findings emphasize the acquisition of knowledge in regards to students, this study brings attention to the crucial fact that teachers also face a complex paradigm shift in regards to implementing new teaching practices in the classroom.

The findings, therefore, can be used by school sites and districts to highlight the importance helping to analyze, develop, and implement project based learning and assessments geared towards the standards of Common Core. As CCSS guidelines and literature suggests, the emphasis, rather than teaching for the mastery of the standards, should be the application of these standards into real world situations. Since these standards focus on analytical thinking and

justifying reasoning, teaching practices and the overseeing of them, the documentation of student achievement may require significant overhaul (Causey-Bush, 2005; Dee & Jacob, 2011; Kirst, 2013; Linn, 2005).

There was evident communication and participation in training occurring between the district and teachers, but the teachers noted that the PD is rather generic. The PD may need to be focused on improving student learning through the incorporation of the concepts within the CCSS (Elmore, 2002). Teachers would like to see additional training what to measure, how to measure and how to communicate the requirements to the students and their parents. Since research recognizes that teachers are catalysts for instructional change, opening the lines of communication between all parties involved and including them in the change process will help to promote professional accountability (Desimone, 2009; Marzano et al., 2005, Fullan, 2014). People want to believe they are a community of professionals, working diligently and with integrity to help increase student learning (Clark & Estes, 2008; Goldberg & Morrison, 2003; Velasquez, Andre, Shanks, & Meyer, 1996). Furthermore, educational accountability must be reciprocal, everyone must “buy in” for this goal to be achieved (Elmore, 2002) and open communication may promote this.

Beyond CCSS, this study speaks to the strategies necessary for implementing educational change. A clearly articulated change in process, both in instruction and in teaching philosophy will lessen the barriers and ease the transition process. This change process will become sustainable over time by making the strategies an inextricable part of the school’s culture (Kotter, 2012).

### **Recommendations for Future Study**

Since this study examined the early stages of CCSS implementation and in some cases, an initial introduction to project based learning and assessments on the part of districts, sites and teachers, there is a need to explore the impact and sustainability of the instructional strategies. This needs to occur as CCSS continues to be implemented over the next few years. Shifts in thinking and changes to incorporate “21<sup>st</sup> Century Skills” (Wagner, 2008) in the classroom take time; therefore, the researcher recommends that the following be considered for future study:

1. This study focused on the pre-implementation and early implementation phases of CCSS, thus, it will be necessary to continue to study the strategies that districts, sites, and teachers are implementing to sustain the goals of CCSS. While the summative assessment implemented by the national testing company is an indicator of student achievement, more research needs to occur to document if students are acquiring knowledge, skills, and perspectives relevant to their success as life-long learners, citizens and participants in the economy of the 21<sup>st</sup> century.
2. Continued research on the best practices of project based learning and assessments and how these practices fit into a 21<sup>st</sup> century classroom.
3. Research on the effective and efficient models for collaboration at the site level and how the implementations of those models may help to mitigate the barriers during the change process.
4. There is a need to study how administration and the district perceive the the role of the teacher in regards to designing, implementing, and reflecting on the barriers and successes of the CCSS execution.



## Conclusion

The CCSS will provide a greater opportunity to share experiences and best practices within and across states which may improve our ability as educators to best serve the needs of students (Common Core State Standards Initiative, 2010). The CCSS define the knowledge and skills students should have within their K-12 educational careers so that they will graduate from high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs Wagner (2008) has defined the skills needed to accomplish this as complex problem solving *skills*, new forms of literacy, students and teachers working collaboratively, and implementing new ways of acquiring and communicating knowledge and they are packaged simply as “21<sup>st</sup> Century Skills” (2008).

If students are expected to learn in this manner, then teachers must be prepared to teach this. This can be achieved if leadership strategies for change and teacher learning equally reflect the same 21<sup>st</sup> century learning themes. However, in order to accomplish this, teachers may have to shift their paradigms from standard based learning and assessment (i.e. summative projects and assessments) to project based learning and assessments (i.e. formative projects and assessments).

This shift may prove difficult for some and this change process may cause teachers and educators to feel as though they are novices again. Therefore, motivation of educators and others to attend to relevant information and to expend the effort necessary to augment or change strategies in response to this information is imperative. Motivation should ultimately occur at the individual level, but it is likely to be dependent in part on the structures of the school as well as on individual characteristics of educators and students (O’Day, 2002).

This study documented that while most teachers are open to this change, they are concerned that the resources (i.e. time and collaboration) needed for successful implementation may be limited. There may be a need to develop the knowledge and skills to promote valid

interpretation of information and appropriate attribution of causality at both the individual (teacher) and system (site and district) levels.

This should occur in the short run, but should also be applied to establish mechanisms for continued learning (O'Day, 2002) for the successful implementation of CCSS in the future.

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**APPENDIX A****GENERAL RECRUITMENT EMAIL COVER LETTER**

March [insert date], 2014

Dear [insert name of school] teachers,

My name is Zara E. Navarro and I am a doctoral candidate in the Rossier School of Education at University of Southern California. I am a candidate under the direction of Dr. Rudy Castruita. I am conducting a research study as part of my dissertation, focusing on how educator's may have to shift their paradigms from the practice of standard based learning and assessment to project based learning and assessment for the implementation of the Common Core State Standards (CCSS).

Your school has been identified and approved for participation by Dr. Morales, superintendent of Oxnard Unified School District. Participation in this study is entirely voluntary. If you agree, you are invited to participate by completing the attached survey and email it back to me. The survey is anticipated to take no more than 10-15 minutes to complete.

At the end of the survey, you will be asked if you are willing to be considered for participation in a face-to-face, follow-up interview. If selected, follow-up interviews will last approximately 45 minutes and may be audio-taped.

Please note, your identity as a participant will remain confidential at all times during and after the study.

If you have any questions, please contact me via email at [znavarro@usc.edu](mailto:znavarro@usc.edu) or by phone at 805-657-2063.

Thank you in advance for your consideration and participation.

Sincerely,

Zara E. Navarro  
Ed.D. Candidate  
University of Southern California

## APPENDIX B

### SURVEY INSTRUMENT

By beginning the survey, you agree you have read the above information and are willing to participate in this survey.

#### 2. Standard Based Learning and Assessment Viewpoints

Please check the box to show the extent of your agreement or disagreement with each statement.

1. Standard based learning and assessments represent a viable means to document and analyze student achievement in the course of study.

strongly agree     agree     undecided     disagree     strongly disagree

2. Standard based learning and assessments lends curriculum to be geared to teach to the test.

strongly agree     agree     undecided     disagree     strongly disagree

3. Teachers must understand the components of standard based learning and assessments in order to establish a curriculum which represents the elements of this type of learning.

strongly agree     agree     undecided     disagree     strongly disagree

4. Standard based learning and assessments should be incorporated into the implementation of the CCSS in classrooms.

strongly agree     agree     undecided     disagree     strongly disagree

#### 3. Project Based Learning and Assessments Viewpoints

Please check the box to show the extent of your agreement or disagreement with each statement

1. Project based learning and assessments represent a viable means to document and analyze student achievement in the course of study.

strongly agree     agree     undecided     disagree     strongly disagree

2. Project based learning and assessments enable students to develop critical thinking skills, collaborate, and analyze material in more detail.

strongly agree     agree     undecided     disagree     strongly disagree

3. Teachers must understand the components of project based learning and assessments in order to establish a curriculum which represents the elements of this type of learning.

strongly agree     agree     undecided     disagree     strongly disagree

4. Project based learning and assessments should be incorporated into the implementation of the CCSS in classrooms.

strongly agree     agree     undecided     disagree     strongly disagree

### 3. Organizational Barriers Viewpoints

Please check the box to show the extent of your agreement or disagreement with each statement.

1. Organizational barriers may hinder the successful implementation of the CCSS into the curriculum.

strongly agree     agree     undecided     disagree     strongly disagree

2. Organizational barriers which may occur outside of the classroom will be addressed in a timely manner.

strongly agree     agree     undecided     disagree     strongly disagree

3. Organizational barriers which may occur inside the classroom will be addressed in a timely manner.

strongly agree     agree     undecided     disagree     strongly disagree

4. Collaborative discussions about any organizational barriers which may occur will be crucial to the successful implementation of the CCSS.

strongly agree     agree     undecided     disagree     strongly disagree

### 4. Professional Development Viewpoints

Please check the box to show the extent of your agreement or disagreement with each statement.

1. Professional development training for the CCSS will be necessary for teachers to understand the new curriculum requirements

strongly agree     agree     undecided     disagree     strongly disagree

2. The viewpoints reflected in a 21<sup>st</sup> century classroom needs to be addressed in professional development training.

strongly agree     agree     undecided     disagree     strongly disagree

3. This district will provide sufficient professional development training for teachers to meet the requirements of implementing the CCSS in their classrooms. development training.

strongly agree     agree     undecided     disagree     strongly disagree

4. Professional development training will need to be adapted based on the needs of the teachers who are implementing the CCSS in their classrooms.

strongly agree     agree     undecided     disagree     strongly disagree

#### 4. Personal Characteristics

Please check the box which is applicable to you.

1. Age Range

21-25 years     25-35     35-45     45-55     over 55

2. Number of years teaching

1-5 years     5-10 years     10-15 years     15-20 years     over 20 years

3. What is the highest degree you hold?

BA or BS     Master's Degree     Ed. D.     Ph. D.     Currently pursuing a graduate degree

4. What teaching credentials do you hold?

Multiple Subject     Single Subject     Multiple and Single Subject     Emergency or substitute credential

5. What is your exposure to the CCSS?

None     Discussions but no training     Attended training

**5. Follow-up**

Thank you for taking the time to complete this survey.

1. Would you be willing to be contacted for a follow-up interview related to this topic?

No

Yes

**APPENDIX C****THANK YOU LETTER TO PARTICIPANTS**

May [insert date] 2014,

Dear Teachers,

I would like to take this opportunity to thank you for your voluntary participation in my dissertation research project. Your insights in how to best implement the Common Core State Standards will provide valuable information for my analysis.

If you have any questions, please do not hesitate to contact me via email at [znavarro@usc.edu](mailto:znavarro@usc.edu) or by phone at 805-657-2063.

Sincerely,

Zara E. Navarro  
Ed. D. Candidate  
University of Southern California

**APPENDIX D**

## INTERVIEW COVER LETTER/EMAIL

April [insert date], 2014

Dear [insert teacher's name],

My name is Zara E. Navarro and I am a doctoral candidate in the Rossier School of Education at the University of California under the direction of Dr. Rudy Castruita. As you know, my research focuses on the practice of shifting educator's paradigms from standard based learning and assessment to project based learning and assessment for the implementation of the Common Core State Standards (CCSS).

As indicated on the survey questionnaire, you are willing to participate in a 30-45 minute interview. Participation in this study is entirely voluntary. Your identity as a participant will remain confidential at all times. No one will be identified by name and you may withdraw from participating in this research at any time without prejudice. There are no known risks for participating in this research, but the benefits may be used to further understand the implications for implementing the CCSS criteria within the classroom. Your participation is voluntary, but encouraged, since teachers are affected by the implementation of the CCSS.

Please respond to this email with a date and time that is most convenient for you to be interviewed. If you have any questions, please contact me via email at [znavarro@usc.edu](mailto:znavarro@usc.edu) or via phone at 805-657-2063.

Thank you for your participation.

Regards,

Zara E. Navarro  
Ed. D. Candidate  
University of Southern California



## APPENDIX E

### INTERVIEW PROTOCOL

My name is Zara Navarro and I am working on a doctorate in education at the University of Southern California. I am studying how the current knowledge pedagogy of teachers affects the implementation of Common Core State Standards within this site and what professional development teachers are in the process of receiving or feel that they need in this district. Thank you for agreeing to this interview. I appreciate your response to the email granting permission for this interview to occur.

During this conversation, I am hoping to learn more about your thoughts and experiences regarding Common Core State Standards implementation. Specifically, I would like to know how this implementation may affect teaching practices, how professional development is being introduced and your views on a 21<sup>st</sup> century classroom. This study's ultimate goal is to create a useful guide for others when planning an implementation strategy for the Common Core State Standards.

I want to assure you that your comments will be strictly confidential. I will not identify you or your organization by name. I would like to tape this interview in order to have an accurate record of our conversation. Would that be okay? If at any time during this interview you want me to stop recording, please let me know and the machine will be turned off.

The interview should take about 30 minutes. Do you have any questions before we begin?

1. Please describe your experience as a professional education (including years of experience, grade levels taught and content) and your professional preparation for education (including credentials, certifications, and professional development).
2. What can you tell me about standard based learning and assessment?
3. What can you tell me about project based and performance based learning and assessment?
4. Describe your current understanding of the Common Core State Standards.
5. What are your perceptions of how current pedagogical knowledge will influence the implementation of the Common Core State Standards?
6. How do you feel that teachers can best acquire knowledge necessary to implement the Common Core State Standards?
7. What are the implications of a new standard's based initiative (Common Core) that focuses on project/performance based learning and assessment
  - a. In the district?
  - b. In your school?
  - c. In your classroom?
8. The Common Core State Standards focus on skills needed for students to be college and career ready. On that note, please describe your view on a 21<sup>st</sup> century classroom.
9. Do you feel that there might be any organizational barriers which may impede the implementation of the CCSS in the classroom? If so, please explain.

10. How is professional development being carried out to help educators in the district achieve a 21<sup>st</sup> century (project/performance based learning and assessment) classroom for Common Core State Standards??

11. How should professional development carried out to help educators in the district achieve a 21<sup>st</sup> century (project/performance based learning and assessment) classroom for Common Core State Standards?

Do you have anything to add in regards to Common Core state Standards implementation or professional development?

Thank you very much for your time. I appreciate it.

Zara E. Navarro  
Ed. D. Candidate  
University of Southern California

**APPENDIX F****THANK YOU LETTER TO PARTICIPANTS**

May [insert date] 2014,

Dear Teachers,

I would like to take this opportunity to thank you for your voluntary participation in my dissertation research project. Your insights in how to best implement the Common Core State Standards will provide valuable information for my analysis.

If you have any questions, please do not hesitate to contact me via email at [znavarro@usc.edu](mailto:znavarro@usc.edu) or by phone at 805-657-2063.

Sincerely,

Zara E. Navarro  
Ed. D. Candidate  
University of Southern California

## APPENDIX G

### IRB TRAINING

#### 1. Information Sheet

##### PURPOSE OF THE STUDY

The purpose of this study is to appraise the understanding that high school educators have of both the CCSS, 21<sup>st</sup> century learning skills, and project based learning and assessments versus standard based learning and assessments. Additionally, this study will help to identify and analyze what organizational barriers educators feel might impede the implementation of CCSS and what professional development that educators consider important in order to improve student learning through the incorporation of the concepts within the CCSS.

##### PARTICIPANT INVOLVEMENT

Participants of this study are elementary teachers in a urban Southern California School district. You will be asked to complete the attached survey and return answers to the researcher via email at [znavarro@usc.edu](mailto:znavarro@usc.edu). It is anticipated that the survey will take not more than 10-15 minutes to complete. You may decline to answer any question throughout the duration of the survey and all responses will remain confidential. The last question of the survey will ask you if you are willing to participate in a follow-up interview that will ask you to expand on your viewpoints in regards to CCSS. If you are will to do so and are chosen to participate, the interview will be recorded and last approximately 30-45 minutes.

##### CONFIDENTIALITY

There will be no identifiable information obtained in connection with this study. Your name, address or other identifiable information will not be disclosed. If you volunteer to participate in a follow-up interview, your information will be coded and presented as general data. If specific information related to your interview is quoted or described, your name will be changed to protect your privacy and identity.

The members of the research team and the University of Southern California's Human Subjects Protection Program (HSPP) may access the data. The HSPP reviews and monitors research studies to protect the rights and welfare of research subjects.

##### INVESTIGATOR CONTACT INFORMATION

The Ed. D. candidate is Zara E. Navarro (805-657-2063).

##### IRB CONTACT INFORMATION

University Park IRB, Office of the Vice Provost for Research Advancement, Stonier Hall, Room 224a, Los Angeles, CA 90089-1146. (213) 821-5272 or [upirb@usc.edu](mailto:upirb@usc.edu)