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The purpose of this study was to examine elementary literacy teachers' perceptions of their preparedness to implement the English Language Arts Common Core State Standards (ELA CCSS). Preparedness was defined as teachers' perceived levels of knowledge of the standards and its components; efficacy to implement changes; and actual changes to their instructional practices. A survey was developed based on the literature and administered to 158 elementary school teachers in two districts. Findings from the study document the nature of their professional development and identify areas where additional development opportunities are necessary. Discussion focuses on the need to provide more time and supports to teachers as they deal with the challenges of the new standards.

EXAMINING ELEMENTARY LITERACY TEACHERS' PERCEPTIONS
OF THEIR PREPAREDNESS TO IMPLEMENT THE
ENGLISH LANGUAGE ARTS COMMON
CORE STATE STANDARDS

by

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Committee Chair

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To Scot, Klete, and Brody
To Mom and Dad
For your constant support, sacrifice, and love

APPROVAL PAGE

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CHAPTER I

INTRODUCTION

Statement of the Problem

The implementation of the English Language Arts Common Core State Standards (ELA CCSS) represents a significant challenge for states, school districts, and teachers because the standards represent a considerable change from past state-designed standards and are commonly recognized as more rigorous and aligned to higher expectations (Association for the Supervision of Curriculum Development [ASCD], 2012; Kober & Rentner, 2012; Sawchuk, 2012; Shanahan, 2013). While the primary responsibility for their implementation begins with state departments of education, the ultimate success of this effort will depend on the extent to which teachers understand expectations and are ready to make the necessary instructional changes. To meet these dual goals for preparation, states and school districts have created and disseminated information on the standards; designed and offered teachers professional development; and made changes to curricula, assessments, and policies to align with the standards.

The critical question becomes: Are teachers prepared to successfully implement the standards into practice? In many cases, researchers have directed this question to state or district personnel and not classroom teachers

(Anderson, Harrison, & Lewis, 2012; Council of the Great City Schools, 2012; Kober, McIntosh, & Rentner, 2013; Kober & Rentner, 2011a; Kober & Rentner, 2011b; Kober & Rentner, 2012; McMurrer & Frizzel, 2013; Murphy & Regenstein, 2012; Rentner, 2013a; Rentner, 2013b; Rentner, 2013c). Moreover, when teachers have been asked about their preparedness to teach the CCSS, it is from a very general perspective; then researchers compare teachers' general estimations of their competence to teachers in other schools, districts, or states (ASCD, 2012) or provide broad assessments of preparedness without connections to classroom practice (AFT, 2013; Editorial Projects in Education Research Center, 2013; Scholastic, & Bill and Melinda Gates Foundation, 2013; Walker, 2013). How these ratings translate into increased understanding or knowledge and changes in instructional practices is not explored.

A more multidimensional approach is required to examine (a) what school districts and schools have offered teachers either through professional development or other means; (b) how teachers evaluate their knowledge and general self-efficacy relative to the standards and its components and topics, (e.g., close and critical reading, informational text, new state assessments, etc.); and (c) the extent to which teachers report that they have made instructional changes based on these estimations. By looking at these indicators, we will have a better understanding of the extent to which districts have prepared teachers for the different components of the ELA CCSS; the extent to which they perceive that they understand these components; and their perceptions about

whether their understanding led to the implementation of new instructional practices.

To accomplish these tasks, a multi-dimensional understanding of teacher preparedness and the development of a measure to evaluate this understanding, I will first present a conceptual framework illustrating various factors that shape teacher preparedness to implement the standard along with outcomes measures of teacher preparedness. Next, I will present a review of the existing literature on CCSS (with particular attention to the English language arts standards) and its history within our country's approaches to developing learning standards; a review of what is required if districts are to present quality professional development activities; and finally an evaluation of how others have evaluated teachers' preparedness for the CCSS. Thus, the purpose of this study is to build on previous research in this area and to develop a measure to evaluate the extent to which teachers perceive that they are prepared to deal with the challenges associated with the ELA CCSS implementation.

Conceptual Framework

This study adopts a social constructivist approach which highlights teachers' active engagement in constructing new knowledge and understanding through participation with others in activities and experiences (Vygotsky, 1978). As teachers engage in learning experiences and professional development around the standards, they actively and collectively make meaning of the standards. Beliefs about teaching and learning serve as a filter through which

teachers process new knowledge and substantially influence their judgments and actions in the classroom (Levin & He, 2008). In addition, teachers' beliefs influence choices relating to topics to teach and instructional strategies to adopt (Bandura, 2006; Chrysostomou & Philippou, 2010; Pajares, 2006; Richardson, 1990). According to DeFord (1985), teachers' knowledge "forms a system of beliefs and attitudes which direct perceptions and behaviors" (pp. 352–353).

Teachers' construction of new knowledge, preparedness to meet the challenges of the new standards, is related to their overall understanding of the standards and their components; sense of confidence or self-efficacy to teach the standards; and actual changes in instructional practices based on implementing the standards (Duffy, 2005; Schraw, 2006). Their overall understanding requires reconciliation between past and newly acquired knowledge as well as confidence in their ability to use this knowledge to implement necessary instructional changes ability (Bandura, 1986; Ormrod, 2006). In the case of implementing the ELA CCSS, teachers' sense of self-efficacy would relate their confidence in their ability to successfully teach the standards. Research suggests that self-efficacy is an important mediator between an individual's knowledge and his/her actions (Emmer & Hickman, 1991). Consequently, in looking at teachers' perceptions of preparedness to implement the ELA CCSS from a multidimensional perspective, teachers' sense of efficacy would likely influence the degree to which teachers take the new knowledge learned in relationship to the standards and make corresponding changes in their instructional practice. In addition, although a

causal link has not been determined, there is a theoretical link connecting perceived preparedness and the development of self-efficacy (Giallo & Little, 2003). In order to fully explore teachers' perceptions of preparedness, however, it is necessary to understand not only the knowledge and self-efficacy teachers have relating to the standards, but also what they can do with that knowledge and self-efficacy. Therefore, the final dimension of changes in instructional practice is included as an outcome to understand teachers' perceptions of preparedness.

Several factors will likely influence a teacher's perceptions of their preparedness to implement the standards. First, background factors such as years of teaching experience as well as additional degrees, coursework, or qualifications will likely play a role in shaping teachers' perceptions of their preparedness. Second, professional development experiences will also likely influence teachers' perceptions of their preparedness. Professional development experiences for teachers vary greatly in a variety of ways. Some teachers may only experience formal professional development opportunities delivered by the school or district within which they work, while others will likely seek out additional information and learning experiences relating to the ELA CCSS on their own. The quality, quantity, content of the professional development activities and how they are formatted and who presents the information will potentially influence teachers' perceptions of their preparedness to implement the standards. Third, there are mediating variables at play, such as the level of

school support for implementation; the availability of resources aligned with the standards; and teachers' overall perceptions of the quality of the standards that will likely have an effect on teachers' perception of their preparedness.

Figure 1 provides a graphical depiction of the proposed conceptual framework for understanding teachers' perceptions of their preparedness to implement the ELA CCSS into practice. This framework was adapted from a conceptual framework for understanding factors influencing preservice teacher preparedness (Ingvarson, Beavis, & Kleinhenz, 2007).

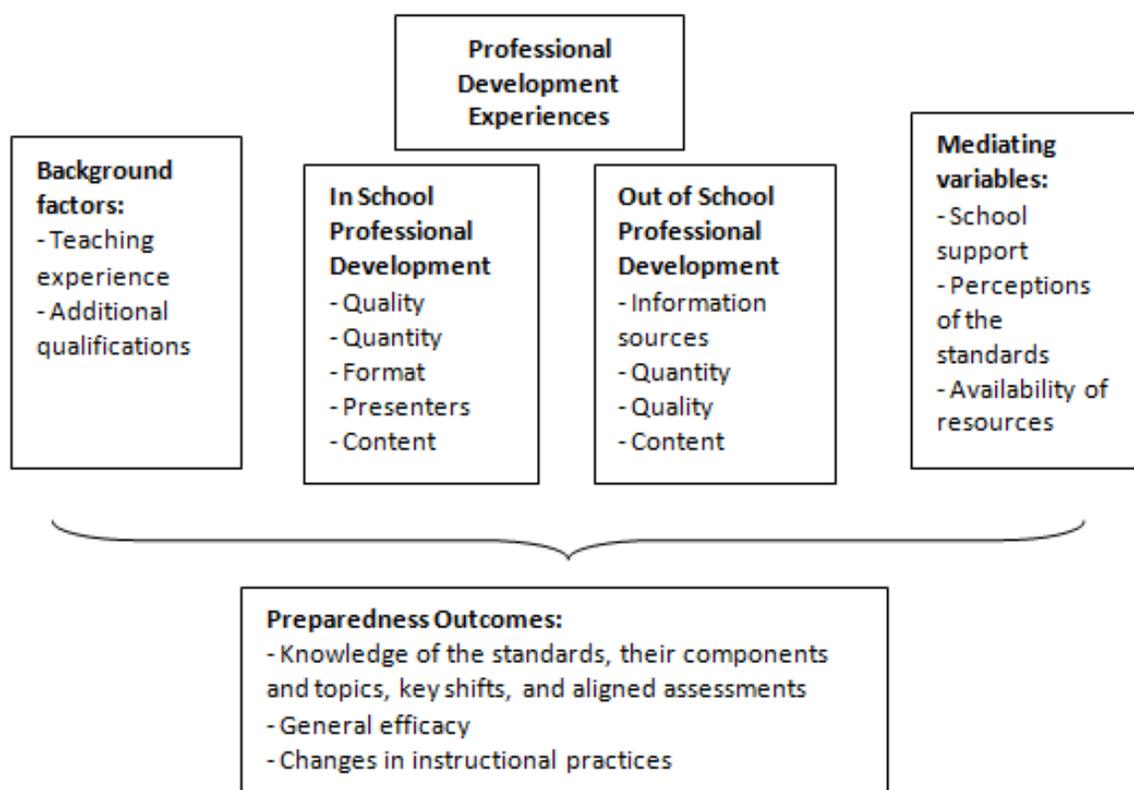


Figure 1. Proposed Conceptual Framework For Teachers' Perceptions of Their Preparedness for Implementation of the English Language Arts Common Core State Standards.

In summary, there are many factors that influence teachers' perceptions of their preparedness to implement the ELA CCSS. These factors stem from teachers' backgrounds and previous teaching and learning experiences; their experiences and professional learning of the standards; their school environment and level of support; as well as their personal perceptions of the standards. These factors shape teachers' perceptions of their preparedness to meet the challenges of the new standards by giving them knowledge of the standards and by increasing their sense of self-efficacy, thereby leading to the implementation of the necessary instructional changes.

Review of the Literature

The following review of the literature includes five sections (a) the history of the standards movement, (b) an overview of the CCSS, (c) challenges the new standards are likely to present for teachers, (d) a summary of the literature on effective professional development, and (e) research studies evaluating teachers' preparedness for the new standards. Findings from these sections were used to develop a comprehensive survey instrument that examines teachers' perception of their preparedness from multiple perspectives.

History of the Standards Movement

In order to understand the present state of affairs in education, particularly those that relate to the CCSS, it is necessary to understand how we got to where we are in our present accountability history. This section will review how the

historical developments of the standards movement in education led to the development of the CCSS.

The standards movement emerged in the 1980s following the publication of *A Nation at Risk: The Imperative for Educational Reform* (National Commission on Excellence in Education, 1983). This report was issued by the National Commission on Excellence in Education, a group appointed by President Reagan's Secretary of Education, Mr. Terrel H. Bell. The commission was charged with assessing the quality of education in the United States. It concluded that the nation's educational system was in dire need of reform, stating that it was "being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people" (National Commission on Excellence in Education, 1983, p. 9). In addition, the report highlighted the economic imperative for society to improve the nation's educational system in order to remain globally competitive. The commission encouraged states to move from a focus on minimum competency standards to high standards for all students. The standards movement also evolved, in part, as a result of cognitive science research of the time which illustrated that clear expectations were a prerequisite for improving learning (Rothman, 2012; Watt, 2009).

National organizations and states willingly responded to the call for higher learning standards (Rothman, 2012; Vinovskis, 1999). In 1989, the National Council of Teachers of Mathematics (NCTM) released *Curriculum and Assessment Standards for School Mathematics*, which represented a consensus

from the field of the major ideas in mathematics that all students should learn (Barton, 2009; Rothman, 2012). These standards were highly influential in the reform of existing state curricula as well as the National Assessment of Educational Progress (NAEP) (Ravitch, 1995; Rothman, 2012). Also in 1989, President George H.W. Bush called an educational summit with the nation's governors. The outcome of this summit was six expansive goals to be reached by the year 2000 (Wixson, Dutro, & Athan, 2004); one of the goals of this summit was that "American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography" (Vinovskis, 1999). To supervise the progress towards these goals, the National Education Goals Panel (NEGP) was created (Ravitch, 1995).

In order to assess progress towards the National Education Goals, Congress established the National Council on Education Standards and Testing (NCEST) in 1991 (Ravitch, 1995; Wixson et al., 2004) to "advise on the desirability and feasibility of national standards and tests" (NCEST, 1992, p. 1). The council released a report in 1992 recommending national content standards and correlating assessments (NCEST, 1992). This report advocated for national and state standards to include the following components:

An overarching statement for each subject area to provide a guiding vision of its content and purpose; *Content standards* that describe the knowledge, skills, and other understandings that schools should teach in order for students to attain high levels of competency in challenging subject matter; *Student performance standards* that define various levels of competence in

the challenging subject matter set out in content standards; *School delivery standards* (often referred to as *opportunity-to-learn standards*) developed by the state collectively from which each state could select the criteria that it finds useful for the purpose of assessing a school's capacity and performance; and *System performance standards* that provide evidence about the success of schools, local school systems, states, and the Nation in bringing all students, leaving no one behind, to high performance standards. (NCEST, 1992, p. 13)

The authors believed that all of the above components would be necessary for increasing student achievement and improving teacher instruction (Wixson et al., 2004).

The Bush administration also distributed grants to a variety of organizations to develop voluntary national standards across the content areas (New York State Department of Education, n.d.; Rothman, 2012). In addition, the administration encouraged states to develop content standards (Wixson et al., 2004). Clinton's administration continued to strive for national standards with its Goals 2000 legislation which established a framework for developing high academic standards, monitoring students' progress towards these standards, and ensuring that students had the necessary supports to achieve the standards (Paris, 1994; Schwartz, Robinson, Kirst, & Kirp, 2000). This Act also established the National Education Standards and Improvement Council (NESIC) to award grants to states to establish standards and to examine and endorse national and state content, performance, school delivery standards as well as the assessment systems states voluntarily submitted (Ravitch, 1995; Schwartz et al., 2000).

However, this council was eliminated by the newly Republican controlled Congress in 1994 before members were even appointed (Rothman, 2012).

In 1994, the national standards effort came crashing to a halt when the soon-to-be released history standards, developed by the National Center for History in the Schools at the University of California at Los Angeles, were harshly criticized by Lynne Cheney in the *Wall Street Journal* for being “too negative in their treatment of the United States, the West, and white males; too dismissive of traditional heroes; and too uncritical in their embrace of multiculturalism and other politically left themes” (Ravitch, 1995, p. xvii). Other critics agreed with Cheney believing the standards were politically biased. The demise of the history standards became a symbol for federal and state policymakers, illustrating the fact that creating widely supported national standards would simply be unattainable (Ravitch, 2010; Wixson et al., 2004). This belief was further reinforced in 1996 when the National Council of Teachers of English (NCTE) and the International Reading Association (IRA) jointly released a set of proposed English/language arts standards that were severely disparaged by the press (Myers, 2011).

The failure of the national standards movement led to a renewed effort for states to develop their own learning standards. States were encouraged by the 1994 Goals 2000: Educate America Act to develop standards in order to receive federal funding for education (Jennings, 2012; Rothman, 2012; Schwartz et al., 2000). The Improving America’s Schools Act (IASA), the 1994 reauthorization of

the Elementary and Secondary Education Act (ESEA), required states to establish learning standards for all grades, assessments that matched these standards for students at third grade and above, and an accountability system that measured school performance on the assessments (Watt, 2009). By the late 1990s, all states except Iowa had created learning standards in reading and mathematics (Rothman, 2012). The vision of state standards, assessments, and accountability systems persisted with the reauthorization of ESEA in 2001, more commonly referred to as the No Child Left Behind (NCLB) Act, which officially required state-level standards by law (Ravitch, 2010).

While the initial purpose of the standards movement was to determine what students should know and be able to do at each grade levels and to develop a means to assess students' mastery of this content, this movement morphed into a test-driven accountability movement with the passage of NCLB, with minimal attention given to what we were asking students to learn (Jennings, 2012; Ravitch, 2012). Several key elements of NCLB eventually led to the movement that brought about the CCSS (Rothman, 2012; Wixson, 2011). First, because each state established its own content standards for learning, there existed a wide variation in the content, quality and rigor of the standards (Barton, 2009; Wixson, 2011). Second, each state set its own definition of proficiency, again resulting in high variability and state test results not aligning with the results of National Assessment for Educational Performance (NAEP; ASCD, 2012; Rothman, 2012). Third, the number of students requiring reading

remediation support upon entering the job market and college was increasing (ACT, 2006; ASCD, 2012; Rothman, 2012). Finally, the notion that state boundaries were somewhat meaningless given increased student mobility and the necessity of students being prepared to compete in a global society furthered the need for common standards across states (Darling-Hammond, 2010; Rothman, 2012; Wixson, 2011). All of these factors led many to see the need for the creation of high, common standards; this push resulted in the creation of the CCSS.

The English Language Arts Common Core State Standards

The CCSS were created through the collaborative effort of the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA) (NGA & CCSSO, 2010) and are the result of a voluntary, state-led effort to create a common set of internationally-benchmarked, college and career ready standards in English/language arts and mathematics for K-12 students. These two organizations underscored the need for “fewer, clearer, and higher” standards that would ensure graduates were ready for the challenges of college and career throughout the initiative’s process (Rothman, 2012). The first phase in writing the standards involved three organizations: Achieve, ACT, and the College Board, establishing work groups for English/language arts and mathematics to determine the standards for graduating high school students. These standards would become the College and Career Readiness (CCR) Anchor Standards. In phase two, experts in the field of education were recruited

to take the CCR Anchor Standards and break them down into grade level progressions. CCSSO and NGA created validation committees to evaluate the standards. Finally, the two organizations released a draft of the standards for feedback from the public. The final draft was released in June 2010.

While the standards are national in scope, they are not “national standards”, but instead state standards due to the fact that states voluntarily adopt the standards (ASCD, 2012; Porter, McMaken, Hwang, & Yang, 2011). This is an important distinction, as the United States Constitution assigns education as a state, not federal, responsibility. However, the federal government does provide incentives for states to adopt the CCSS through President Obama’s “Race to the Top” reform agenda, which exhorts states to adopt “internationally benchmarked state-developed standards and assessments that prepare students for success in college and the workplace” (Organisation for Economic Co-operation and Development [OECD], 2011, p. 228), or in other words, the CCSS. Currently, 45 states, Washington DC, and four territories have adopted the CCSS.

The standards are intended to present a clear and consistent vision of what students should know and be able to do at each grade level so that they are college and career ready by graduation. The Standards are not a curriculum; they are intended to offer direction for curriculum development by presenting the fundamental content for English/language arts and mathematics (Wixson, 2011). Unlike traditional standards, identifying material to be taught, the CCSS

highlighted key College and Career Readiness (CCR) Anchor Standards that students should master by high school graduation in order to be adequately prepared for higher education or entry into a career. The CCR Anchor Standards are broken down through progressive grade-level benchmarks, denoting students' progress toward mastery of these central learning outcomes (NGA & CCSSO, 2010).

The English Language Arts Common Core Standards document begins with a brief introduction explaining the purpose and process involved in the development of the standards. While not defining literacy or English/language arts, the authors do provide the reader with a description of what it means to be a literate person in the 21st century stating,

Students who meet the Standards readily undertake the close, attentive, reading that is at the heart of understanding and enjoying complex works of literature. They habitually perform the critical reading necessary to pick carefully through the staggering amount of information available today in print and digitally. They actively seek the wide, deep, and thoughtful engagement with high-quality literary and informational texts that builds knowledge, enlarges experience, and broadens world views. They reflexively demonstrate the cogent reasoning and use of evidence that is essential to both private deliberation and responsible citizenship in a democratic republic. (NGA & CCSSO, 2010, p. 3)

The introduction also includes key design elements of the standards, an explanation of the CCR and grade level standards, a focus on results, the manner in which research and media skills were woven throughout the standards, an interdisciplinary approach to literacy, and the importance of focus and coherence in both instruction and assessment (NGA & CCSSO, 2010, p. 4-

5). The introduction also articulates what is not included in the standards: how to teach the content, all the content that must be taught, strategies for differentiation, supports for exceptional children and English learners, and the entire set of knowledge, skills, and dispositions students need to be college and career ready (NGA & CCSSO, 2010, p. 6). Finally, the introduction provides a description of a student who is college and career ready in English/language arts.

The English/language arts standards themselves begin with an explanation of how to read the document. Although the ELA CCSS emphasize an integrated approach to language arts, the standards are divided into reading, writing, speaking and listening, and language standards, for ease of use. Each of these standards is tied to a set of CCR Anchor Standards and then further broken down into grade level standards in the elementary and middle grades and grade level bands for high school. There are ten CCR Anchor Standards for reading which are divided into four categories: Key Ideas and Details; Craft and Structure; Integration of Knowledge and Ideas; and Range of Reading and Levels of Text Complexity. These ten CCR Anchor Standards are unpacked into grade level standards for reading literature and reading informational text. In addition, in the elementary grades, there are also standards for foundational reading skills: print concepts, phonological awareness, phonics and word recognition, and fluency. The foundational skill standards do not have CCR Anchor Standards; they simply ensure that students acquire the foundational knowledge necessary for students to learn to read.

There are also ten CCR Anchor Standards for writing divided into four groups: Text Types and Purposes; Production and Distribution of Writing; Research to Build and Present; and Range of Writing. The standards expect students to learn to write narrative, informative and argumentative text, with argumentative or opinion writing serving as the “cornerstone of the writing standards” (CCSSI, 2012). A significant emphasis is placed on students’ learning to conduct research to use to support the ideas and claims in their writing.

There are six CCR Anchor Standards for speaking and listening, separated into two areas: Comprehension and Collaboration and Presentation of Knowledge and Ideas. These standards focus on students’ ability to speak and listen in academic discussions one-on-one, in small groups, and in whole class settings. Both informal discussion and formal presentations are included in the standards. Finally, there are six CCR Anchor Standards for language which are divided into three topics: Conventions of Standard English, Knowledge of Language, and Vocabulary Acquisition and Use. The language strand places a heavy emphasis on vocabulary with the expectation that students learn new words through conversation, direct teaching, and wide reading. The authors decided to separate the language standards from the other three language arts standards because vocabulary and language conventions are used across all across reading, writing, and speaking and listening.

The standards are followed by three appendices with additional information to aid in implementation of the standards as intended by the authors. Appendix A includes the research behind the English/language arts standards with specific attention paid to text complexity, foundational reading skills, and language development. Appendix A also defines the three types of writing the standards promote. Furthermore, Appendix A also includes a glossary of terms that are relevant to the English/language arts standards. Appendix B provides text exemplars in terms of complexity, quality, and range. It also includes sample performance tasks for teachers to use and model assessments after. Lastly, Appendix C includes student writing samples for the three types of writing (narrative, informative, and argumentative) for each grade level.

While these standards represent an important first step in improving schools, implementation will be critical in determining the standards' impact on student achievement and teaching practices. In order for the intended policy action of Common Core to be effective, teachers need to be equipped to implement the standards in their classroom. Therefore, teachers play a critical role in translating the standards into practice. Because these standards are commonly recognized as more rigorous than previous state learning standards and because they emphasize different knowledge and skills (Kober & Renter, 2012; Sawchuk, 2012; Shanahan, 2013), teachers will likely face challenges in the implementation process. The next section will explore some potential challenges teachers will likely face in implementing the standards.

Critical Challenges for Implementing the ELA CCSS

The authors of the Common Core note key shifts from previous language arts standards. These shifts include (a) building knowledge through content-rich nonfiction and informational text; (b) reading and writing grounded in evidence from text; and (c) regular practice with complex text and its academic vocabulary. Researchers and other experts in the field have also noted additional changes that are likely to require changes in teachers thinking and practice to successfully implement. This section will explore some of the challenges teachers are likely to face in implementing the CCSS in English language arts. Teachers understanding of these challenges will likely play an important role in their preparedness to teach the standards.

Teachers face several challenges as they attempt to implement the ELA CCSS into practice. They differ from the state standards they are replacing in a number of significant ways (McLaughlin & Overturf, 2012; Shanahan, 2013; Wixson, 2013a). First, the ELA CCSS are recognized as more rigorous than the previous state standards (Beach, 2011; Shanahan, 2013), and they have brought new or renewed attention to several key concepts in English/language arts: close/critical reading, informational text, text complexity, higher order thinking skills, and an integrated view of English/language arts and disciplinary content. These changes in focus and perspective will likely require teachers to make changes in what they teach as well as how they teach and may require new learning. Each of the above changes will be explored in more detail, including

what the standards document has to say about it, what knowledge teachers will need, and how it might require new pedagogical practices for teachers. Second, the new assessments that align with the ELA CCSS also differ quite significantly from the state assessments they are replacing. Teachers face an additional challenge in preparing students to take these exams, particularly since they will, in most places, be used to evaluate teachers' effectiveness. Since high-stakes testing drives the curriculum (Au, 2007), the quality of the assessments, as well as their alignment with the ELA CCSS, will, to a large extent, affect the implementation of the standards. Finally, if states that have adopted the ELA CCSS hope for effective implementation, it will be necessary for them to give teachers the resources, support, training, and time necessary.

Next, I will discuss the challenges teachers are likely to face in implementing the ELA CCSS. While I recognize that these challenges are not necessarily discrete in nature, a teacher might expect close reading of a complex information text on science content, I will discuss them separately in order to point out specific features of each challenge.

Close and critical reading. While close and critical reading is by no means a new goal of education, the Common Core has brought renewed attention to it. Close reading of text entails the critical examination and deep analysis of a piece of text, often requiring multiple readings (Brown, Kappes, & Aspen Institute, 2012; Shanahan, 2013). The purpose of close and critical reading is the acquisition of new knowledge; close reading transpires both within

and across texts (Pearson & Hiebert, 2013). The first anchor standard for reading is focused specifically on close reading stating that students should be able to “Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text” (NGA & CCSSO, 2010, p. 10). While this first standard points specifically to close reading, Pearson and Hiebert (2013) point out that close reading is a part of all the standards because one cannot gain key ideas and details, integrate new knowledge, critique and evaluate text, and study craft and structure without reading text closely and critically. The focus on close and critical reading has several important implications for classroom practice.

First, some have confused the focus on close reading to indicate that the message lies in the text alone and eliminates the need for background knowledge (Brown et al., 2012). However, the attention to close reading is not meant to eliminate what the reader brings to the text, because it is this knowledge that defines what the reader is able to learn from the text and the goal of close reading is new knowledge. In order to support students in reading closely, teachers can assist students in setting a purpose for reading, activating their background knowledge on the topic, and making connections to personal experiences as well as other texts (Pearson & Hiebert, 2013).

Second, teachers will need to scaffold students learning of reading closely through text-based questions and discussion (Brown et al., 2012). The

teacher can use the gradual release of responsibility model (teacher model, guided practice, collaborative practice, and independent practice) as a means to structure support for students learning to be critical readers. While many teachers may be familiar with this model, they may not be applying it to close reading where students generally work with a brief piece of complex text and try to gain a deep, meaningful understanding of it. Close reading goes far beyond literal comprehension and surface level understanding and requires thoughtful analysis and evaluation of the ideas and concepts presented in the text and how they relate to each other as well as the knowledge the reader brings to the task (Pearson & Hiebert, 2013). Teachers will need to carefully plan both how to model and guide students with thoughtful questions to elicit this deep understanding and critical analysis of the text.

Third, as students read closely and analyze multiple texts, teachers can assist them in reviewing and connecting the big ideas from one text to another as they build their knowledge base (Pearson & Hiebert, 2013). Close reading often requires repeated readings of the same text to establish a deep understanding (Shanahan, 2013). Teachers need to give students multiple opportunities to grapple with complex text and discuss their emerging understandings with their peers and the teacher. The teacher can take on the role of facilitator and help probe students thinking with thoughtfully planned questions that encourage the critically thinking about the ideas and underlying messages presented in the text.

Brown et al. (2012) name the following characteristics of a close reading lesson: (a) selection of a short, complex text of exemplary quality, (b) time for students to independently read the text, (c) opportunity for shared reading aloud, (d) text-based questions and discussion as a class, (e) student discussions of the text, and (f) writing about the text. While this is certainly not the only structure for close reading lesson, it does provide a general framework for teachers to begin thinking about how to teach students to read more closely and critically.

Informational text. The ELA CCSS positions informational text on par with literary text in the elementary grades with informational text taking precedence as students' progress to middle and high school (Ogle, 2013; Shanahan, 2013). This shift represents a major change for many elementary teachers due to the traditional marginalization of informational text in these early years of school (Duke, 2000). In regards to informational text, the standards document states:

Part of the motivation behind the interdisciplinary approach to literacy promulgated by the Standards is extensive research establishing the need for college and career ready students to be proficient in reading complex informational text independently in a variety of content areas. Most of the required reading in college and workforce training programs is informational in structure and challenging in content; postsecondary education programs typically provide students with both a higher volume of such reading than is generally required in K–12 schools and comparatively little scaffolding. (NGA & CCSSO, 2010, p. 4)

There is good reason behind the recent push to focus more attention on informational text in elementary grades. Informational text represents the bulk of

what most people read in high school, college, and beyond and is where students glean much new knowledge (Shanahan, 2013). The emphasis on information text is in part of result of employers and college instructors citing that graduates were unable to comprehend the level of text required for the job or course (Ogle, 2013).

The increased attention on informational text in the elementary grades will require many elementary teachers to make changes in their practice. They will need to focus more attention and time on instructing students on informational and persuasive texts; they will also need to have access to quality and varied types of texts, both digital and print, used to inform and persuade (McLaughlin & Overturf, 2012). Teachers need to be aware of the various forms of informational text: literary nonfiction, historical documents, scientific journals, manuals, directions, brochures, menus, biographies, autobiographies, essays, speeches, charts, graphs, maps, etc. and provide opportunities for reading and instruction on a variety of informational texts (Gewertz, 2012a). Due to the fact that reading and writing are genre specific (Duke, Caughlan, Juzwik, & Martin, 2012), teachers will need to know how to instruct students to navigate and comprehend different types of texts. Ogle (2013) suggests surveying students early in the year to gain a better understanding of their familiarity and knowledge relating to information text. This information can provide teachers with a starting off point for planning instruction with informational text.

Informational text differs from literary text in a number of important ways. First, informational text includes text features such as pictures, captions, text boxes, index, table of contents, etc. that are not often found in literary text. These text features provide additional information and may change the manner in which the student reads the text. Reading informational text does not always entail reading from the start to the finish of the text. Often the reader is seeking information and may use the text features to find what he/she is looking for.

Second, informational text is often structured differently than literary text. Instead of a beginning, middle and end story format, common informational text structures include descriptive, linear, compare-contrast, cause-effect, problem-solution and argument/persuasion. When students are able to understand the manner in which the author has structured the text, they are better able to comprehend the information in the text and they remember more of the important information in the text (Dymock & Nicholson, 2007; Purcell-Gates, Duke, & Martineau, 2007). Third, the language and style of writing often differs between informational text and literary text as well as among the various kinds of nonfiction text. While both informational and literary text can have challenging vocabulary, the meaning of those challenging words is often more critical to understanding the nonfiction text (Hiebert, & Cervetti, 2011). In addition, the language in informational text is often more straightforward with less focus on literary elements; however the ideas are no less complex. These differences in language and style relate to the varied purposes of informational and literary text.

Whereas, the main objective with informational text is to gain new knowledge, the overarching goal of literary text is to entertain the reader.

In order for students to become proficient readers of informational text, teachers will need to give students lots of opportunities to read and discuss different types of informational text, significantly more than what happens in many elementary classrooms (Duke, 2000). Teachers should try to use multiple texts on the same topic in order for students to see different authors' perspectives on the same topic and learn to become critical consumers of informational text by analyzing the quality and effectiveness of the author's message (Ogle, 2013). Teachers will also need to provide explicit instruction on text features and text structures common to informational text and provide students opportunities to practice finding, discussing and understanding these elements of informational text. However, teachers also need, at times, to take on the role of facilitator and allow students to actively and deeply engage with informational text independently, with partners, and in small groups (Ogle, 2013). Gewertz (2012a) notes that the "immediate challenge of the informational-text emphasis . . . lies more in training than in materials" (p. 12).

Text complexity. The Common Core's focus on text complexity may represent the biggest change in both practice and thinking for many teachers. The standards document says the following in regards to text complexity,

The Reading standards place equal emphasis on the sophistication of what students read and the skill with which they read. Standard 10 defines a grade-by grade "staircase" of increasing text complexity that

rises from beginning reading to the college and career readiness level. (NGA & CCSSO, 2010, p. 8)

One standard, standard ten, is completely devoted to increasing students' ability to read more complex text, representing a first in the history of the standards movement (Pearson & Hiebert, 2013). The rationale behind the push for increased text complexity is that a gap exists between the reading level expectations of senior in high school and the reading level expectations of college and careers (Pearson, 2013). The standards propose to reduce this gap by increasing the text complexity levels in grades three and above. The standards document provide three criteria for measuring text complexity: qualitative measures (i.e., levels of meaning, structure, language conventionality and clarity, and knowledge demands), quantitative measures (i.e., readability measures), and consideration of the reader and the task.

Hiebert and Mesmer (2013) point out three assumptions underlying the Common Core's stance on text complexity:

1. Many current high school graduates are not prepared to read the texts of college and the workplace.
2. K–12 texts have decreased in complexity.
3. Increasing the complexity of texts from the primary grades onward can close the gap between the levels of texts in high school and college. (pp. 46-47)

These assumptions have led to the recommendations to increase the Lexile levels starting in second and third grade to ensure college and career readiness. However, Hiebert and Mesmer (2013) contend that the declining levels of text

complexity is only relevant for middle and high schools and express concern that raising the text complexity levels in early grades may negatively impact students' acquisition of foundational reading skills as well as their motivation and engagement in reading.

The increased expectation in text complexity represents a significant shift in the conventional thinking related to early reading instruction. The theory of reader-text match has dominated the literature and discourse on reading instruction and is based on the notion of finding students "just right" books to maximize their learning (Clay, 1991; Pinnell & Fountas, 2010). "Just-right" books are neither too easy nor too hard for the students. The Common Core's focus on text complexity implies that students need to be reading text within their grade-level band regardless of their instructional reading ability (Pearson, 2013).

Because the emphasis on text complexity represents a major shift in thinking, it also requires a major shift in practice for most teachers. Reading complex text does not represent an end in itself. Rather, the end goal is for students to be able to read and *understand* complex text (Valencia, Wixson, & Pearson, in press). This represents a significant challenge for teachers.

Pearson (2013) asks the important question, "What makes us think that we can improve things by expecting students to read ABOVE grade level texts when, in the current environment, we cannot manage to help our students handle texts that are AT grade level?" (p. 7). We cannot simply ask students to read more difficult text and expect them to be successful without providing significant

scaffolding for their learning. Most teachers will likely need considerable professional development to increase their knowledge of text and pedagogy if they are to successfully support students in deeply comprehending complex text (Pearson & Hiebert, 2013).

Valencia et al. (in press) suggest that readability formulas cannot provide a complete picture for teachers in terms of text complexity and that close attention must be paid to the reader, the task, and the context. They offer Text-Task Scenarios (TTSs) as a means to analyze curriculum, instruction, and assessment. TTS include consideration for the text and task students are expected to complete and the framework takes into consideration the reader and the context. All four of these elements must be considered in designing lessons around complex text.

Pearson and Hiebert (2013) suggest three ways teachers can assist students in understanding more complex text. First, teachers can help students understand differences in the vocabulary typically found in narrative text (typically synonyms of words students are already familiar with) and information text (new concepts that are critical to understanding the text). Second, teachers can give students opportunity for choice and allow them to read text they find interesting. If students are interested in a topic, they will be more motivated and engaged during reading. Students may also bring more background knowledge to readings they find interesting, providing them with a stronger foundation to comprehend challenging text. Finally, teachers can make sure that students

read plenty of text of increasing length. This will help their reading ability and stamina. Despite these recommendations, Pearson and Hiebert (2013) argue that without substantial changes in professional development, many teachers will likely not have the necessary skills and knowledge to teach students how to read more complex text.

Higher order thinking skills. Most researchers and educators agree that the ELA CCSS places a greater emphasis on higher order knowledge and skills than the state standards they are replacing (i.e., McLaughlin & Overturf, 2012; Porter et al., 2011; Wixson, 2013a). The standards' focus on higher order thinking skills is evident in their description of research and media skills blended into the standards.

According to the standards document, in order to be ready for college, careers, and life in the 21st century students need to be able “to gather, comprehend, evaluate, synthesize, and report on information and ideas, to conduct original research in order to answer questions or solve problems, and to analyze and create a high volume and extensive range of print and nonprint texts” (NGA & CCSSO, 2010, p. 4). This focus is also evident in the College and Career Anchor standards that privilege knowledge integration, critical analysis, interpretation, synthesis of ideas, and providing evidence (McLaughlin & Overturf, 2012; Shanahan, 2013).

Porter et al. (2011) conducted a study comparing the CCSS with existing state standards. They found that the standards did “reveal a shift towards

greater emphasis on higher order cognitive demand” (p. 110). Moreover, there is also evidence to suggest that many teachers currently lack the skills, knowledge, and self-efficacy to engage students in higher order thinking and tasks (Sawchuk, 2012). Consequently, if teachers are to effectively teach the standards and engage students in critical thinking and challenging tasks, they will likely need support and professional development to do so.

Peterson and Taylor (2012) offer several suggestions for how to engage students with higher order questions. While their suggestions relate to literary texts, many of their suggestions can be applied to informational text as well. They suggest teachers purposefully plan several higher order thinking questions to align with the lesson objective. If the questions initially are too challenging for students, they recommend the teacher model appropriate responses. They emphasize that teacher support and peer support through discussion is essential in developing students’ capacity to think more critically about what they read. They advocate for time to reflect on, discuss, and write in response to questions that require critical and deep thinking about what has been read.

Teachers also need to consider task complexity in fostering students’ ability to think at higher levels. If tasks are too easy, designed to ensure success, they will not lead to learning (McCaslin & Good, 1996). More complex tasks provide more meaningful learning opportunities for students, encourage them to become more self-regulated in their learning (McCaslin & Good, 1996), and are more motivating for students (Miller, 2003). Miller (2003) argues that if

we want students to be able to think more critically, then it is essential that we design instructional activities that require them to do so. He terms these tasks high-challenge tasks. High-challenge tasks require students to extend a great deal of effort to complete and promote students to value the learning process. In a study where teachers switched their instruction from low-challenge task to high-challenge tasks, Miller found that the high-challenge tasks increased students learning and their motivation. In order to promote students in higher order thinking skills: analyzing, evaluating, critiquing, and synthesizing, teachers must be purposeful and their lesson design to incorporate questions and tasks that promote this kind of thinking. Many teachers will likely need support and professional development to do so.

Integrated approach to English/language arts and literacy in the content areas. The ELA CCSS take an integrative approach to literacy and despite the standards being separated for clarity purposes, the authors believe the individual strands are closely connected (NGA & CCSSO, 2010). This integrated perspective represents an important shift away from the excessive attention devoted to reading in the No Child Left Behind Era (Pearson & Hiebert, 2013). A key assumption underlying this perspective on English and language arts is that “receptive (reading and listening) and productive (writing and speaking) language processes are integrated in learning (Pearson & Hiebert, 2013). The integrated perspective of English/language arts presented in the

standards calls for a synthesized approach to teaching standard (McLaughlin & Overturf, 2012) that can lead to improved teaching and learning (Wixson, 2013a).

In addition, the standards feature more intensive focus on disciplinary content than do the previous state standards (Conley, 2012, p. 141). The standards document states,

The Standards insist that instruction in reading, writing, speaking, listening, and language be a shared responsibility within the school. The K–5 standards include expectations for reading, writing, speaking, listening, and language applicable to a range of subjects, including but not limited to ELA. (NGA & CCSSO, 2010, p. 4)

A disciplinary view of literacy identifies it as a key component of any disciplinary domain and recognizes that different disciplines privilege different knowledge, skills, and ways of communicating (Pearson, 2013). Russell (2002) proposes that students entering disciplinary discourse communities must learn both the “facts” of the content area and the “essential rhetorical structures: specialized lines of argument, vocabulary, and organizational conventions, the tacit understandings about what must be stated and what assumed – in short, the culture of the discipline that gives meaning to the ‘facts’” (p. 18). Within science and social studies, students require nuanced and varied literacy skills in order to access the disciplinary knowledge base. By conducting “think aloud” readings with accomplished professionals in various disciplines, Shanahan and Shanahan (2008) found discipline-specific ways of thinking and knowing reified in the text and text reading/interpretation of disciplinary material.

Even students who have mastered basic or fundamental reading skills require additional instruction in order to grasp higher-level disciplinary content. As students progress from basic and intermediary to advanced disciplinary literacy, their skills and routines become more sophisticated, but less generalizable from subject to subject due to technical language, discipline-specific text organization, and increasingly abstract content (Shanahan & Shanahan, 2008). Despite the benefits of advanced disciplinary literacy instruction, many teachers may lack the knowledge and experience either to identify disciplinary text features or to teach students to navigate those features.

Wixson (2013a) calls for a content-process view of literacy, “composed of both the processes of reading, writing, listening, and speaking and the content of the texts that promote connections with other disciplines as well as the world outside the classroom” (p. 193). So how do teachers achieve this balanced approach? The use of thematic units offers one means for integrating both the processes of English/language arts and the content material (Wixson, 2013a). Thematic units have the potential to provide coherence to instruction, offer opportunities for in-depth learning, and promote student interest and engagement.

Many teachers have not had training in discipline specific literacy instruction. Teacher preparation programs generally offer limited coursework in literacy that focuses on general reading skills or generic “reading in the content area” strategies. Rarely do preservice teachers experience coursework in

discipline-specific literacy courses (Shanahan & Shanahan, 2008, p. 53).

Typically, literacy courses for preservice teachers are dissociated from content courses (probably even housed in the School of Education rather than the Physics or History Department) and are “organized according to general literacy-related topics, such as vocabulary, prior knowledge and motivation, comprehension, reasoning, and writing” (Conley, 2012, p. 142). Even teachers, who are quite knowledgeable in particular disciplines, may have automatized their disciplinary reading, and therefore are unable to articulate to students the norms and conventions of the discipline (Snow, Griffin, & Burns, 2005).

The reality of teaching in the era of the Common Core demands that all teachers support students in making meaning of complex text in their disciplines, and specifically of informational or non-fiction text beyond the English language arts classroom. A recent survey of 70 education majors at Kansas universities found that during their university education program 89% of teacher candidates believed teaching information literacy skills was a priority, but only 10% claimed to be “very familiar” with information literacy skills, 51% “somewhat familiar” and 39% had “never heard of them” (Stockham & Collins, 2012).

Teachers can and must learn to apprentice students in reading discipline specific text with positive effects to their reading comprehension (Snow et al., 2005). However, they will likely need to grow their own knowledge base and repertoire of content specific pedagogy in order to be able to do so. This will require considerable professional development, but has the potential to increase

students' content and literacy knowledge, skills, and performance (Zygouris-Coe, 2012).

New Common Core aligned assessments. With the adoption of new standards come new state assessments. Two independent test development consortia: the Partnership for Assessment of Readiness for College and Careers (PARCC) and the Smarter Balanced Assessment Consortium have been awarded \$330 million to develop state assessments aligned with the CCSS (Applebee, 2013). Most states that have adopted the CCSS are a member of one or both of the test consortia and plan implement the newly designed assessments in the 2014-2015 school year. These assessments are fairly different from the state assessments they are replacing. Whereas many state assessments relied solely or primarily on a multiple choice format for state tests, the new assessments include traditional multiple choice questions, technology enhanced multiple choice questions, and constructed response questions (Wixson, 2013b). In addition, the assessment consortia developed performance assessments that involve the integration of standards to prepare students for real world tasks (Smarter Balanced Assessment Consortium, 2012). Students are expected to read, gather information, discuss information, answer questions, and write in order to demonstrate their ability to apply what they have learned. For example, one sample Smarter Balanced performance task requires students to examine several sources about gardening. Students are then expected to

answer three questions to show what they have learned and write an argumentative article about school gardens for their school newsletter.

The quality of these assessments and the extent to which they align with the standards are critically important because once released they will likely have a greater impact on the curriculum and instruction than the standards themselves (Applebee, 2013). In addition, the results of these new assessments will, in many places, be used to determine teachers' effectiveness.

Summary. Clearly, the implementation of the ELA CCSS represents a significant challenge for states, schools, and teachers. Because the standards represent a considerable change from the state standards they are replacing, changes in practice are needed. The CCSS are not a curriculum; they are intended to offer direction for curriculum development by presenting the fundamental content for English/ language arts and mathematics (Wixson, 2011). Therefore, the manner in which states, counties, districts, and schools use the standards to develop curriculum will likely vary and will be influenced by not only the standards, but the creators' knowledge, experience, and understandings of teaching and learning. This translation of the standards into a curriculum is an important step in the process of standards implementation (ASCD, 2012).

Teachers will need the materials and resources necessary to successfully implement the standards into practice (Gewertz, 2012b). Because of the focus on complex text and informational text, it will be important for teachers to have a variety of texts from different genres that are both interesting and complex

(McLaughlin & Overturf, 2012). But more important than the materials, teachers need the content and pedagogical knowledge to be able to successfully implement the standards (Killion, 2011). The English Language Arts Common Core represents significant changes in perspectives on literacy (more integrated with a focus on disciplinary knowledge), the types of texts students should be reading (more informational and complex), and the manner in which students read (closely and critically). Teachers need time to understand these changes and the rationale for these shifts. In addition, many teachers will need to gain new knowledge and pedagogy to effectively teach the standards. As cited in the above discussion on the major changes represented by the standards, this will require quality, long-term, ongoing professional development (ASCD, 2012; Wixson, 2013a). In addition, teachers need time to work collaboratively with their colleagues to interpret, analyze and grapple with the standards (McLaughlin & Overturf, 2012). Real changes in practice, the kinds advocated for in the standards, will not take place overnight.

One additional point to mention relates to the fact that these challenges are presented by researchers: teachers were not asked for their suggestions. This statement should not be interpreted to minimize the importance of these challenges; instead, teachers may have more items to add to this list and their voice in this matter is critical given their primary role in this reform effort. Therefore, when evaluating teacher preparedness for the ELA CCSS, researchers need to evaluate teachers' understanding of these different

challenges, how prepared they feel to meet these challenges, and to give teachers an opportunity to offer additional difficulties based on their classroom experiences.

Professional Development

In order for the ELA CCSS to be successfully implemented into practice, school districts and states need to put in place comprehensive and systematic approaches for implementation (ASCD, 2012; Weiner, 2013). Successful implementation will likely require educators to make substantial changes in current practices that require professional learning (Hall & Hord, 2011; Murphy & Regenstein, 2012). Therefore, plans for implementation must include provisions for ensuring that teachers increase their knowledge and are adequately prepared given that they are the individuals responsible for teaching the standards. This preparation involves increasing teachers' content and pedagogical knowledge; time to work with colleagues to critically analyze the standards; and opportunities to develop, practice, and reflect on new practices (Corcoran, 1995). This preparation takes shape in the form of professional development, an essential component in successful implementation of any educational reform (Gibson & Brooks, 2012).

Learning Forward, previously named the National Staff Development Council, defines professional development as “a comprehensive, sustained, and intensive approach to improving teachers’ and principals’ effectiveness in raising student achievement” (Leaning Forward, 2012, para 3). Professional

development can vary significantly in format, length, content and participation (Birman, Desimone, Porter, & Garet, 2000) making it a complex entity to study. Traditionally, professional development was considered discrete activities such as workshops, conferences, courses, institutes, and centers (Desimone, 2009). However, in recent years, professional development has taken on a broader conceptualization to include co-teaching, mentoring, lesson reflection, professional book clubs and study groups, and inquiry and action research (Desimone, 2009).

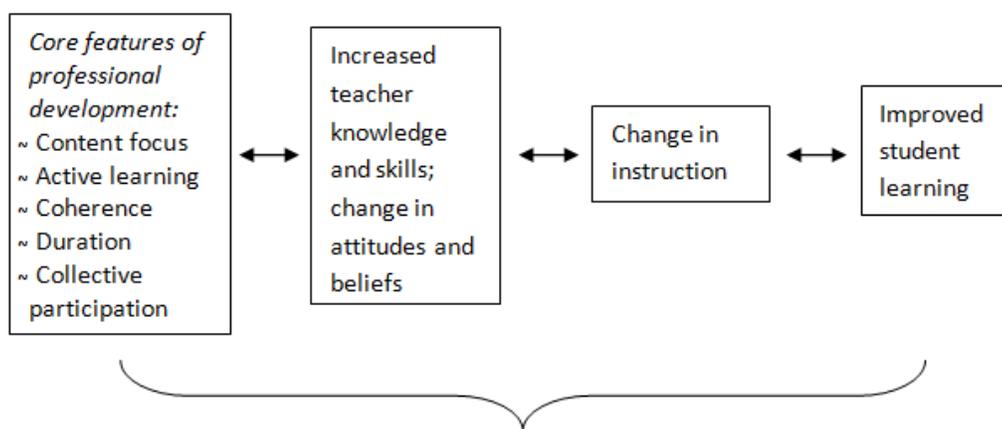
Kennedy (1998) argues that the content of professional development matters more than the structure and organization. However, even when these factors are constant, differing school contexts can lead to considerable differences in the results of the same professional development, leading Guskey (2009) to argue that context as well is an important factor influencing professional development, quite possibly above both content and process. Consequently, it becomes difficult, if not impossible, to determine a “one size fits all” approach for professional development on the ELA CCSS or any other topic for professional learning (Kedzior & Fifield, 2004). However, this difficulty has not stopped researchers from attempting to develop lists of best practices or characteristics of effective professional development.

There exists a fairly substantial body of literature regarding the characteristics of effective professional development (Desimone, 2009; Gibson & Brooks, 2012). Researchers, teacher associations, and educational

organizations have all developed lists of the essential characteristics of effective professional development (American Federation of Teachers, 2008; Birman et al., 2000; Corcoran, 1995; Gibson and Brooks, 2012; Hunzicker, 2011; Ingvarson, Meiers, & Beavis, 2005; National Educators' Association, 2013). In 2003, Guskey conducted an analysis of 13 of the most commonly cited of these lists and found that while commonalities existed, no two lists were identical. Some characteristics were found on many of the lists, while others were unique to just one or two of the lists. However, not one characteristic was consistent across all 13 lists. Out of the 21 different characteristics only six—enhances teachers' content and pedagogical knowledge; provides sufficient time and other resources; promotes collegiality and collaboration; includes procedures for evaluation; aligns with other reform initiatives; & models high quality instruction—were found on at least half of them. Guskey (2003) cites differences in the manner in which the lists were compiled, how effectiveness was defined, the intended audiences and purposes, and the real-world context in which the professional development was carried out as contributing factors to the variations in the lists of characteristics. He concludes that it may be unrealistic to assume that a single list of effective professional development characteristics will ever emerge; instead, Guskey argues for the field to focus on agreeing on criteria for defining effectiveness and presenting clear descriptions of contextual factors in professional development research.

In 2009, Guskey proposed an alternative to developing lists by identifying a set of core elements that play a role in the effectiveness of professional development and can be adapted to the distinct contextual considerations. While characteristics and core elements may sound similar, there is an important distinction. Characteristics are more specific in nature, whereas, core elements are broader in conception and adaptable to different contexts. Guskey (2009) recommended time, collaboration in problem solving, school-based orientation, and strong leadership as core elements of effective professional development and defined these core elements broadly. Time related to teachers having adequate time to extend their knowledge, analyze student work, and adopt and practice new instructional approaches; however, time alone was not sufficient because it had to be well organized and focused so that it promoted teacher learning. Collaboration in problem solving promoted an environment of professional learning as well as a shared sense of responsibility and purpose among participants. A school-based orientation for professional development targeted the needs of each school. While not all professional development needed to be school-based, a good deal of the professional development should be related to the particular needs of the school and teachers because of each school's unique context. Finally, strong leadership was considered a core element for successful professional development. While the leadership style may differ depending on school context, no successful reform effort has occurred without strong leadership.

Desimone (2009) made a similar argument for the use of core elements to study professional development. Based on research consensus, she identified content focus; active learning; coherence; duration; and collective participation as critical features of professional development that lead to increased teacher learning, changed practice, and ultimately improved student learning. Using these five core features of effective professional development, Desimone (2009) proposed a conceptual framework to be used in future studies of the effectiveness of professional development (see Figure 2).



Context such as teachers and student characteristics, curriculum, school leadership, policy environment

Figure 2. Proposed Core Conceptual Framework for Studying Professional Development on Teachers and Students (Desimone, 2009).

While terminology is slightly different, several of the elements in Desimone's framework relate to Guskey's (2009) proposed core elements discussed earlier. Duration clearly relates to time, and active learning and collective participation both overlap with what Guskey refers to as collaborative

problem solving. This leaves two additional core elements: content focus and coherence. Content focus refers to the topics or themes that are addressed through professional development (Kennedy, 1998). Desimone (2009) points to research that links professional development activities that focus on subject matter content and pedagogy to increased teacher knowledge and skills, improved instructional practices, and to a lesser extent, increases in student learning. Lastly, Desimone described coherence in professional development activities as two fold. First, coherence related to the alignment between learning activities and existing knowledge and beliefs. Second, coherence related to alignment between school, district, and state reforms and policies and professional development activities.

Combining the core elements recommended by Guskey (2009) and Desimone (2009), results in the following list: time (duration); collaboration in problem solving (active learning and collective participation); school-based orientation; strong leadership; content focus; and coherence (See Figure 3). In order to conceptualize these core elements more concretely, I used several lists of essential characteristics of effective professional development and mapped these characteristics onto Guskey's (2009) and Desimone's (2009) core elements. This was done to link the specific nature of the ELA CCSS and their associated challenges with the professional development that is necessary to prepare teachers for these challenges. Appendix A shows the essential characteristics from several prominent lists on professional development mapped

onto Guskey's (2009) and Desimone's (2009) core elements. This table provides a more comprehensive understanding of the core elements.

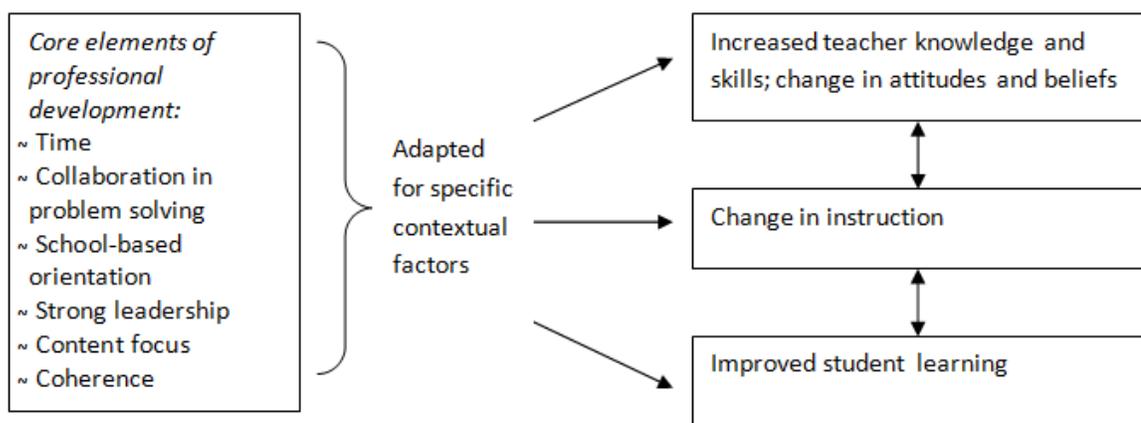


Figure 3. Revised Conceptual Framework for Studying Professional Development Combining Desimone (2009) and Guskey (2009).

Thus, when evaluating teachers' perception of their preparedness to implement the ELA CCSS, the question becomes: How do these core elements of professional development provide a framework to evaluate the extent to which teachers are prepared to implement the Common Core, in particular, those aspects of the standards that are likely to be especially challenging for teachers? In other words, teachers need time and follow up support to deeply understand the standards and fully implement them into practice, particularly in light of the major changes in practice necessitated by the new standards (AFT, 2008; Birman et al., 2000; NEA, 2013). Time involves both the total number of hours spent on an activity as well as the period of time in which the professional development occurred (Desimone, 2009). However, time alone is not sufficient;

the time must be purposeful, focused, and spent on meaningful learning experiences and important content (Guskey, 2009). Knowing the amount of time, the period of time, and the learning experiences that occurred during this time provides a means for understanding teachers' preparedness to implement the new standards.

Teachers also need opportunities to collaborate with colleagues in order to socially construct meaning of the standards (Birman et al., 2000; Corcoran, 1995; Ingvarson et al., 2005). This collective participation allows interaction and discourse among colleagues and serves as an influential means for new learning (Desimone, 2009). However, Guskey (2009) cautions that collaborative problem solving can also block change or result in conflict if all individuals are not invested in change. Therefore, it is important for schools to share a common vision and goals for implementation of the standards (NEA, 2013).

Understanding the opportunities teachers have been provided to collaborate with their peers and actively engage with the new standards provides an additional way to understand how prepared teachers are to face the challenges and shifts in thinking and practice that are a result of the Common Core.

In addition, insight into the extent to which implementation efforts are school-based and tailored to the needs of the teachers, helps with understanding the degree to which teachers are prepared to implement the standards. While elements may be consistent across professional development activities and outside knowledge and guidance may be necessary, it is also important to target

the individual needs of each school and the teachers (AFT, 2008; Gibson & Brooks, 2012; NEA, 2013). Because school contexts differ quite dramatically (Guskey, 2009), implementation efforts that are differentiated for school and teacher needs will likely better prepare teachers to meet the challenges of implementation. Attempts to evaluate teachers' perceptions of their preparedness need to be sensitive to these subtleties of context.

Next, while the style may vary by context, strong leadership is critical for successful implementation of the ELA CCSS (Guskey, 2009). Strong leadership will ensure that teachers have the necessary materials, time, and support to implement the standards successfully (Gibson & Brooks, 2012; Hunzicker, 2011; NEA, 2013) and position teachers to be prepared to handle the implementation effectively. In terms of content, the topics that would be most important to focus professional learning would likely be those that require shifts in teachers' thinking and practice (AFT, 2008; ASCD, 2012; NEA, 2013). For the ELA CCSS some important areas of focus would be those discussed above in the challenges for implementation, namely, close and critical reading, informational text, text complexity, higher order thinking skills, and an integrated view of English/language arts and disciplinary content, as well as the new state assessments. Lastly, coherence must exist between professional learning and the goals of the teacher, school, district, and state as they relate to the ELA CCSS if teachers are to feel equipped to implement the standards into practice (Birman et al., 2000; Gibson & Brooks, 2012; NEA, 2013).

Understanding how schools' professional development shapes the manner in which teachers increase their knowledge, feel confident in their preparedness, and develop new instructional practices is critical for studying the actual implementation of the ELA CCSS as well as any attempt to evaluate teachers' perception of their preparedness. The next section, an examination of the literature on the processes states, districts, and schools have taken in implementing the CCSS, will provide guidelines for an evaluation of the extent to which teachers feel confident in their ability to meet the challenges of the new standards.

Research on Implementation of Common Core

Due to the fact that the CCSS are relatively new, few studies in peer reviewed journals exist; instead, most efforts are reports and guidelines from government and private educational organizations, often sponsored by large national foundations and newspaper, magazine, and blog articles. A number of surveys, polls, and studies examined teachers' perceptions of the CCSS with a focus on the nature of their professional development, providing valuable information on the implementation process as well as the professional development teachers have received on the CCSS (i.e., Achieve, 2011; AFT, 2013; Anderson et al., 2012; ASCD, 2012; Council of the Great City Schools, 2012; Editorial Projects in Education Research Center, 2013; Kober et al., 2013; Kober & Rentner, 2011a, 2011b, 2012; McMurrer & Frizzel, 2013; Murphy & Regenstein, 2012; Rentner, 2013a, 2013b, 2013c; Scholastic & Bill and Melinda

Gates Foundation, 2013; Walker, 2013; Watt, 2011). Specifically, they provide insight regarding states' adoption process; perceptions; states' and districts' plans and timelines for implementation; professional development; cost of implementation; curriculum materials and resources; assessments; and cooperation between states and with higher education systems as they relate to the CCSS (with particular attention given to the English Language Arts standards). The following paragraphs provide a brief summary of the critical findings of these studies.

Adoption and information dissemination. Initially, 45 states and Washington DC adopted the ELA CCSS (EPE, 2013; Rothman, 2013), three states have officially withdrawn and several others states are considering withdrawing (Rice, 2014). This rather quick adoption has left states facing significant implementation challenges and required states to make changes to policies and practices in an effort to ensure successful implementation of the standards (EPE, 2013). In a survey completed by the Center in Education Policy (CEP) in 2011, states deputy superintendents or their designees almost unanimously cited the increased rigor and the expectation of improved student learning as reasons for adopting the CCSS (Kober & Rentner, 2011b). The next most commonly cited reason for adoption was the possible effect on their Race to the Top application (Kober & Rentner, 2011b). In a follow-up survey in 2012, the CEP found that most states did not foresee changing their decision to adopt

the standards, with only three states reporting this as a possibility (Kober & Rentner, 2012).

States have been busy taking steps to familiarize key stakeholders with the standards. The CEP survey conducted in 2013 found that all adopting states were providing information on the standards to state education agency staff and school district leaders and staff (Kober & Rentner, 2012). In addition, many states are also taking steps to inform the larger public about the new standards including state leaders, higher education faculty, and parents (Kober & Rentner, 2012).

Perceptions of the Common Core. Perhaps because Common Core adoption was so quick, public awareness and opposition was initially rather low. Shortly after the release of the CCSS, Achieve, an independent, nonprofit education reform organization, conducted a survey of voters, intentionally oversampling educators, regarding perceptions of public education and awareness of the CCSS. While almost all voters cited public education as an important issue, only 10% of voters, and educators, believed that public education was currently working well (Achieve, 2011). The survey also found voters supported common standards, regardless of age, education, race, ethnicity, or political party. At the time of the survey, August, 2011, the general public had limited awareness of the CCSS and among those who were aware, opinions varied as to whether or not the new standards represented a positive direction for education. Awareness among educators was considerably higher,

and educators, in general, had a more favorable view of the standards (Achieve, 2011). Similarly, in a survey completed by the CEP in 2011, districts reported little resistance to Common Core implementation from parents, community members, and educators (Kober & Rentner, 2011a).

The CCSS have been embraced by so many states, districts, and educators because of their perceived quality. States and districts participating in CEP's studies almost without exception agreed that the CCSS were more rigorous than the previous state standards and would lead to improved student learning in both English/language arts and mathematics (Kober & Rentner 2011a, 2012; Rentner, 2013a). Teachers, in general, also supported Common Core implementation and agreed that the Common Core would improve students' critical thinking skills (Scholastics & the Bill and Melinda Gates Foundation, 2013; Walker, 2013). This was especially true for teachers who had the most knowledge and experience with the new standards (Scholastics & the Bill and Melinda Gates Foundation, 2013). This increased rigor led to the perception among both state officials and educators that implementation would require substantial changes in curriculum and instructional practices (Rentner, 2013a; Scholastics & the Bill and Melinda Gates Foundation, 2013).

Despite pervasive "initiative fatigue" (ASCD, 2012, p. 15), teachers report being excited about Common Core implementation (Scholastics & the Bill and Melinda Gates Foundation, 2013). This may be due to the fact that many teachers believed that implementation will help them improve their own teaching

and classroom practice (EPE, 2013). At the same time, teachers also have pragmatic views of the challenges that accompany implementation (Scholastic & the Bill and Melinda Gates Foundation, 2013). Teachers report being reasonably well prepared to teach the CCSS to students, however, they report being markedly less prepared to teach particular student populations, such as English language learners and students with disabilities (EPE, 2013; Scholastic & the Bill and Melinda Gates Foundation, 2013).

Plans and timelines for implementation. While states have varied timelines for implementation, most states do not expect full implementation before the 2014-2015 school year (Anderson et al., 2012; Council of the Great City Schools, 2012; Kober & Rentner, 2012). States vary in their roll out approach with some states implementing the new standards all at once, and others phasing them in over time, beginning in the early grades and progressing through to the later ones (Anderson et al., 2012; Rentner 2013a). The majority of states have developed and disseminated comprehensive state level plans for implementation (Kober & Rentner, 2012; Rentner, 2013a). An initial step taken by most states involved conducting a comparative analysis of the CCSS and the previous state standards (Anderson et al., 2012; Council of Great City Schools, 2012; Rentner, 2013a; Watt, 2011). In a report published by the Association for Supervision and Curriculum Development (ASCD), this approach was referred to as the crosswalk approach and the report cautioned that this approach, although common, “fails to adequately capture the level of content mastery, rigor, and

depth of change necessary to meet the expectations of college and career readiness in the Common Core standards” (ASCD, 2012, p. 13). Instead, the report suggested that the best way to facilitate successful implementation was to promote teachers’ awareness and knowledge of the Common Core and ensure that they have the necessary resources and professional development.

Most states implementation plans included making changes to existing curricula, assessments, teacher policies, and professional development for teachers in order to be aligned with the CCSS (Kober & Rentner, 2011b, 2012). A general implementation progression taken by many states involved first developing aligned curriculum and instructional resources and then providing professional development for educators (Anderson et al., 2012). State educational agencies have taken steps to familiarize districts with the standards through informational meetings and the development of informational materials to assist districts with implementation (Council of the Great City Schools, 2012; Rentner, 2013a). However, approximately two-thirds of the districts surveyed by the CEP reported inadequate or unclear guidance from their state as a major challenge they were facing in implementing the Common Core (Kober & Rentner, 2011a). In addition, only a quarter of teachers working in high poverty districts reported that their districts were well prepared to implement the Common Core in a National Educator’s Association (NEA) survey (Walker, 2013).

In a survey conducted by the Editorial Projects in Education (EPE) Research Center, teachers reported school administrators and state educational

departments were the primary sources of information on the CCSS (EPE, 2013). Yet, in a poll conducted by the American Federation of Teachers (AFT), teachers reported a significant concern regarding the school districts' implementation of the standards (AFT, 2013). Many teachers also reported having a limited role in the implementation of standards in the NEA survey (Walker, 2013).

Professional development. Professional development represented an essential and significant component of states' and districts' Common Core implementation plans (Watt, 2011). This has led to educators' knowledge and awareness of the standards expanding quickly; however, this increase in knowledge may not represent the deep level of understanding that will be required to help students meet the higher standards (ASCD, 2012). All Common Core adopting states surveyed by the CEP reported creating materials for professional development and carrying out statewide professional development (Kober & Rentner, 2012). However, the survey revealed that this professional development varied by both content and process. Both the 2012 and 2013 CEP surveys revealed that many states viewed providing professional development in sufficient quantity and quality as a widespread and major challenge (Kober & Rentner, 2012; Kober et al., 2013). Surprisingly, less than half of the districts surveyed by the CEP in 2011 had provided or planned to provide professional development to teachers (Kober & Rentner, 2011a). Therefore, it would appear, that at least early on in the implementation process, many districts were relying on the state educational agency for professional development programs.

There are mixed results regarding the amount of professional development teachers have received. Surveys by the EPE and NEA show that many teachers have received some professional development (Walker, 2013), although typically less than four days (EPE, 2013). However, nearly three out of ten teachers reported that they have received no professional development related to the Common Core in the EPE survey (Gewertz, 2013) and only one quarter of the states surveyed by the CEP in 2013 reported that more than 75% of their teachers have received professional development (Kober et al., 2013). Similarly, over half of the teachers polled by the AFT reported either no training or inadequate training (AFT, 2013). The NEA survey reported that only a quarter of the teachers surveyed reported that their training was helpful (Walker, 2013). While states report using a variety of approaches for professional development (Anderson et al., 2012), teachers reported that most professional development was delivered in structured, formal settings such as workshops or seminars and carried out by school or district personnel (EPE, 2013). The most common topics covered by professional development appeared to be the new English/language arts standards, the new math standards, alignment between the Common Core and previous standards, and collaboration with colleagues (EPE, 2013). While teachers reported wanting more professional development in order to effectively meet the standards (Walker, 2013); it appears that they have not been satisfied with the professional development they have received. Because teachers' sense of preparedness to teach the CCSS relates with how much professional

development they have had (Gewertz, 2013), effective professional development appears to be vital to successful implementation.

Cost of implementation. States are looking to make changes to curriculum, assessments, professional development and teacher evaluation systems in order to align these elements with the CCSS. These changes are important, but they can be expensive. States and districts have cited finding adequate funds for their implementation efforts as a major challenge they are facing (Kober & Rentner, 2011a, 2011b, 2012). This challenge has been exacerbated by the fact that many states have made cuts or frozen budgets for K-12 education and/or their state educational agency (Rentner, 2013a). Two national organizations have released reports to estimate implementation costs associated with Common Core and reached noticeably different results (Rothman, 2013).

The Pioneer Institute, an independent, non-partisan, privately funded research organization and a leader in the campaign against the CCSS, conducted a study and found the costs across states over a seven year time period would be approximately \$15.8 billion (Accountability Works, 2012). The report states that this is a mid-range estimate that only includes required spending for implementation, which is broken down to include \$1.2 billion for new assessments, \$5.3 billion for professional development, \$2.5 billion for new, aligned textbooks and curriculum materials, and \$6.9 billion for technology infrastructure and support.

The Thomas B. Fordham Institute, a nonprofit education policy think tank and advocate of the CCSS, also published a report entitled “Putting a price tag on Common Core: How much will implementation cost?” (Murphy & Regenstein, 2012). This report projects significantly lower costs associated with Common Core implementation. This lower estimate was the result of several factors: only looking at transitional costs, relying on a more balanced approach to implementation that employs both traditional and new strategies, not including costs for building technical infrastructure, and taking into account current state expenditures on these actions to reach a net-cost estimate (Murphy & Regenstein, 2012).

The report describes three potential approaches to implementation: (1) *Business as Usual*, a traditional approach to implementation, which includes purchasing new textbooks, administering paper-pencil state assessments, and in-person professional development; (2) *Bare Bones*, an alternative approach which relies on utilizing open-source materials, computer-based state assessments, and online professional development; (3) *Balanced implementation*, a mixed approach to implementation that includes a combination of instructional materials, assessments, and professional development (Murphy & Regenstein, 2012). The report projects the *Business as Usual* approach to cost \$12.1 billion, the *Bare Bones* approach to cost \$3.0 billion, and the *Balanced Implementation* to cost \$5.1 billion. The authors concluded that “Implementation can be modestly priced and likely more effective if states are astute enough to (a)

implement differently, (b) redeploy resources that they're already spending, and (c) take advantage of this rare opportunity to revamp their education delivery systems, too" (Murphy & Regenstein, 2012, p. 12).

Curriculum materials and resources. The introduction of new learning standards necessitates new, aligned curriculum materials and classroom resources. Most states are revising curriculum materials and/or creating new materials to align with the Common Core (Kober & Rentner, 2012). About half of the Common Core adopting states have or are in the process of creating web-based portals holding an assortment of curriculum resources (Watt, 2011). Many districts also report efforts to develop or purchase aligned curriculum materials (Kober & Rentner, 2011a). Most states have reported that Common Core aligned curriculum is being taught in both math and English language arts in at least some school districts or grade levels; however, in the same survey, states reported developing and identifying aligned curriculum materials and supplying teachers with aligned curriculum materials and resources to implement the standards were significant challenges they were facing (Rentner, 2013a). Teachers have also expressed concern regarding the alignment of their curriculum materials with the Common Core (EPE, 2013) and the need for updated classroom resources (Walker, 2013).

Assessments. The development of new assessments is particularly critical because, once released, the form and content of these assessments will likely have greater influence on curriculum and classroom practice than the

CCSS themselves (Applebee, 2013). According to the CEP survey, numerous states have already revised state assessments to better align with the content of the CCSS prior to the release of the consortia-developed assessments while the remaining states have not changed their existing state assessments (Rentner, 2013a). Almost all states belonging to one or both of the state testing consortia conveyed positive opinions of the assessments being developed by the consortia (Rentner, 2013c). Approximately half of the CEP surveyed states have begun the process of training teachers to interpret the assessment results and use the data to inform their instruction, provide additional support to students who may experience difficulty passing the new Common Core aligned assessments, and develop remediation plans for students who do not pass the exams (Rentner, 2013c). In addition, about half of the surveyed states were contemplating administering additional Common Core aligned assessments either in addition to or in lieu of the consortia-developed assessments.

A survey conducted by Achieve revealed strong support for common assessments among states but varied opinions regarding the use the assessments' results (Achieve, 2011). The general public expressed strong support for the use of assessment results for a variety of accountability purposes, while teachers were more skeptical of using test results for accountability reasons. Many states have been working on creating evaluation systems which hold teachers accountable for student mastery of the standards determined by their performance on Common Core aligned assessments (Council of the Great

City Schools, 2012; Rentner, 2013a). A few states are considering suspending consequences of state assessments on a temporary basis (Rentner, 2013c). However, over half of the teachers who participated in an NEA survey revealed that their schools plan to use Common Core assessment data to evaluate their performance (Walker, 2013). Teachers overwhelmingly support a moratorium on assessment result consequences until Common Core is fully implemented (AFT, 2013).

Because the new consortia-developed assessments will be administered in a computer-based online format, states and educators have concerns regarding technology challenges associated with the new assessments (ASCD, 2012; Kober & Rentner, 2012). Nearly all states cited technological issues as a major or minor challenge they expected to face with assessment administration relating to bandwidth, availability of computers, knowledgeable personnel for handling technology problems as they arise, and security issues (Rentner, 2013a). Teachers also expressed the belief that more and better technology was necessary to implement the computer-based assessments (Walker, 2013).

Cooperation between states and with higher education systems.

When surveyed in 2011, state education departments had no concrete plans for coordination between K-12 and higher education systems (Kober & Rentner, 2011). However, when surveyed again in 2013, many states had formed formal partnerships with institutes of higher learning to ensure that the CCSS do in fact prepare students for college readiness, as they are intended to do (McMurrer &

Frizzell, 2013). Additionally, the 2013 CEP survey found that almost all participating states have collaborated with other states on the Common Core Standards implementation efforts (Rentner, 2013a). States reported this collaboration has resulted in increased expertise of State Educational Agency staff, the sharing of effective strategies, as well as shared costs.

Conclusion. These studies provide valuable insight into the ways in which states and school districts have adopted, planned for and implemented the CCSS. The results of these studies reveal varied perceptions, timelines, cost estimates, professional development, and development of aligned curriculum materials and resources across states, districts, and schools. They provide some information regarding teachers' preparedness to implement the CCSS in terms of their own perceptions of preparedness to teach all students as well as particular populations of students, and the professional learning that they have experienced related to the Common Core. These studies provide a foundation for creating a survey instrument to measure teachers' perception of their preparedness. They suggest that questions relating to perceptions of quality, professional development, knowledge of the standards, curriculum materials and resources, and assessments would be necessary for establishing teachers' perceptions of their preparedness to teach the standards in light of district and state support.

Purpose Statement and Research Questions

Teachers' preparedness is critical for the successful implementation of the ELA CCSS. While the results of the studies previously discussed on the Common Core provide valuable insight into the implementation process, they fail to fully capture the complex nature of teacher preparedness. Instead, teacher preparedness is only explored from a very general perspective and compared across schools, districts, and states. Based on a review of the literature, teachers' perceptions of their preparedness to implement the Common Core has not been fully explored. I argue that a more multidimensional approach is necessary to fully understand teachers' perceptions of their preparedness. This multidimensional approach involves examining the professional development and supports schools and districts have provided teachers; teachers' self evaluation of their knowledge and general efficacy to deal with particular challenges related to Common Core implementation; and the extent to which teachers report changes to their instructional practices in order to deal with these challenges.

In order to ascertain the extent to which teachers feel prepared to implement the ELA CCSS into practice, a survey instrument was designed using the following criteria: teacher professional development, knowledge, general self-efficacy, and changes in practice. It is important to ask teachers directly about the types and levels of professional development they have received, their level of understanding of the many components of the ELA CCSS, their confidence in their ability to implement the standards, and the changes they have made in their

instructional practices. Therefore, the purpose of this survey study is to build on previous research in this area and to develop an approach to evaluate the extent to which elementary teachers feel prepared to deal with the challenges associated with Common Core implementation of the English Language Arts Standards. Preparedness was defined as teachers' perceived levels of knowledge of the standards and its components; efficacy to implement changes; and actual changes to their instructional practices. This study is guided by the following research questions:

1. To what extent do teachers feel prepared to implement the ELA CCSS?
 - a. What level of understanding do teachers have regarding the ELA CCSS and its components (e.g., topics, general standards, & assessment)?
 - b. How do teachers rate their general efficacy to teach the ELA CCSS?
 - c. What changes do teachers report making to their instruction to meet the expectations of the new ELA CCSS?
2. What types of professional development have teachers received?
3. How do they rate the quality of their professional development opportunities?
4. To what extent are teachers' evaluations of their preparedness (i.e., knowledge of components, general efficacies, & instructional changes) predicted by teacher (e.g., advanced degrees, years of experience) &

school characteristics (rural versus urban), and professional development?

CHAPTER II

METHODOLOGY

Survey Research

This study utilized a cross-sectional survey with data collected at one point in time from participants at 20 elementary schools in two school districts (Creswell, 2003). The survey was administered online to participants using Qualtrics software. The survey data is intended to reveal teachers' perceptions of their preparedness to implement the ELA CCSS and address each of the research questions.

Survey research is most appropriate for this study because of the need to understand the views and experiences of participants in an entire population (Creswell and Plano Clark, 2011). In addition, surveys provide an efficient means of collecting data from a large number of teachers (Gillham, 2008). Survey methods also offer a valid means for collecting self-reported data on teachers' behaviors and experiences (Desimone, 2009). Many researchers have utilized surveys methods as a means to study teacher professional development (Carlisle, Cortina, & Katz, 2011; de Vries, Jansen, & van de Grift, 2013; Herman, 2012; Ingvarson et al., 2005; Kose & Lim, 2010; Phillips, Desimone, & Smith, 2011; Torff, & Byrnes, 2011) and educational reform efforts (Cochran et al.,

2012; Harris, 2011; Krumm, & Homstrom, 2011; Stecher & Borko, 2002; Tierney, Simon, & Charland, 2011).

Population and Sample

All elementary English language arts teachers from two school systems in a southeastern state were invited to participate in the study. The first school system (School System A), is a county system with 15 elementary schools, four middle schools, five high schools and one alternative school. Based on end of year assessments in 2012-2013 school year for the 15 elementary schools, eight schools met expected growth, four schools exceeded expected growth, and three schools failed to meet expected growth. The county has 1,042 licensed, full-time employees of which 575 hold master's or advanced degrees, 11 hold doctoral degrees, and 149 are national board certified. The county serves more than 13,000 students. The ethnic composition of the student population is 63.2% white, 20.4% black, 10.7% Hispanic, 4.9% multi-racial, .4% Asian, and .4% American Indian. Fifty-nine percent of students received free or reduced lunch. The graduation rate in 2011-2012 was 76% and the dropout rate was 3.89%.

The second school system (School System B), a smaller, city system, is comprised of five elementary schools, two middle schools, one high school and one early childhood center. According to 2012-2013 assessment results for the five elementary schools, two schools met expected growth requirements, one school exceeded expected growth, and two schools failed to meet expected growth. The city system has 438 certified staff members of which 152 hold

advanced degrees and 52 are national board certified. Approximately 4,700 students are enrolled in the school district of which 40.3% are white, 15.2% are black, 38.7% are Hispanic, 1.5% are Asian, 0.3% are American Indian and 4.13% are multi-racial. In the 2013-2014 school year, 73.65% of the students qualified for free or reduced lunch. The high school graduation rate for 2013 was 86.3%. All elementary English language arts teachers from both school systems were invited to participate in the study at the request of the school district. Results were shared with the participating counties' superintendent.

One-hundred thirty three teachers from School System A and 40 from School System B consented to take part in the study and completed the survey (see Table 1). Of these teachers, 92% from School System A and 88% from School System B identified their teaching assignment as general elementary education (all subjects) and/or English/language arts. The data from the remaining teachers were removed because the survey was designed for English language arts elementary teachers. This resulted in a sample size of 123 teachers from School System A and 35 teachers from School System B. From reviewing the district's and school's websites, there are an estimated 244 English/language arts teachers in School System A and 121 English/language arts teachers in School System B. This estimation was determined by subtracting out classroom teachers in the upper elementary grades that were departmentalized and did not teach English language arts. If this information could not be obtained from a school website, then all classroom teachers were

left in the population total, resulting in a response rate of 50% from School System A and 29% from School System B.

Table 1

Teacher Demographics

Variable	School System A (<i>n</i> = 123)	School System B (<i>n</i> = 35)
Grade Level		
Kindergarten	16	4
First	22	6
Second	16	6
Third	21	5
Fourth	20	6
Fifth	18	5
More than one grade	10	5
Years of Teaching Experience		
0-2	10	4
3-5	18	8
6-10	23	9
11-15	30	7
15-20	22	6
More than 20	20	3
Additional educational qualifications		
National Board Certification	24	9
Master's degree	72	23
Doctoral degree	2	1
Additional coursework in education	27	7

Several steps were taken in an attempt to improve the response rate.

After the survey was initially disseminated, two follow-up reminders were sent. In

addition, a drawing survey was attached to the original survey, with the chance to win one of four \$25 gift card to Target.

As noted on Table 1, both groups of teachers were evenly distributed across the various elementary grades. Similarly both sets of participants had variation in the years of teaching experience, with teachers from School System A having more participants with more years of teaching than School System B. Finally, both sets of teachers were highly qualified; in School A, 59% of teachers had a master's degree in education and 20% had their National Board Certification and in School B, 66% of teachers had a master's degree in education and 26% held their National Board Certification.

Instrumentation

Data was collected using an online, cross-sectional survey which participants received a link to via email using the Qualtrics program. The survey instrument was developed using the Editorial Projects in Education Research Center's teacher survey on the Common Core, found in the report entitled "Findings from a National Survey of Teacher Perspectives on the Common Core" as a foundation. This survey was selected because it was designed for teachers and provided the most comprehensive framework for evaluating teachers' perceptions of their preparedness. It includes 34 items spread across six categories. Additional questions were added in each category based on an evaluation of relevant research and other questions were modified. In total, the

survey has 37 items (with ten items composed of multiple questions) across the six categories.

Appendix B includes a table with a listing of the original questions by category as well as the additional and revised questions with a rationale for their inclusion. These included modifying the professional development questions to collect information on the number of opportunities, hours, and quality ratings of teachers' professional development experiences. In addition, questions were added to elicit more specific information on teachers' instructional practices. These included three items that asked participants about their literacy planning and instruction from the previous week. Potential answer choices for these items were developed using the literature on the ELA CCSS and potential challenges for implementation. Appendix C includes a copy of the survey, which is described below in more detail.

As previously stated, the survey was comprised of six categories. The first category asked for participants' demographic information and included six questions, one of which was text entry, three single-select multiple choice questions, and two multi-select multiple choice questions. The questions related to teachers' experience, teaching position, and additional educational qualifications.

The second category related to teachers' perceived levels of knowledge of the standards. It included three items which asked teachers to rate their level of knowledge on a four point scale with 4 being very knowledgeable and 1 being not

at all knowledgeable. The first of the three items asked teachers to rate their level of knowledge of the standards, their components, and key instructional topics. The second item asked teachers to rate their level of knowledge of the alignment between the ELA CCSS and their state's previous literacy standards. The final item asked teachers to rate their level of knowledge of the new state assessments and its new question formats.

The third category related to teachers' sense of self efficacy to implement the standards into practice and had seven items, six closed response and one open-ended response. Three of the items asked teachers to rate their level of preparedness for implementation from a general perspective as well as related to particular groups of students (e.g., English language learners, students with disabilities); in comparison to their colleagues, school, district, and state; and for their students to take the new state assessments. This section also contained two items that asked teachers to rate their level of agreement with statements about having adequate materials and informational texts to implement the standards. This category also included a multi-select, multiple-choice question about teachers needs for an improved sense of preparedness (Constant Contact, 2010). The final question relating to teachers' self-efficacy was an open-ended item that asked teachers to describe the biggest challenges they have faced implementing the standards into practice.

The fourth category dealt with the instructional change component of preparedness. This category included eight close-ended items and one open-

ended item. The category included five rating items that asked teachers to rate their level of agreement with particular statements about instructional change and the extent to which they changed their own practices. In addition, this category included three multi-select multiple choice items that asked teachers about their planning and teaching of literacy in the previous week. These items were included in order to ask teachers more implicitly about their instructional change. The answer choices were developed from the literature review section on the ELA CCSS and its related challenges. Finally, this category included one open-ended question that asked teachers to describe how their instruction has changed since the implementation of the ELA CCSS.

The fifth category related to professional development on the ELA CCSS and included six items. The first item asked teachers to fill in the number of opportunities and hours they have engaged in professional development offered by a variety of entities such as their school, district and state; this item also asked teachers to rate the overall quality of their professional development from each entity. There were also three multi-select multiple choice questions that asked teachers about the format, provider, and topics addressed in their professional development experiences. Finally, there was a rating item which asked teachers to rate their professional development experiences on specific standards of effective professional development such as collaborative, strong leadership, and tailored to school and teacher needs.

The sixth and final category related to teachers' perceptions of quality of the ELA CCSS. This category consisted of six items, four of which asked teachers to rate their level of agreement with particular statements about the standards, such as whether they contained the skills and knowledge students needed and would increase the number of students who graduated career and college ready. In this category, teachers also were asked to rate the quality of the English Language Arts Common Core Standards compared to that of their previous literacy standards as well as the impact of the standards on student learning in various content areas.

Coding and Analysis

The open-ended survey items were coded using qualitative methods. Data analysis occurred in three phases, following Miles and Huberman's (1994) recommendations of data reduction, data display, and drawing and verifying conclusions. During phase one, participants' responses were open-coded and organized in a three-column chart with researcher notes. After creating a list of initial codes based on this open coding, I moved to phase two in which codes were refined into common categories and a table was created with categories and corresponding responses. Frequency counts were used to determine the most commonly referenced responses. Finally, phase three involved creating thematic codes by collapsing the categories from phase two into major themes (Merriam, 1985). Each response that supported a theme was added to a table so that themes could be looked across to determine major findings and

compared with quantitative findings. Once themes were established, teachers' responses and themes were shared with my dissertation chair and he independently coded the data. An inter-rater reliability rate of more than 90% occurred and discrepancies were resolved through discussion.

The first set of analyses was descriptive and focused on the determining means and variances (standard deviations and kurtosis) for each Likert-scaled item. All such items demonstrated appropriate levels of distribution (skewness, ± 2.0) for conducting parametric analyses. For multi-select multiple choice items, percentages were calculated for the total number of respondents who selected each answer choice as well as the percentage each answer choice represented of the total per question.

A second set of analyses focused on answering the first three research questions, including related sub-questions, and was comparative in nature. Repeated measures ANOVAs were used to compare overall differences between means for items within the same category. When significance was found, Bonferroni's pairwise comparisons were utilized to determine which item means differed significantly. Post-hoc comparisons are described for each analysis with a listing of all the comparisons in Appendix D. When more than two items were compared the assumption of sphericity was violated based on Mauchly's test; therefore, the Greenhouse Geisser correction was used to adjust the degrees of freedom. Effect sizes are provided for each analysis: for each of these reports, the power of the test was within the expected range (Howell, 2007).

For the final research question, scores were calculated for teachers' knowledge, self-efficacy, and instructional change by adding teachers' responses to the items in each respective area. Similarly, summary scores were calculated for factors influencing teachers' preparedness: professional development opportunities, professional development hours, professional development quality, years of experience, educational qualifications and school group. Cronbach alpha ratings were determined for each of the summary scores dealing with teachers' attitudes and beliefs: knowledge, self-efficacy, instructional change, and professional development quality and were .81, .85, .82, and .71, respectively. Then, forward selection multiple regressions were run to determine which school, teacher, and professional development factors were predictors of variance in teachers' knowledge, self-efficacy, and instructional change scores. The forward selection multiple regression was selected because of the experimental nature of the study and the lack of an existing theory on which factors would be most influential on teachers' perceptions of preparedness (Field, 2012).

CHAPTER III

RESULTS

Initially results were separated by school district. However, because no significant differences were found between districts (independent t-test, Howell, 2007), the data were combined. Consistent with the order of the research questions, results will be shared below for teachers' perceptions of their preparedness, in terms of their ratings of their levels of knowledge, self-efficacy, and reported changes; for teachers' professional development experiences; and for influences on teachers' perceptions of their preparedness.

Perceptions of Preparedness to Teach the ELA CCSS

As stated earlier, preparedness to teach the ELA CCSS was viewed from three perspectives: perceived knowledge of the standards and its components, self-efficacy to implement its recommendations into practice, and reported changes in practice. This multidimensional view differs from previous studies where preparedness was based on teachers' general perception of their understanding or their ability to implement the standards.

Knowledge

In evaluating teachers' perceptions of their preparedness for implementing the ELA CCSS, their knowledge of standards and its components was reviewed. Three sets of questions with twelve items asked teachers' to rate their knowledge

of the standards, of their components and topics, and its corresponding assessments on a four-point scale with 4 representing very knowledgeable and 1 representing not at all knowledgeable. As listed on Table 2, teachers' knowledge of the different components varied with the lowest mean score of 1.90 for knowledge of the constructed response questions on the new state assessments and the highest mean score of 3.24 for knowledge of different types of informational text with the means for five items below the value 2.5.

A repeated measures ANOVA ($F(6.245, 980.428) = 101.878$ $p < .001$, $\eta_p^2 = .394$) yielded significant differences and post hoc tests revealed that teachers rated their understanding of the ELA CCSS significantly higher than their knowledge of the new state assessments and their corresponding new question formats, as well as their knowledge of the CCR anchor standards. Teachers feel more knowledgeable about standards themselves and their topics and components, with the exception of the CCR Anchor Standards, than they do about the new state assessments aligned to the standards.

In sum, teachers rated their knowledge of the standards and its components higher than their knowledge of the aligned assessments and their question formats. The one exception to this is that teachers also rated their knowledge of the CCR Anchor Standards significantly lower than their other knowledge of the standards.

Table 2

Knowledge Ratings of the ELA CCSS and its Components

	Number of participants	Mean	Standard deviation
ELA CCSS	158	2.80	.91
College and Career Anchor Standards	158	2.23	.85
Foundational Skills for ELA CCSS	158	2.90	.64
Content area literacy instruction	158	3.05	.57
Close reading of text	158	2.82	.66
Different types of informational text	158	3.24	.59
Instructional strategies for teaching complex text	158	2.85	.70
New state assessments students	158	2.08	.72
Technology enhanced multiple choice questions on the new state assessments	158	1.92	.69
Constructed response questions on the new state assessments	158	1.90	.74
Performance tasks on the new state assessments	158	1.92	.74

Self-efficacy

In evaluating the second dimension of preparedness, teachers' self-efficacy in implementing the standards into practice, seven items were used. Two asked teachers to rate their level of preparedness for teaching different populations of students and compared with that of their colleagues, school, district, and state. In addition, three questions asked if teachers had the materials, resources, and supports necessary for them to be self-efficacious.

Finally, an open-ended item asked teachers to list the challenges they faced implementing the standards into practice.

Teachers' mean ratings of self-efficacy to teach different groups of students were between 3.17 and 3.92 for all items on a 5.0 scale with 5 representing very prepared and 1 representing not at all prepared. Teachers' rated their self-efficacy for teaching students in general higher than their rating for teaching particular groups of students (See Table 3). A repeated measures ANOVA supported these differences, $F(3.217, 498.690) = 52.477, p < .001, \eta_p^2 = .253$ and post hoc tests ($p < .05$) showed how ratings for teaching students in general were significantly higher than their ratings for teaching English language learners, students with disabilities, low income students, and academically at-risk students. Also, teachers' perceptions of preparedness to teach students with disabilities had the lowest rating and differed significantly from their efficacy to teach all groups, except English language learners.

Table 3

Ratings of Preparedness to Teach Different Groups of Students

	Number of participants	Mean	Standard deviation
Your students as a whole	156	3.92	.74
English language learners	156	3.19	.93
Students with disabilities	156	3.17	.90
Low income students	156	3.60	.90
Academically at-risk students	156	3.43	.91

When asked to compare their preparedness to other groups, teachers' means ranged between 3.31 and 3.73 on a five point scale (See Table 4). Teachers rated their self-efficacy highest, followed by confidence in their school, colleagues, district, and state respectively. A repeated measures ANOVA, $F(2.781, 433.791) = 25.138, p < .001, \eta_p^2 = .139$) followed by pairwise comparisons showed how teachers' rating of their confidence in the state was significantly lower than their confidence in themselves, colleagues, school, and district.

Table 4

Ratings of Preparedness

	Number of Participants	Mean	Standard deviation
You	157	3.73	.73
Your colleagues	157	3.71	.65
Your school	157	3.71	.63
Your district	157	3.63	.62
Your state	157	3.31	.77

Next, two sets of items examined what teachers perceived they need to improve their efficacy to teach the ELA CCSS. As listed on Table 5, teachers' need for textbooks and other curricula materials were rated higher than their need for informational text. A repeated measures ANOVA $F(1.00, 155) = 76.883, p < .000, \eta_p^2 = .332$) confirmed this difference. Teachers then identified

additional factors which could help them to become more confident about their ability to teach the ELA CCSS. Teachers selected multiple responses from a list of eight options or wrote in their own response. More than 80% of teachers selected between three and seven factors. When reviewing teachers' perceptions of what would increase their self-efficacy to implement the standards, a criterion of 50% was used to designate a frequently cited need.

Table 5

Materials for Preparedness

	Number of participants	Mean	Standard deviation
My textbooks and other main curricular materials are aligned with the ELA CCSS.	156	1.92	.70
I have access to enough informational texts to teach my students.	156	2.45	.75

As noted on Table 6, of the eight choices listed, five met this criterion. Teachers reported more planning time, collaboration with colleagues, access to curriculum resources aligned to the standards and assessments, and professional development as their highest needs for improving their sense of preparedness. Less frequently selected needs included more information about how the standards will change instructional practices, how the standards will change what is expected of students, and how the ELA CCSS differed from state's standards prior to the CCSS.

Table 6

Needs for Improved Sense of Preparedness

	Number of responses	% of respondents	% of total
More professional development tailored to my needs and the needs of my school.	110	70%	15%
More information about how the ELA CCSS will change my instructional practices.	60	38%	8%
More information about how the ELA CCSS will change what is expected of students.	66	42%	9%
Access to curricula resources aligned to the ELA CCSS.	113	72%	16%
Access to assessments aligned to the ELA CCSS.	102	65%	14%
More planning time.	129	82%	18%
More collaborative time with colleagues	122	77%	17%
More information about how the ELA CCSS differ from state's standards prior to the CCSS	120	13%	3%
Other	2	1%	< 1%

In addition to self-efficacy ratings and items relating to needs for improving self-efficacy, teachers listed what they considered to be challenges to teaching the ELA CCSS. As stated earlier, this question was developed in response to a lack of teacher input regarding what they viewed as challenges. One hundred twenty-three teachers (84%) responded to this open-ended item providing an

initial list of 20 challenges. These 20 challenges were collapsed into categories from which six thematic codes were developed. Table 7 contains the six themes along with the frequency count for each one.

Table 7

Challenges for Standards Implementation: Themes and Frequency Counts

Theme	Frequency Count
Teachers need more time to meet the standards, to collaborate, to plan, and to adjust instruction	42
Teachers need materials and resources aligned to the standards	59
Issues related to the challenges of assessing student learning	25
Students need time to adjust to the rigor of the ELA CCSS	22
Lack of adequate support from the district	8
Communicating with parents about the standards	3

The most commonly cited challenge teachers referred to was a lack of resources and materials aligned with the standards, followed by the need for additional time. Teachers cited the need for more time to plan, to collaborate with colleagues, to understand the standards fully and adapt their instruction, and to teach their students everything that was expected. Teachers also described challenges related to assessments, such as figuring out how to assess the standards, the increased rigor of the assessments they were expected to use, and the frequency with which they were expected to assess student learning. In School System B, teachers described a lack of support from the district level,

explaining that the materials provided were poorly developed and a lack of coherence in district goals. The last challenge teachers referenced related to communicating with parents about the standards.

In summary, teachers had generally high self-efficacy ratings. Their ratings of self-efficacy were higher for students as a whole than for particular groups, with their ratings for English language learners and students with disabilities being the lowest. Teachers rated their self-efficacy slightly higher than their level of confidence in their colleagues, school, and district--these ratings were all statistically significantly higher than teachers' ratings of confidence in their state. Teachers reported a need for textbooks and other materials aligned with the standards, more planning time and collaboration with colleagues, and additional professional development in order to become more self-efficacious to implement the standards. Finally, teachers reported their biggest implementation challenges as not enough time for planning, teaching, and understanding the standards; not enough resources and materials aligned to the standards; keeping up with and getting students to pass more frequent and challenging assessments; the rigor and higher expectations of the standards as a challenge for their students.

Instructional Change

In evaluating teachers' perceptions of their preparedness for implementing the ELA CCSS, nine sets of questions were employed in order to examine teachers' reports of changes to their instruction. The first set looked at the

degree to which the ELA CCSS requires fundamental changes in their instructional practices. Eighty-nine percent of teachers agreed or strongly agreed with this statement and 90% of teachers agreed or strongly agreed that their instructional practices had changed as a result (mean scores for these items were 3.12 and 3.10 respectively on a 4.0 scale; see Table 8). As a follow-up to these two questions, teachers rated the degree to which they implemented the standards into their practices: 37% reported that they were incorporated into some areas of their teaching but not others, while 63% reported they were fully incorporated into their practice.

Table 8

Overall Perceptions on Changes in Practice

Question	Strongly Agree	Agree	Disagree	Strongly Disagree	Total Responses	Mean	Standard Deviation
Implementation of the ELA CCSS requires fundamental changes in instructional practices	23%	66%	11%	0%	158	3.12	.57
My instructional practices have changed with the ELA CCSS.	20%	70%	9%	1%	157	3.10	.57

The next set of items looked more specifically at the extent to which teachers reported implementing changes based on different disciplines. As noted on Table 9, the greatest change, as indicated by the selection of the

highest two options, was in reading (71%), followed by writing (64%), science (51%) and then social studies (46%). A repeated measures ANOVA determined that the mean values for change in practices differed significantly, ($F(2.049, 315.949) = 35.014, p < .001, \eta_p^2 = .183$). Bonferroni's post hoc tests revealed no significant difference in the mean scores for changes in reading and writing practices. However, the mean scores for changes in reading and writing practices were significantly higher than the mean scores for changes in science and social studies practices, which did not differ significantly.

Table 9

Extent of Instructional Change by Content Areas

Question	5 Significantly	4	3	2	1 Not at All	Total Responses	<i>M</i>	<i>SD</i>
Reading	22%	49%	22%	4%	3%	158	3.85	.90
Writing	23%	41%	28%	5%	3%	158	3.77	.96
Science	12%	38%	31%	15%	4%	157	3.42	1.02
Social Studies	10%	36%	35%	15%	4%	157	3.32	.99

The third set of questions examined teachers' previous week's literacy instruction by looking at their planning and instructional activities (See Table 10). These questions were included in order to implicitly ask teachers about their instructional changes. Answer choices for these items were developed from the literature on the ELA CCSS as well as potential challenges associated with implementation. The first question was a multi-select multiple choice which asked

teachers to report the materials used during planning; teachers could also add their own responses. During planning, using a criterion of fifty percent, teachers mainly relied on district's pacing guides, the ELA CCSS, and self-created or borrowed materials. The materials that were less frequently employed during planning were from a core (basal) program or supplementary program aligned to the standards, from professional sources such as books and journals, and results from student assessment data. More than 80% of teachers reported using three to eight resources when planning their instruction. Additionally, when asked to identify their thinking during planning, every option received more than a 50% rating with the highest on developing critical thinking questions, identifying strategies for differentiation, considering unfamiliar vocabulary, and engaging students in discussions.

An additional item on instructional changes asked teachers about the frequency with which they employed particular instructional strategies or practices in their instruction during the previous weeks' teaching (See Table 11). Strategies were placed into one of three categories. The most frequent strategies were used by teachers 80% or more according to their ratings on the options 'several times a week,' 'daily,' and 'several times a day.' Strategies in the middle category included those used by teachers between 50% and 80% in the same three categories. Finally, the less frequently used strategies were employed 50% or less of the time.

Table 10

Planning Materials and Considerations

	Number of responses	% of respondents	% of total
Planning Materials			
The instruction emerged spontaneously	16	10%	2%
The ELA CCSS	108	68%	14%
My county's curriculum/pacing guide based on the ELA CCSS	135	85%	17%
Resources from a core (basal) program aligned with the ELA CCSS	30	19%	4%
Resources from a supplementary program aligned with the ELA CCSS	36	23%	4.5%
Resources or results from a state-mandated assessment program	41	26%	5%
Resources or results from a district-mandated assessment program	46	29%	6%
Resources or results from a curriculum based assessment	40	25%	5%
Information from a screening or progress monitoring assessment	61	39%	8%
Resources from a professional source (e.g., a journal, book, or conference)	51	32%	6.5%
Resources I developed myself	116	73%	15%
Resources from teachers in my school or district	92	58%	12%
Other	8	5%	1%
Planning Considerations			
Questions to engage students in critical thinking	146	92%	15%
The level of complexity of the text	108	68%	11%
How students would provide text support for their responses	110	70%	12%
Integrating multiple ELA CCSS into each lesson	100	63%	11%
Integrating content standards into instruction	108	68%	11%
Differentiation strategies to meet the needs of all students	134	85%	14%
The vocabulary that would be discussed in the lesson	127	80%	13%
Ways to engaged students in discussion relating to the lesson content	116	73%	12%

Table 11

Instructional Strategies and Practice Utilized

Question	Did not occur	Once a week	Several times a week	Daily	Several times a day	Total	<i>M</i>
Set a purpose for reading	5%	8%	30%	44%	13%	156	3.48
Read a text multiple times	4%	7%	42%	37%	10%	158	3.42
Compare content across various text	11%	27%	41%	19%	2%	157	2.74
Evaluate the ideas presented in a text	5%	13%	34%	35%	13%	158	3.39
Evaluate the author's purpose for writing a text	7%	20%	46%	23%	4%	158	2.97
Provide text evidence to support their ideas	4%	8%	23%	36%	29%	158	3.76
Discuss ideas presented in a text	3%	6%	18%	46%	27%	156	3.85
Analyze text structure	20%	21%	38%	17%	4%	156	2.62
Analyze text features	8%	15%	48%	22%	7%	156	3.01
Analyze different authors' perspectives of the same content	27%	37%	25%	10%	1%	155	2.16
Read challenging text	6%	11%	39%	39%	5%	157	3.25
Reading informational text	4%	7%	42%	39%	8%	157	3.38
Apply what they are learning to real world situations	6%	20%	36%	28%	10%	156	3.13
Research a topic	29%	39%	25%	5%	2%	156	2.09
Highlight or annotate text they read	24%	20%	34%	17%	5%	154	2.55
Take notes on text they read	29%	22%	27%	17%	4%	154	2.38
Write narrative text	16%	37%	37%	9%	1%	156	2.39
Write informational text	19%	42%	29%	9%	1%	156	2.29
Write argumentative text	37%	43%	16%	3%	1%	156	1.86
Provide evidence to support their ideas when writing	12%	27%	36%	20%	5%	156	2.79

The strategies most frequently implemented were discussing ideas presented in a text, reading informational text, reading a text multiple times,

providing text evidence to support ideas, setting a purpose from reading, reading challenging text, and evaluating ideas presented in a text. Strategies in the middle category included analyzing text features, applying their learning to the real world, evaluating author's purpose, comparing content across texts, providing evidence to support ideas when writing, analyzing text structure, and highlighting or annotating text. Less frequently used strategies were taking notes on a text read, writing narrative text, writing informational text, analyzing different authors' perspectives on the same content, researching a topic, and writing argumentative text.

The final instructional change item was an open-ended question where teachers described how their instructional practices had changed since the implementation of the standards. One hundred twenty-one teachers (83%) provided a responses resulting in an initial list of 35 changes. This list was collapsed into categories from which themes were developed. Table 12 contains the nine themes developed from teachers' responses along with the frequency counts for each theme. These responses confirm what teachers reported to be frequently implemented practices in the close-ended item. The most frequently referred to instructional changes related to the increased rigor of the ELA CCSS. Teachers referred to increased use of critical thinking activities, more in-depth study of content, deeper comprehension of text, increased use of higher-order thinking questions, increased expectations for text support for responses, and overall higher expectations for students.

Table 12

Changes in Teacher Practice Themes and Frequency Counts

Theme	Frequency
Increased rigor of the curriculum	72
Changes in the texts used	36
Changes in assessment practices	14
Increased expectation for writing	19
More integrated instruction	18
Changes in instructional support	13
Increased classroom discussion	14
Increased instructional focus on academic vocabulary	5
Little to no change	9

The second most frequently reported change related to the types of text used, with most teachers citing increased use of informational text, while other referred in an increase in the use of more complex text. Teachers also reported an increased expectation for writing, however, this was frequently related to writing in response to what was read. Similarly, teachers also referred to increased classroom discussions, again often in response to text read. Teachers reported changes in their assessment practices explaining that they assessed more frequently, the assessments were more rigorous, and they were more frequently using assessment data to inform their instruction. Teachers referred to changes related to instructional support; in particular, several teachers pointed to increased small group instruction and more remediation. A small percentage

of respondents pointed to more focused instruction on academic vocabulary. Finally, a few teachers reported little or no change, either because they had started teaching with ELA CCSS and therefore did not need to change, or because they believed they were already teaching in a manner that aligned with the ELA CCSS.

In summary, most teachers believed implementation of the ELA CCSS requires fundamental changes in practice and that they had responded accordingly, implementing more changes in reading and writing than in science and social studies. However, 37% of teachers still reported that they have not fully implemented the standards into their practice. When planning instruction, teachers relied most heavily on their school district's pacing guide or curriculum, materials created by themselves or by their colleagues, and the ELA CCSS. In addition, while planning, teachers most often considered the questions they would ask, strategies for differentiation, vocabulary, and ways to engage students in discussion. The instructional strategies teachers reported to use most frequently were discussing ideas presented in a text, providing text evidence to support ideas, reading informational text, reading a text multiple times, setting a purpose from reading, reading challenging text, and evaluating the ideas presented in a text. With less attention devoted to taking notes on a text read, writing narrative text, writing informational text, analyzing different authors' perspectives, researching, and writing argumentative text. Finally, teachers described their instructional change relating to the increased rigor of the

curriculum, types of texts utilized, assessment practices, increased writing, more integrated instruction, level and types of instructional support, increased classroom discussion, greater focus on academic vocabulary, and little to no change.

Professional Development

The next set of analyses focused on teachers' professional development experiences. Teachers entered the number of opportunities and hours of professional development provided by their school and district, the state, professional organizations, colleges or universities, or other entities. Then, they rated the quality of each of their professional development experiences. Additional items asked about the presentation format, provider, and topics addressed in professional development. Teachers reported the amount of time they spent outside of formal professional development learning about the standards from a variety of sources (e.g., district and state websites, professional organization, general news and media). The final professional development item asked teachers to rate the quality of their professional development experiences relative to standards for effective professional development. Analyses of participants' responses to these questions revealed several important findings, each of which will be discussed below.

As listed on Table 13, the greatest number of opportunities for professional development occurred at the school (56%) and district (30%) levels, followed by professional organizations (7%), the state (4%), and a college or

university (3%). Accordingly, school and district professional development required a high percentage of teachers' time (78%), followed by professional organizations (8.5%), colleges or universities (8.5%), and the state (5%). Similarly, the greatest majority of teachers attended professional development at the school and district level (88% and 84%, respectively), followed by professional organizations (22%), the state (16%) and colleges and universities (13%). Per these findings, teachers had about five opportunities at the school level with each session averaging about two hours and two to three opportunities at the district level with each session lasting about five hours. Thus, when teachers received professional development, it mainly occurred at the school or district level.

Table 13

Participation Levels of Teachers in Different Professional Development Activities

Professional development offered by:	Number of responses	Number of opportunities	% of total opportunities	Number of hours	% of total hours	Average Hours Per Opportunity
My school	139	770	56%	1687	37%	2.19
My district	132	410	30%	1895	41%	4.62
The state	26	54	4%	236	5%	4.37
A professional organization	35	90	7%	384	8.5%	4.27
A college or university	21	39	3%	387	8.5%	9.92
Other	0	0	0%	0	0%	0.00

In most professional development opportunities, as noted on Table 14, presenters used structured settings such as seminars, lectures, or conferences (31%), collaborative planning time with colleagues (29%), and professional learning communities (18%). Job-embedded training or coaching (10%) and online webinars or videos (10%) were less commonly employed. As noted on Figure 4, the majority of teachers, an estimated 8 of 10, experienced two, three, or four formats across their professional development opportunities, with the three previously stated formats being the most common. More than 80% of teachers' professional development opportunities were presented by a staff member from their school, another school, or the district office (See Table 15).

Table 14

Structural Characteristics of Professional Development

	Number of responses	Percentage of respondents	Percentage of total PD experiences
Collaborative planning time with colleagues	124	78%	29%
Structured, formal settings (seminars, lectures, conferences)	133	84%	31%
Professional learning communities	77	49%	18%
Job-embedded training or coaching	46	29%	11%
Online webinars or videos	42	27%	10%
Other	4	3%	1%

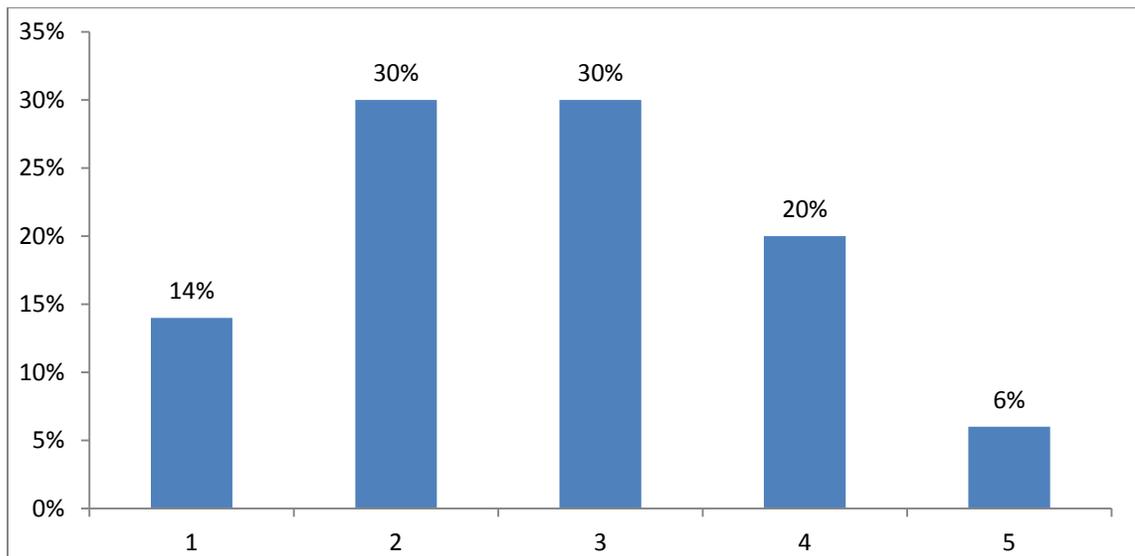


Figure 4. Number of Different Formats of Professional Development Participants Experienced.

Table 15

Professional Development Characteristics by Provider

	Number of responses	Percentage of respondents	Percentage of total PD experiences
Staff member from my school	136	86%	35%
Staff member from another school in my district	84	53%	21.5%
Staff member from my district's central office	96	61%	24.5%
Independent professional development provider or consultant	38	24%	10%
State department of education	23	15%	6%
Professional association	9	6%	2%
Other	4	3%	1%

When reviewing topics covered during professional development, based on the distribution of responses, a criterion of 50% was used to designate a frequently addressed topic. As noted on Table 16, of the 15 topics listed, six met this criterion. The top three included the CCSS in English Language Arts, the CCSS in Mathematics, and the alignment between the CCSS and the state's previous standards, followed by the teaching higher order and critical thinking, integrating literacy into the content areas, and collaborating with colleagues to teach the standards.

Topics not commonly addressed included curricular materials and resources to teach the standards, teaching informational text, adapting classroom assessment to the standards, key shifts from previous standards, research for best practices for implementing the standards, teaching close/critical reading, teaching the standards to specific groups of students (e.g., students with disabilities and English language learners), determining text complexity and/or teaching complex text, and new state assessments developed by the multi-state consortia. With the exceptions of literacy in the content areas and higher order thinking skills, all of the commonly addressed topics dealt with the standards from a general perspective.

Because professional learning occurs outside the context of formal professional development experiences, teachers also estimated amount of time they spent learning about the ELA CCSS from a variety of informational sources. As noted on Table 17, greater than 90% of teachers turned to outside sources to

learn more about the ELA CCSS with district and state websites being the most frequented portals.

Table 16

Topics Addressed in Professional Development

Topic	Number	Percentage of respondents	Percentage of topics covered
CCSS in English/Language Arts and Literacy	145	92%	13%
CCSS in Mathematics	136	86%	12%
Alignment between the CCSS and your state's standards prior to CCSS	105	66%	10%
Curriculum materials and resources to teach the CCSS	74	47%	7%
Teaching the CCSS to specific students (e.g., students with disabilities or English-language learners)	30	19%	3%
Collaborating with colleagues to teach the CCSS	85	54%	8%
Adapting classroom assessments to the CCSS	61	39%	5.5%
CCSS assessments being developed by multi-state consortia	23	15%	2%
Research on best practices for implementation of the CCSS	47	30%	4%
Key shifts from previous standards	63	40%	6%
Teaching close/critical reading	42	27%	4%
Teaching informational text	69	44%	6%
Determining text complexity and/or teaching more complex text	29	18%	2.5%
Teaching higher order and critical thinking	98	62%	9%
Integrating literacy into the content areas	87	55%	8%
Other	2	1%	< 1%

Table 17

Time Learning from Outside Information Sources

Question	None	1-5 hours	6-10 hours	Greater than 10 hours
District website, publication, or communication	11%	65%	15%	9%
State department website, publication, or communication	8%	62%	18%	12%
Professional association website, publication, or communication	41%	45%	9%	5%
National education research or advocacy organization	62%	30%	6%	2%
Education publishing or testing company	52%	28%	5%	5%
Education news and media (print or online)	27%	53%	14%	6%
General news or media (print or online)	31%	53%	13%	3%

Teachers were asked to rate the quality of their professional development experiences provided by different entities on a 5-point scale. Teachers rated the quality of their professional development experiences provided by their school ($M = 3.34$), district ($M = 3.43$), and state ($M = 3.54$) lower than professional development experiences offered by college and universities ($M = 4.03$) and professional organizations ($M = 4.21$). However, because the number of teachers participating in the professional development provided by the different entities was unequal, the only statistical comparison was between ratings for the

state and district (Howell, 2007). Consequently, a repeated measures ANOVA ($F(1,128) = 1.506, p = .222, \eta_p^2 = .012$), for these two formats revealed a non-significant difference in teachers' quality ratings for their school and district professional development experience.

The next repeated measures ANOVA examined teachers' ratings of the extent to which the professional development they experienced in their schools adhered to recommended professional development standards (See Table 18). Mean ratings ranged from a high of 3.21 to a low of 2.68 on a 4.0 scale. Teachers' ratings were found to be significantly different using a repeated measures ANOVA ($F(4.650, 725.356) = 49.312, p < .001, \eta_p^2 = .240$) with post-hoc comparisons ($p < .05$) revealing a higher overall rating for item six and item three. Teachers rated the presence of collaborative environments and support from school leadership for professional learning as the most frequently implemented standards.

Table 18

Overall Quality Ratings of Standards for Effective Professional Development

Question	Strongly Agree	Agree	Disagree	Strongly Disagree	Total Responses	Mean
My professional development promoted an integrated approach to teaching the ELA CCSS.	9%	72%	16%	3%	158	2.86

Table 18

(Cont.)

Question	Strongly Agree	Agree	Disagree	Strongly Disagree	Total Responses	Mean
My professional development was tailored to the needs of my school and the teachers who work there.	6%	58%	33%	3%	157	2.66
The leaders at my school actively support and encourage all staff to take part in professional development.	22%	67%	10%	1%	157	3.08
Insufficient time is available at my school to support teachers' professional learning.	15%	47%	35%	3%	158	2.74
Follow up support for professional development is available within my school.	7%	67%	25%	1%	158	2.81
Teachers at my school work collaboratively to resolve teaching and learning issues.	27%	67%	6%	0%	157	3.21
Since the implementation of the ELA CCSS, teachers at my school discuss teaching and learning more with their colleagues.	8%	66%	26%	0%	157	2.81
Since the implementation of the ELA CCSS, teachers have increased their collaboration in planning, teaching, and assessment activities.	9%	70%	20%	1%	156	2.87

In summary, most teachers' professional development occurred at the local level, either provided by their school or district. These opportunities were largely in the format of formal, structured meeting or collaborative planning with colleagues and were most often led by staff members from the teachers' school, another school within the district, or from the central office. The most commonly addressed topics dealt with the standards primarily from a general perspective, and rarely addressed issues such as assessments, newly emphasized skills and topics (e.g., close/critical reading, text complexity), and teaching to different groups of students (e.g., students with disabilities, English language learners). Many participants also engaged in learning about the standards through state and district websites, publications, and communications as well as the educational and general news and media. In general, participants had positive perceptions of the quality of their professional development, with average quality ratings lower for professional development offered by the school, district, or state compared to that of professional development offered by a professional organization or college or university. Teachers rated collaboration with colleagues on issues related to teaching and learning and school leadership and support for professional learning as receiving the most emphasis during their professional development.

Influences on Teachers' Perceptions of Their Preparedness to Teach the ELA CCSS

The final set of analyses looked at the extent to which perceptions of preparedness (i.e., knowledge, self-efficacy, and instructional change) was predicted by various teacher (e.g., advanced degrees, years of experience) and school characteristics (e.g., rural versus urban) and professional development experiences.

The first analysis examined the extent to which teachers' years of experience, qualifications, school district, and professional development opportunities, hours, and perceptions of its quality predicted knowledge of the ELA CCSS, the first dimension of preparedness. Table 19 includes the correlations among the variables.

Table 19

Correlations between Teacher Knowledge, Professional Development, and Teacher and School Characteristics

	Knowledge Score	PD Time	PD Quality	PD Opportunity
Knowledge Score	1.000	.232*	.294**	.164*
PD Time	.232*	1.000	.418**	.426**
PD Quality	.294**	.418**	1.000	.330**
PD Opportunities	.164*	.426**	.330**	1.000

*Correlation is significant at the 0.05 level (2 tailed).

**Correlation is significant at the 0.01 level (2 tailed).

As noted, four significant correlations exist between the knowledge and professional development quality ratings ($p < .001$), educational qualifications ($p = .001$), professional development hours ($p = .002$), and professional development opportunities ($p = .020$). A forward selection multiple regression revealed significant differences in knowledge ($F(1,155) = 8.621, p = .004; r = .367$). Teachers' knowledge was found to be predicted by only by their perceptions of the quality of professional development opportunities ($R^2 = .087$: Adjusted $R^2 = .081$) and their educational qualifications ($R^2 = .135$; Adjusted $R^2 = .124$). See Table 20.

Table 20

ANOVA for Full Regression Model of Knowledge Score

		Sum of squares	df	Mean square	F	Sig.
1	Regression	324.429	1	324.429	14.786	.000 ^a
	Residual	3422.913	156	21.942		
	Total	3747.342	157			
2	Regression	504.772	2	252.386	12.064	.000 ^b
	Residual	3242.570	155	20.920		
	Total	3747.342	157			

^aPredictors: (Constant), PD Quality

^bPredictors: (Constant), PD Quality, Qualifications

^cDependent variable: Knowledge Score

The second analysis examined the extent to which teachers' years of experience; qualifications; school district; and professional development opportunities, hours, and perceptions of its quality predicted self-efficacy to teach

the CCSS, the second dimension of preparedness. Table 21 includes the correlations among the variables. As noted, two significant correlations exist between the self-efficacy dimension and professional development quality ratings ($p < .000$) and professional development hours ($p = .002$). A forward selection multiple regression revealed significant differences in efficacy ($F(1, 156) = 29.381, p < .000; r = .398$). Differences in self-efficacy were found to be based only on teachers' perceptions of the quality of their professional development opportunities ($R^2 = .158$; Adjusted $R^2 = .153$). See Table 22.

Table 21

Correlations between Teacher Self-Efficacy, Professional Development, and Teacher and School Characteristics

	Self-Efficacy Score	PD Time	PD Quality	PD Opportunity
Self-Efficacy Score	1.00	.226*	.398**	.125
PD Time	.226*	1.000	.418**	.426**
PD Quality	.398**	.418**	1.000	.330**
PD Opportunities	.125	.426**	.330**	1.000

Correlation is significant at the 0.05 level (2 tailed).

**Correlation is significant at the 0.01 level (2 tailed).

Table 22

ANOVA for Full Regression Model of Self-Efficacy Score

	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	513.232	1	513.232	29.381	.000 ^a
	Residual	2725.027	156	17.468		
	Total	3238.259	157			

^aPredictors: (Constant), PD Quality

^bDependent variable: Self-Efficacy Score

The third analysis examined the extent to which teachers' years of experience; educational qualifications; school district; and professional development opportunities, hours, and perceptions of its quality predicted teachers' instructional change, the third dimension of preparedness. Table 23 includes the correlations among the variables. As noted, five significant correlations exist between the instructional change dimension and professional development quality ratings ($p < .000$), professional development hours ($p < .000$), professional development opportunities ($p = .014$), years of teaching experience ($p = .011$), and educational qualifications ($p = .033$). A forward selection multiple regression revealed significant differences in instructional change ($F(1, 153) = 6.030, p = .015; r = .455$). These differences were based on the time spent in professional development, teachers' perceptions of the quality of their professional development opportunities, years of experience, and educational qualifications ($R^2 = .207$; Adjusted $R^2 = .187$). See Table 24.

Table 23

Correlations between Teacher Change, Professional Development, and Teacher and School Characteristics

	Change Score	PD Time	PD Quality	PD Opportunity
Change Score	1.00	.326**	.307**	.176**
PD Time	.326**	1.000	.418**	.426**
PD Quality	.307**	.418**	1.000	.330**
PD Opportunities	.176**	.426**	.330**	1.000

*Correlation is significant at the 0.05 level (2 tailed).

**Correlation is significant at the 0.01 level (2 tailed).

Table 24

ANOVA for Full Regression Model of Change Score

		Sum of squares	Df	Mean square	F	Sig.
1	Regression	5016.062	1	5016.062	18.522	.000 ^a
	Residual	42246.646	156	270.812		
	Total	47262.709	157			
2	Regression	6693.192	2	3346.596	12.786	.000 ^b
	Residual	40569.517	155	261.739		
	Total	47262.709	157			
3	Regression	8322.381	3	2774.127	10.971	.000 ^c
	Residual	38940.327	154	252.859		
	Total	47262.709	157			
4	Regression	9798.898	4	2449.724	10.005	.000 ^d
	Residual	37463.811	153	244.862		
	Total	47262.709	157			

^aPredictors: (Constant), PD Hours

^bPredictors: (Constant), PD Hours, PD Quality

^cPredictors: (Constant), PD Hours, PD Quality, Experience

^dPredictors: (Constant), PD Hours, PD Quality, Experience, Qualifications

^eDependent variable: Change Score

In summary, teachers' knowledge relating to the ELA CCSS was found to be predicted by teachers' ratings of the quality of their professional development experiences and their educational qualifications. Teachers' self-efficacy to implement the standards was found to be predicted only by teachers' ratings of the quality of their professional development experiences. Teachers' changes in instructional practice was found to be predicted by the time spent in professional development, the years of experience, educational qualifications, and the quality

of the professional development experiences. While the models were found to be a good fit in the regression model, in each case they only explained between 12% and 20% of the variance in scores on the three dimensions.

CHAPTER IV

DISCUSSION

This study explored teachers' perceptions of their preparedness to implement the ELA CCSS into practice and how this preparedness was predicted by the nature of their professional development experiences and various school and personal characteristics. Preparedness was defined across three dimensions: teachers' knowledge of the standards and their components, teachers' self-efficacy to implement the standards into practice, and reported changes in teachers' instructional practice.

As expected, teachers' knowledge of the ELA CCSS varied according to topic. Their knowledge of the standards, in general, was higher than their understanding of the assessments and CCR Anchor Standards. Similarly, teachers' ratings of self-efficacy were higher for preparing students in general than for teaching specific groups of students, particularly as it related to their ability to perform successfully on the new assessments. Teachers were more confident in their ability to teach the standards than they were in students' ability to perform successfully on the new assessments: the ability to teach and students' ability to perform were two separate entities. While most teachers believed the standards required fundamental changes in practice, and reported making substantial adjustments to their instruction, the changes were most

obvious in reading, with fewer modifications occurring in writing, science, and social studies.

Teachers' professional development opportunities were mainly at the local level, provided by staff members from their school, from other schools in the district or from the central office: their format usually included formal, structured meetings or collaborative planning with colleagues. The topics most frequently covered addressed the standards from a general perspective, with less frequent attention given to specific components or topics addressed by the standards--- how to teach the standards to different groups of students, the research upon which the standards are based, and the new assessments. The duration of the school's professional development opportunities were the shortest, about two hours per session, followed by professional organizations, the state, the district, or college or university opportunities. Most teachers reported seeking out further information on the standards, most often from district and state websites and publications, as well as educational and general news and media sources. Teachers rated equally the quality of their school and district professional development opportunities with higher ratings given to those opportunities where the fewest number of teachers participated.

The literature review recommended six core elements to the design of effective professional development (Desimone, 2009; Guskey, 2009). Teachers rated two of these elements quite highly when evaluating their professional development opportunities: they were collaboration in problem-solving and strong

leadership. The presence of adequate time allotments, sensitivity to individual school's needs, adequate focus on content, and coherence within the professional development presentation were identified as areas where greater emphasis could have been placed. Teachers' views regarding the design of professional development related directly to their perceptions of their preparedness to teach the standards.

While a relationship existed between teachers' perceptions of their preparedness to teach the standards--knowledge, self-efficacy, and degree of instructional change--and their professional development and school and teacher characteristics, it only explained between ten and twenty percent of the variance, with their ratings of the quality of their professional development as the only consistent predictor across the three dimensions of preparedness. With the greatest number of predictors (professional development hours, professional development quality, years of experience, and educational qualifications) explaining variations in teachers' instructional change.

The relationship between the dimensions of preparedness was found to be complicated. A linear relationship between knowledge, self-efficacy, and instructional change was not found. More knowledge did not necessarily result in higher self-efficacy or in increased instructional change. Teachers reported higher levels of knowledge and self-efficacy compared to change, suggesting instructional adjustments may be more difficult to increase. Teachers knew changes were necessary, but the pace of the adjustment took longer than did

their acquisition of knowledge and efficacy towards making the necessary modifications (Hammerness et al., 2005; Snow, Griffin, & Burns, 2005).

However, the use of a more multi-dimensional approach to understanding preparedness did provide an alternative perspective when compared to previous studies where teachers were simply asked if they were prepared.

Even though teachers spent several thousand hours in professional development during the first two years of the standards' implementation, they overwhelmingly requested more time and resources to meet the challenges of the new standards. Teachers requested more time for understanding the standards and assessments; planning with the standards; and adjusting their instructional practice to meet the needs of underserved student populations. They also wanted more time for their students to adjust to the increased rigor and expectations of the standards and assessments. With resources, teachers reported the need for curricular materials, assessments, and resources aligned to the standards. In addition to time and resources, teachers believed they would benefit from continued professional development. They recognized areas where they needed to improve their knowledge and pointed to professional development as a means for strengthening their preparedness. Requests for time, resources, and professional development related directly to those areas where teachers lacked knowledge and self-efficacy and were consistent with research recommendations for providing effective professional development.

The manner by which teachers expressed views towards the standards and requests for additional time and resources reflected willingness on their part to change, but a need for patience. Teachers believed they had changed their practices and recognize the need for more change, but they needed additional time to adapt their teaching the challenging new standards. None of their responses contained negative statements, regarding the standards or their efforts to adjust; if anything, they, and perhaps administrators at the district and state levels, simply underestimated how long it would take for teachers to meet fully the challenges of the new standards and their assessments. Thus, while the expectations of the ELA CCSS were yet to be fully realized, teachers believed they were moving in the right direction.

It is important to note that a small minority of teachers reported little or no changes in their instructional practices. In some cases this was due to being a new teacher and not knowing anything different from the ELA CCSS. In other cases teachers reported that what they had been doing was confirmed by the ELA CCSS as effective. However, one teacher's responses stood out to me. He/she stated, "I am not real sure they have changed at all. All you hear is that 'You are already doing it.'" This response caught my attention because I think teachers are frequently told this (You're already doing this) when a new initiative is introduced, most likely to minimize the stress of an added expectation. However, when this is the message that is sent, it negates the need for change.

Why should teachers change if the message they are receiving is that you are already doing what we are now asking you to do?

Limitations

There are several limitations to this study. First, all data were collected through survey methods, which limits the depth of understanding teachers' perceptions of their preparedness one can glean from the data. There is no observational data to triangulate what teachers report as their changes in practice. Second, there was a limited sample; the results are only from two school districts and are not generalizable to all elementary teachers' perceptions of their preparedness for implementation. In addition, the teachers who participated in the survey may have different perceptions of their preparedness than the non-responders from the same school districts. Third, this survey only looked at elementary teachers' perceptions of their preparedness, not middle and high school teachers and it only looked at the ELA CCSS, not mathematics. Finally, at the time the survey was administered, there was uncertainty around the fate of the standards with a lot of press regarding the possibility of the state repealing the standards. This may have affected teachers' responses.

Implications for Practice

Several important implications can be drawn from this study relating to time, resources, and professional development to improve teachers' perceptions of their preparedness for standards implementation. First, from a practice perspective, most importantly, teachers need additional time to continue to

increase their knowledge of the standards, to plan instruction around the standards, and to adjust their instructional practice to the standards. While teachers' perceptions of their preparedness varied, almost all reporting taking steps to increase their knowledge and self-efficacy relating to the standards and making corresponding changes to their instructional practice. But they expressed the need for patience. The increased rigor of the ELA CCSS has been a challenge for both teachers and students. It is a challenge that teachers are working to meet, but have yet to achieve. Administrators at the state, district, and school level need to provide teachers the necessary time to become fully prepared. Second, teachers need curricular materials and resources that align with the standards. In order to increase their preparedness, teachers must have what they need to teach the standards effectively. Again, administrators at the state, district, and school level are responsible for ensuring that teachers have what the necessary resources for teaching the standards. Finally, teachers need additional professional development. Although teachers have experienced professional development related to the ELA CCSS, more is required to improve their preparedness to implement the standards. The ELA CCSS requires significant shifts in teachers' thinking and practices when compared with the state's previous literacy standards. Some important topics were not addressed at all or minimally addressed in teachers' professional development experiences. Other important topics were addressed but require continued professional development to fulfill the expectations of the ELA CCSS. The state and the

district need to make certain that more, high quality professional learning experiences are offered to teachers on the content teachers need most.

State and district level administrators could offer additional professional development on topics that were identified by teachers as receiving too little attention, where teachers reported limited knowledge and posed daily challenges. Some of these topics aligned with the challenges discussed in the literature review.

Recommendations for professional development topics are provided below. To develop these recommendations, data were split informally into quartiles based on the change outcome variable. Descriptive statistics were run for each of the quartiles so that profiles could be developed based on the extent to which teachers implemented change based on those items which focused on this outcome. Recommendations were split into three categories based on whether most teachers were not adopting certain instructional practices, adopting them at a high novice level, and apparently were not practicing them or just starting to adopt them. Thus, the highest category had adopted most of the practices yet still had others to consider (e.g., writing and integrative projects), whereas the next two were adopted quite thoroughly by this group of teachers but were less evident in the practices of the other teachers.

Two important topics, the CCR Anchor Standards and writing, have received minimal attention thus far in teachers' professional development experiences and need to be addressed. Less than half of teachers reported

being knowledgeable or very knowledgeable about the CCR Anchor Standards, which serve as the foundation for the ELA CCSS. Understanding these standards is critical for understanding the vision of the ELA CCSS. This lack of knowledge is particularly concerning because of recommendations by researchers to use the CCR Anchor Standards to guide planning and instruction, to be cautious when interpreting and implementing grade level standards, and to not follow them too literally (Valencia & Wixson, 2013). Professional development on this topic would provide teachers with the knowledge necessary to utilize the CCR Anchor Standards to guide their instruction as well as provide teachers a more in-depth understanding of the standards. Writing instruction has also received minimal attention in teachers' professional development. One intention of the ELA CCSS was to bring a renewed balance to the areas of language arts and move away from an overemphasis on reading, and there has been some progress in this regard. Teachers reported increases in writing, discussion, and vocabulary instruction. However, reading still received the bulk of the instructional focus, particularly when compared to writing. Just under half of teachers reported writing narrative text as a frequently occurring practice in their instruction from the previous week, even fewer reported writing informational text, and only a fifth of teachers reported writing argumentative text as a frequently occurring instructional practice, the supposed "cornerstone of the writing standards" (CCSSI, 2012). While several teachers did report an increase in students writing as a change in their instructional practice, almost half of these

related to an increase in writing in response to what students had read. So, it appears that there have been some shifts towards a more balance in the language arts; however, the vision laid out in the ELA CCSS has yet to be realized and teachers would benefit from professional development related to writing, particularly informational and argumentative text.

Three areas that teachers have been making progress, but could be strengthened with professional development relate to assessment, text complexity, and integrating literacy into the content areas. Professional development on assessing the standards would be beneficial for teachers and was not commonly addressed in teachers' prior professional development. Teachers reported assessing the standards as a major challenge they faced during implementation. Teachers have made and continue to make instructional changes to teach the standards; but many do not feel knowledgeable about how to modify their assessment practices to align with new instructional practices. Teachers also reported limited knowledge of the new state assessments aligned to the standards. This would be another topic for professional development. Text complexity represents arguably the biggest change from previous literacy standards and the literature suggests this is an area that will likely require substantial professional development and changes in practices (Pearson & Hiebert, 2013). However, this study found that determining text complexity and teaching more complex texts were not frequently addressed topics in teachers' professional development. In fact, out of all the topics for professional

development listed, determining text complexity and teaching complex text was the least frequently addressed topic. Teachers did report incorporating more challenging text into their instructional practices as well as changes in the manner in which they differentiated to support students with more challenging text. However, it remains unclear from the data if teachers have the necessary pedagogical knowledge to scaffold students in reading and comprehending more complex text and additional professional development related to text complexity could provide this. Finally, teachers would benefit from additional professional development on integrating literacy into the content areas. While this was a topic that was addressed in more than half of teachers' professional development and was reported as an instructional change teachers were making, most teachers did not report engaging in the integrated projects and research promoted by the ELA CCSS. Therefore, teachers would benefit from additional professional development related to standards integration.

Finally, two areas where teachers report making the greatest strides in changing their practices, but would still benefit from additional professional development are close reading and higher order thinking. Many teachers reported planning considerations and instructional practices that support close reading of text, such as strategic use of questioning, reading a text multiple times, setting a purpose for reading, evaluating ideas in a text, discussing ideas in a text, and analyzing text features. However, additional strategies that would support close reading, such as highlighting and annotating text and taking notes

while reading were less frequently utilized in instruction. Close reading appears to be a topic that teachers have embraced with the implementation of the ELA CCSS and they report to implementing many strategies to support it in their teaching. However, professional development related to this topic would provide teachers a means to expand their repertoire of instructional strategies to support close reading. Similarly, teachers have adapted their instruction to promote higher order and critical thinking. Almost all teachers reported consideration of the questions they would ask to engage students in critical thinking when planning their literacy instruction. In terms of their actual instructional practices and strategies, teachers reported frequently having students evaluate ideas presented in the text, through both writing and discussion. Less frequently utilized strategies that promote critical thinking were applying learning to real world situations, evaluating author's purpose, comparing content across texts, analyzing different author's perspectives, and conducting research on a topic. In teachers' descriptions of their instructional change, many teachers referred to the planning and use of questions that required higher order thinking and the increased expectation for students to think more critically about the content they studied. However, when asked their biggest challenges with implementation, teachers expressed concern about the increased rigor of the curriculum. Some expressed the sentiment that their students needed time to adjust to higher expectations; while others questioned the developmental appropriateness of the standards. While teachers report having increased their expectations for higher

order and critical thinking, they would benefit from professional development that would equip them with additional pedagogical strategies for teaching students to think more critically.

When planning professional development, the state, districts, and schools should ensure it tailored to the needs of teachers and focused on the content they feel they need. Just attending professional development will not result in increased knowledge, self-efficacy, or changes in practice. The quality of the professional development is critical to the effectiveness. In addition, districts and schools should inform teachers about professional development opportunities outside the school system since these were some of the highest rated professional learning experiences reported by teachers.

Implications for Policy

This study offers implications for policy as well. The CCSS represents perhaps the most challenging reform in the history of the standards movement, in that, it promotes both equity and excellence (Sleeter, 2007; Sleeter & Stillman, 2007). In order to have an educational system that is globally competitive, it is now necessary to educate all students at a high level. The standards represent the first time teachers are expected to teach all students to think, read, and write critically. Adoption and implementation was quick and schools and teachers were not adequately prepared. As previously stated, teachers need time to understand the standards and adapt their instruction. However, the high stakes nature of our present accountability system makes it difficult for teachers to

experiment with new instructional practices when their job is on the line. This tension is harmful to the achieving the goal of the ELA CCSS. If the implementation of the ELA CCSS is to be met, it might be necessary to take away the high stakes nature of the reform, at least temporarily. This will provide teachers with the opportunity to become fully prepared, in terms of knowledge, self-efficacy, and instructional change, to meet the expectations of standards implementation.

Future Research

This study brings to light that much is still unknown regarding teacher preparedness to implement the ELA CCSS. A large portion of the variance in self-described teacher change was left unexplained in the regression model. Therefore, more exploration is needed into the relationship between teachers' knowledge, self-efficacy, and instructional change, as well as other factors that might influence teachers' preparedness and their perceptions of their preparedness. In addition, the use of qualitative methods would provide a more nuanced understanding of teachers' preparedness and particularly changes in their instructional practice. Studies could use purposeful sampling to study specific groups of teachers, such as those who have made significant changes to their practice, or those who have reported little change. Observational data would provide a means to understand how teachers actually implement change as well as to more completely investigate the degree to which teachers' practices support the ELA CCSS. This would also serve as a means to explore the nature

of teachers' adjustments to the standards over time as their experience with them increases. In addition, future studies should look at how the introduction of the new state assessments influences teachers' instructional and assessment practices. The content of these exams will likely be highly influential on teachers' instruction and therefore should be studied.

Conclusion

Based on the results of this study, it appears that teachers do not feel fully prepared to implement the ELA CCSS into practice, yet they are making progress towards this goal. Teachers reported greater levels of knowledge and self-efficacy for implementation than changes in practices. However, teachers did report making changes in their practice and acknowledged the need for continued change. They simply asked for the necessary time, resources, and additional professional development to fully meet the demands of the more rigorous learning standards.

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APPENDIX A

CORE ELEMENTS OF PROFESSIONAL DEVELOPMENT

	Time	Collaboration in Problem Solving	School-based orientation	Strong leadership	Content Focused	Coherence
Corcoran (1995)	Provides sufficient time and follow-up support for teachers to master new strategies and content and to integrate them into their practice	Offers opportunities for teachers to be active learners	Stimulate and support site-based initiatives Accessible and inclusive	Demonstrates respect for teachers as professionals and adult learners	Reflects the knowledge base on teaching Offers opportunities for teachers to deepen their subject matter knowledge	Supports teacher initiatives as well as of the school and district
Birman, Desimone, Porter, & Garet (2000)	Longer duration provides more time for other essential elements	Opportunities for active learning Alternative formats to traditional workshop model Collective participation			Focused on content and how students learn that content	Coherence in professional development experiences

	Time	Collaboration in Problem Solving	School-based orientation	Strong leadership	Content Focused	Coherence
Ivgvarson, Meiers, and Beavis (2005)	Follow up support	Active learning and engagement opportunities Feedback and collaborative examination of student work			Content focused	
ATF (2008)	Provide sufficient time, support, and resources to enable teachers to master new content and pedagogy and to integrate these into their practice	Intellectually engaging and address the complexity of teaching Should take a variety of forms, including some we have not typically considered	Should be job-embedded and site specific Should contribute to measurable improvement in student achievement	Designed by teachers in cooperation with experts in the field	Deepen and broaden knowledge of content Provide a strong foundation in the pedagogy of particular disciplines Provide knowledge about the teaching and learning processes Rooted in and reflect the best available research	Should be aligned with the standards and curriculum teachers use

	Time	Collaboration in Problem Solving	School-based orientation	Strong leadership	Content Focused	Coherence
Hunzicker (2010)	Ongoing	Collaborative	Job-embedded	Supportive	Instructional-focus	
Gibson and Brooks (2012)		Carried out in ways that are meaningful and relevant through active learning, collaboration, modeling, and opportunities for practice and feedback Incorporating coaching and in-school	Based on the needs of teachers	Teacher controlled and administration supported	Content and curriculum focused	Coherent and connected to broader school goals and other professional development opportunities
NEA (2013)	Be career-long, rigorous, and sustained	Stimulate intellectual development and leadership capacity	Based upon clearly articulated goals reached by consensus of the school community Designed, directed by, and differentiated to meet the needs of affected professionals at each site Support	Supported by adequate resources Include an ongoing assessment and evaluation component to determine effectiveness	Be standards-referenced and incorporate effective practice, relevant data, and current research	Incorporated into and aligned with (not added to) professional work expectations Balance individual priorities with the needs of the school and the

	Time	Collaboration in Problem Solving	School-based orientation	Strong leadership	Content Focused	Coherence
			education professionals in meeting the needs of students Respond to, refine, improve, and adjust the professional development according to the feedback provided by the participants			district

APPENDIX B
SURVEY INSTRUMENT DESIGN

Category and Number of Questions	From the EPE Survey	Modified from EPE Survey	Added to the EPE Survey	Rationale for Change
Demographics (6 items)	Which of the following best describes your current teaching assignment field? (Q3)	<p>What grade level do you teach? (Q1)</p> <p>I changed answer choices from grade level spans to specific grade levels because all participants are classroom teachers in kindergarten through fifth grade.</p> <p>Where do you work? (Q2)</p> <p>I changed this item to ask "At what school do you work?"</p>	<p>How many years of teaching experience do you have? (Q4)</p> <p>Have you pursued or are you pursuing other degrees, coursework, and/or certification? (Q5)</p> <p>Rate your level of effectiveness as a literacy teacher. (Q35)</p>	<p>Questions relating to years of experience and additional degrees, certification, and coursework, were added to determine if these factors play a role in teachers' perception of their preparedness to implement the standards.</p> <p>The question asking teachers to rate their effectiveness as a teacher was added because of the theoretical link between perceived preparedness and the development of self-efficacy (Giallo & Little, 2003).</p> <p>I removed questions relating to the location of the participant's school (urban, suburban, rural), the approximate number of students enrolled in the participant's school, the poverty level of the participant's school because these aspects will be determined based on participants answer to question 3: Where do you work?</p> <p>In addition, I removed the question asking about participants' current professional role, because the survey was designed for classroom teachers.</p>

Category and Number of Questions	From the EPE Survey	Modified from EPE Survey	Added to the EPE Survey	Rationale for Change
<p>Knowledge of the ELA CCSS and its components (1st level of preparedness) (3 items)</p>	<p>No original questions were used.</p>	<p>Please rate your overall level of understanding with the CCSS in English language arts and literacy. (Q6)</p> <p>I changed the word “familiarity” to “understanding” in the above question. I also added several topics and components of the standards for teachers’ to rate their knowledge level such as the foundational standards, the CCR Anchor Standards, content area literacy instruction, and close reading of</p>	<p>Please rate your level of understanding on the alignment between the CCSS and your state’s standards prior to CCSS in English language arts. (Q9)</p> <p>Please rate your level of understanding of each of the following:</p> <ul style="list-style-type: none"> - New state assessments your students will be taking in 2015. - Technology enhanced multiple choice questions on the new state assessments. - Constructed response questions on the new state assessments. - Performance tasks on the new 	<p>I modified the questions 6 by changing “familiarity” to “understanding” because I am more concerned with teachers’ knowledge of the standards than their familiarity.</p> <p>Also, I added additional items for teachers to rate their level of understanding which asked about the College and Career Anchor Standards; foundational skills; content area literacy instruction; close reading; informational texts; and text complexity. These questions were added because they appeared in the literature as key shifts and potential challenges to implementation of the standards (ASCD, 2012; Wixson, 2013).</p> <p>I added a question regarding the alignment between the CCSS and the previous state standards because most states early on in the implementation process conducting a comparative analysis of the Common Core State Standards and the previous state standards (Anderson et al., 2012; Council of Great City Schools, 2012; Rentner, 2013a; Watt, 2011)</p> <p>The EPE survey did not include any questions related to the Common Core aligned state assessments. Because these assessments are likely to be highly influential on instruction; are recognized as quite different in format, content and rigor from previous state assessments; and represent a significant implementation challenge for districts and states, I</p>

Category and Number of Questions	From the EPE Survey	Modified from EPE Survey	Added to the EPE Survey	Rationale for Change
		text.	state assessments. (Q13)	determined that it was important to ask teachers about their knowledge of Common Core aligned state assessments. One item was added which asked teachers to rate their overall level of understanding of the new assessments as well as their knowledge relating to new question formats: technology enhanced multiple choice, constructed response, and performance tasks.
Self-Efficacy to Implement the ELA CCSS into practice (2nd level of preparedness) (7 items)	<p>On a 5 point scale, how prepared do you personally feel to teach the CCSS to the following groups of students (all students, ELLs, students with disabilities, low-income students, academically at-risk students)? (Q23)</p> <p>My textbooks and other main</p>	<p>Which of the following would help you feel better prepared to teach the CCSS? Check all that apply. (Q24)</p> <p>I added "More professional development tailored to my needs and the needs of my school" as a possible answer choice.</p> <p>On a five-point scale, how prepared do you think you, your colleagues, your school, your</p>	<p>Based on your instruction, how prepared do you believe your students will be for the new assessments in the 2014-2015 school year? (Q14)</p> <p>I have access to enough informational texts to teach my students. (Q28)</p> <p>What have been the biggest challenges you have faced in implementing the ELA CCSS? (Q37 – open-ended)</p>	<p>I added the answer choice of "More professional development tailored to my needs and the needs of my school" because professional development is an essential component of the successful implementation of any educational reform (Gibson & Brooks) and because context plays such an important role in professional development, it is important for it to be tailored to the particular needs of the participants (Guskey, 2009).</p> <p>I also modified the question asking participants to rate the level of preparedness of their school, district, and state by adding you and your colleagues. These were added to determine participants' personal sense of preparedness as well as that of their peers.</p> <p>I added a question asking participants to rate how prepared their students would be for the new state assessments in 2014-2015. This question was added to see if teachers view preparedness to teach differently from preparedness for their students to be assessed.</p> <p>I also added a question asking teachers if they have access to enough quality informational text to teach</p>

Category and Number of Questions	From the EPE Survey	Modified from EPE Survey	Added to the EPE Survey	Rationale for Change
	curricular materials are aligned with the CCSS. (Q27)	district, and your state are to put the CCSS into practice? (Q25) I added “you” and “your colleagues” for participants to rate their confidence in the preparedness.		their students; this question was added because of the stress the Common Core places on informational text (Ogle, 2013; Shanahan, 2013). Finally, I added an open ended question asking participants the challenges they faced implementing the ELA CCSS. The literature on the Common Core and their implementation efforts cites many challenges teachers are likely to face. I am interested in what teachers actually find challenging. This question was intentionally left open-ended so that participants are not confined by the challenges presented in the research literature.
Instructional Change (3rd level of preparedness) (9 items)	To what extent have you incorporated the CCSS into your teaching practice? (Q29)	No questions were modified.	Implementation of the ELA CCSS requires fundamental changes in instructional practices. (level of agreement with statement) (Q11) Will the introduction of the new assessments change the way you teach the standards? (Q15) My practices have changed with the ELA CCSS. (Q30)	I added the question asking participants if the introduction of new state assessments will change their teaching. This was done because the literature suggests that the assessments will be more influential on teaching than the standards themselves (Applebee, 2013). I also added questions asking participants if they believed implementation required fundamental changes in practice and the degree to which their practices have changed overall, and the extent that their instruction had changed in specific content areas (reading, writing, science, and social studies). These questions were added because the literature on Common Core implementation suggests that successful implementation will require substantial changes in the instructional practices of teachers (Rentner, 2013a; Scholastics & the Bill and Melinda Gates Foundation,

Category and Number of Questions	From the EPE Survey	Modified from EPE Survey	Added to the EPE Survey	Rationale for Change
			<p>To what extent has your instruction changed in the following content areas (reading, writing, science, social studies) as a result of the implementation of the CCSS? (Q31)</p> <p>During your literacy planning from the previous week, what resources were used? (Q32)</p> <p>During your literacy planning from the previous week, what elements were considered when planning your instruction? (Q33)</p> <p>Thinking about your language arts instruction from the last week, how often did you ask students to do the following tasks? (Q34)</p>	<p>2013); I want to know if teachers agree with this assessment. I also asked about changes in instruction in specific content areas to determine if changes in practice varied by content area. Because the CCSS take a more balanced approach to ELA, as opposed to an overemphasis on reading (Pearson & Hiebert, 2013), and because the CCSS stresses literacy instruction across the content areas (Conley, 2012), it is important to determine how practices have changed in each area.</p> <p>Teachers were asked to think about their planning and instruction from the previous week and report the resources and considerations while planning as well as the instructional strategies they implemented and the frequency with which they implemented them. These items were added in order to implicitly ask teachers about their instructional change. The answer choices were created using the literature on the ELA CCSS and potential challenges teachers were likely to face in implementation. This provided an additional means to analyze the extent to which teachers' practices aligned with the vision of the ELA CCSS.</p> <p>Finally, I added an open ended question asking participants to describe their instructional changes. This item was added to provide teachers the opportunity to describe their changes in practice without being restricted by predetermined answer choices. Because change is arguably the most challenging aspect of preparedness, I wanted to know the most about it.</p>

Category and Number of Questions	From the EPE Survey	Modified from EPE Survey	Added to the EPE Survey	Rationale for Change
			Explain how your literacy instructional practices have changed since the implementation of the ELA CCSS? (Q36 – open-ended)	
Professional Development on the ELA CCSS (6 questions)	<p>Please indicate how your professional development for the CCSS was presented. (Q18)</p> <p>Please indicate who provided your professional development for the CCSS. (Q19)</p>	<p>Which of the following topics have been addressed in your CCSS professional development? (Q20)</p> <p>I added the following answer choices: Key shifts from previous standards, Teaching close/critical reading, Teaching informational text, Determining text complexity, Teaching higher order and critical thinking, and</p>	<p>Please indicate what formal professional development opportunities you attended and the amount of time spent in each provided by my school, my district, the state, a professional organization, a college or university. In addition, please rate the quality of each opportunity on a scale of 1 (low quality) to 5 (high quality).(Q17)</p> <p>Overall, rate your professional development experience in relation to the following aspects (e.g. my professional</p>	<p>The EPE survey included the category of “professional development on the Common Core” asking questions about the format, provider, amount of time, topics addressed, and participants’ overall rating of their professional development experience. I modified the question regarding the amount of time asking for both the number of opportunities as well as the amount of total time teachers participated in professional development based on particular entities (school, district, state, professional organization, or college or university). This was done because the literature suggests that time, both in terms of period of time and total amount of time matter for effective professional development (Desimone, 2009). In addition, this item asked about the various entities, to get a better sense of where teachers were receiving professional development from. Finally, instead of asking teachers to rate the quality of their professional development overall, teachers were asked to rate the quality of each entity. Again this was done to get a better sense of teachers’ professional development experiences.</p> <p>Also, several topics were added to the list of potential topics addressed in participants’ professional development. The added topics represent key shifts</p>

Category and Number of Questions	From the EPE Survey	Modified from EPE Survey	Added to the EPE Survey	Rationale for Change
		Integrating literacy into the content areas	<p>development promoted an integrated approach to teaching the ELA CCSS, My professional development was tailored to the needs of my school and the teachers who work there.) (Q21)</p> <p>Teachers learn about the ELA CCSS from a variety of sources. Please indicate where you have found such information and the amount of time you've spent with each (e.g. district website, publication, or communication; education news and media). (Q22)</p>	<p>from previous standards: teaching close/critical reading, teaching informational text, determining text complexity, teaching higher order and critical thinking, and integrating literacy into the content areas. These topics were added to the list of potential topics because they were noted as key challenges teachers are likely to face in implementing the standards into practice in the literature on the ELA CCSS.</p> <p>In addition, an item was added that asked teachers to rate the degree to which their professional development aligned with standards of effective professional development such as if their professional development was tailored to the needs of their schools and its teachers, if their professional development promoted an integrated approach to teaching the ELA CCSS, if school leaders were supportive of professional development, if sufficient time was available for professional learning, if follow up support was available, if teachers worked collaboratively, if teachers discussed teaching and learning, and if teachers collaborated in planning, teaching and assessment. This item was added to assess the degree to which teachers' professional development experiences aligned with recommendations in the literature on professional development (i.e., Guskey, 2009; Desimone, 2009).</p> <p>The final professional development item asked teachers about the information sources they used to find additional informational on the ELA CCSS and the amount of time spent with each. This item was added because teachers do not only learn about the standards</p>

Category and Number of Questions	From the EPE Survey	Modified from EPE Survey	Added to the EPE Survey	Rationale for Change
				in formal professional development experiences, but also likely seek out additional information from other sources. This question provided a means for understanding the sources teachers most often go to for information as well as the amount of time outside formal professional development teachers are devoting to their own professional learning.
Perceptions of Quality and Impact on Student Learning (6 questions)	Overall, how would you rate the quality of the CCSS, relative to your state's standards prior to the CCSS? (Q8) The ELA CCSS will help or has helped me improve my own instruction and classroom practice. (Q26)	No questions were modified.	The ELA CCSS includes the skills and knowledge students need to learn in English/language arts. (Q7) The ELA CCSS will increase the number of students who graduate college and career ready. (Q10) What impact do you think the CCSS will have on student learning in reading, writing, science, and social studies? (Q12) I believe the new assessments will successfully measure if students have	I added several questions asking participants about their overall perceptions of quality of the CCSS; their potential impact on student learning in ELA, science, and social studies; and their perceptions of quality of the new state assessments. These questions were added to determine if participants' opinion of the quality of the standards and the assessments was related to their understanding of the components of the CCSS, their professional development relating to the CCSS, or their implementation of standards into practice.

Category and Number of Questions	From the EPE Survey	Modified from EPE Survey	Added to the EPE Survey	Rationale for Change
			mastered the CCSS in ELA? (Q16)	

APPENDIX C

SURVEY INSTRUMENT

English Language Arts Common Core Survey Questions- Elementary

I would like to thank you for taking your time to complete this survey. The survey should take approximately 15-20 minutes to complete. Some questions ask about your background or your professional development experiences; others ask for your opinion.

Choose the response that best reflects your experience or opinion. The goal of the survey is to provide accurate information about your experiences and opinions with the English Language Arts Common Core State Standards, which schools can use to better support teachers as they implemented the Common Core Standards in their classroom.

For brevity, the English Language Arts Common Core State Standards will be referred to as ELA CCSS. Your responses are voluntary and anonymous.

Background Information

1. What grade level do you teach?
 - Kindergarten
 - First Grade
 - Second Grade
 - Third Grade
 - Fourth Grade
 - Fifth Grade
 - More than one elementary grade

2. At what school do you work? _____

3. Which of the following best describes your current teaching assignment field?
Check all that apply.
 - General Education (elementary, all subjects)
 - English/Language Arts
 - History/Social Studies

- Mathematics
- Science
- English-Language Learners
- Special Education
- Other _____

4. How many years of teaching experience do you have?

- 0-2 years
- 3-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- More than 20 years

5. Have you pursued or are you currently pursuing other degrees, coursework, and/or certification? Check all that apply.

- National Board Certification
- Master's in Education
- Doctorate in Education
- Additional coursework in education

Understanding of the components of the English Language Arts Common Core State Standards

6. Please rate your overall level of understanding with each of the following

	Very knowledgeable	Knowledgeable	Slightly knowledgeable	Not at all knowledgeable
CCSS for ELA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
College and Career anchor standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foundational skills for ELA CCSS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Content area literacy instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Close reading of texts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Different types of informational texts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instructional strategies for teaching complex texts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. The ELA CCSS includes the skills and knowledge students need to learn in English/language arts.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

Relationship to Previous State Standards

8. Overall, how would you rate the quality of the ELA CCSS, relative to your state's language arts standards prior to the CCSS?
- Common Core State Standards are of higher quality
 - Common Core Standards and my states standards are of about the same quality
 - My state's standards are of higher quality
 - I am not familiar with the state's standards prior to the CCSS
9. Please rate your level of understanding on the alignment between the ELA CCSS and your state's language arts standards prior to CCSS.
- Very knowledgeable
 - Knowledgeable
 - Slightly knowledgeable
 - Not at all knowledgeable

Impact of the Common Core State Standards on Student Learning

10. The ELA CCSS will increase the number of students who graduate college and career ready.
- Strongly agree
 - Agree
 - Disagree
 - Strongly disagree
11. Implementation of the ELA CCSS requires fundamental changes in instructional practices.
- Strongly agree
 - Agree
 - Disagree
 - Strongly disagree

12. What impact do you think the ELA CCSS will have on student learning in

	None	Little	Some	A lot
Reading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social Studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Understanding of New State Assessments

13. Please rate your level of understanding with each of the following.

	Very knowledgeable	Knowledgeable	Slightly knowledgeable	Not at all knowledgeable
<u>New state assessments</u> students will be taking in 2014-2015	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>Technology enhanced multiple choice questions</u> on the new state assessments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>Constructed response questions</u> on the new state assessments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>Performance tasks</u> on the new state assessments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Based on your instruction, how prepared do you believe your students will be for the new assessments in the 2014-15 school year?

- Very well prepared
- Well prepared
- Somewhat prepared
- Not well prepared

15. Will the introduction of the new assessments change the way you teach the standards?

- Yes, to a large degree
- Yes, to a moderate degree
- Yes, to a small degree
- No

16. I believe the new assessments will successfully measure if students have met the ELA CCSS.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

Professional Development on Common Core Standards

17. Please indicate what formal professional development opportunities you've attended and the amount of time spent in each. In addition, please rate the quality of each opportunity on a scale of 1 (low quality) to 5 (highest quality).

Professional development offered by:	Number of opportunities	Total number of hours	Rate quality 1 = low quality 5 = highest quality
My school			
My district			
The state			
A professional organization			
A college or university			
Other _____			

18. Please indicate how your professional development was presented. Check all that apply.

- Collaborative planning time with colleagues
- Structured, formal settings (seminars, lectures, conferences)
- Job-embedded training or coaching
- Professional learning communities
- Online webinars or videos
- Other _____

19. Please indicate who provided your formal professional development for the ELA CCSS. Check all that apply.

- Staff member from my school
- Staff member from another school in my district
- Staff member from my district's central office
- Independent professional development provider or consultant
- State department of education
- Professional association
- Other _____

20. Which of the following topics have been addressed in your formal professional development? Check all that apply.

- CCSS in English/Language Arts and Literacy
- CCSS in Mathematics
- Alignment between the CCSS and your state's standards prior to CCSS
- Curriculum materials and resources to teach the CCSS
- Teaching the CCSS to specific students (e.g., students with disabilities or English-language learners)
- Collaborating with colleagues to teach the CCSS
- Adapting classroom assessments to the CCSS
- CCSS assessments being developed by multi-state consortia
- Research on best practices for implementation of the CCSS
- Key shifts from previous standards
- Teaching close/critical reading
- Teaching informational text
- Determining text complexity and/or teaching more complex text
- Teaching higher order and critical thinking
- Integrating literacy into the content areas
- Other _____

21. Overall, rate your professional development experience in relation to the following aspects.

	Strongly Agree	Agree	Disagree	Strongly Disagree
My professional development promoted an integrated approach to teaching the ELA CCSS.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My professional development was tailored to the needs of my school and the teachers who work there.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The leaders at my school actively support and encourage all staff to take part in professional development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insufficient time is available in my school to support teachers' professional learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Follow up support for professional development is available within my school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teachers at my school work collaboratively to resolve teaching and learning issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Since the implementation of the ELA CCSS, teachers at my school discuss teaching and learning more with their colleagues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Since the implementation of the ELA CCSS, teachers have increased their collaboration in planning, teaching, and assessment activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22. Teachers learn about the ELA CCSS from a variety of sources. Please indicate where you have found such information and the amount of time you've spent with each.

SOURCE	Amount of time			
	None	1- 5 hours	5 to 10 hours	Greater than 10 hours
District website, publication, or communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State department website, publication, or communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional association website, publication, or communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National education research or advocacy organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education publishing or testing company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education news and media (print or online)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
General news and media (print or online)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____				

Preparedness to Teach the English Language Arts Common Core State Standards

23. On a five-point scale, where 5 is “Very Prepared” and 1 is “Not at All Prepared,” how prepared do you personally feel to teach the ELA CCSS to the following groups of students?

	5 Very Prepared	4	3	2	1 Not at All Prepared
Your students as a whole	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
English-language learners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students with disabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low-income students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Academically at-risk students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. Which of the following would help you feel better prepared to teach the ELA CCSS? Check all that apply.

- More professional development tailored to my needs and the needs of my school
- More information about how the ELA CCSS will change my instructional practice
- More information about how the ELA CCSS will change what is expected of students
- Access to curricula resources aligned to the ELA CCSS
- Access to assessments aligned to the ELA CCSS
- More planning time
- More collaboration time with colleagues
- More information about how the ELA CCSS differ from my state’s standards prior to the CCSS
- Other _____

25. On a five-point scale, where 5 is “Very Prepared” and 1 is “Not at All Prepared”, how prepared do you think you, your colleagues, your school, your district, and your state are to put the ELA CCSS into practice?

	5 Very Prepared	4	3	2	1 Not at All Prepared
You	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your district	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your state	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. The ELA CCSS will help or has helped me improve my own instruction and classroom practice.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

27. My textbooks and other main curricular materials are aligned with the ELA CCSS.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

28. I have access to enough informational texts to teach my students.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

Implementation of the Common Core State Standards

29. To what extent have you incorporated the ELA CCSS into your teaching practice?

- Fully incorporated into all areas of my teaching
- Incorporated into some areas of my teaching, but not others
- Not at all incorporated into my teaching

30. My practices have changed with the ELA CCSS.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

31. To what extent has your instruction changed in the following content areas as a result of the implementation of the ELA CCSS.

	5 Significantly	4	3	2	1 Not at All
Reading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social Studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Think back to your literacy instruction for the last week. If for some reason, there were a lot of disruptions during this time, then think of your last week where you did not have too many disruptions.

32. During this time, what resources were used in planning your lessons?

(Check all that apply)

- The instruction emerged spontaneously
- The ELA CCSS
- My county's curriculum/pacing guide based on the ELA CCSS
- Resources from a core (basal) program aligned with the ELA CCSS
- Resources from a supplementary program aligned with the ELA CCSS
- Resources or results from a state-mandated assessment program
- Resources or results from a district-mandated assessment program
- Resources or results from a curriculum-based assessment
- Information from a screening or progress monitoring assessment
- Resources from a professional source (e.g., a journal, book, conference)
- Resources I developed myself
- Resources from teachers in my school or district
- Other: _____

33. Which of the following elements were considered when planning your lesson during this time? (Check all that apply)

- Questions to engage students in critical thinking
- The level of complexity of the text
- How students would provide text support for their responses
- Integrating multiple ELA standards into each lesson
- Integrating content standards into instruction
- Differentiation to meet the needs of all students
- The vocabulary that would be discussed in the lesson
- Ways to engage students in discussion relating to the lesson content

34. **Thinking about your language arts instruction from the last week**, how often do you ask students to do the following task?

	Did not occur	Once a week	Several times a week	Daily	Several times a day
Set a purpose for reading					
Read a text multiple times					
Compare content across various texts					
Evaluate the ideas presented in text					
Provide text evidence to support their answers					
Discuss ideas presented in the text					
Analyze the text structure					
Analyze the text features					
Analyze different author's perspectives of the same content					
Read challenging text					
Read informational text					
Apply what they are learning to real world situations					
Research a topic					
Highlight or annotate text they read					
Take notes on text they read					
Write narrative text					
Write informational text					
Write argumentative text					
Provide evidence to support their ideas when writing					

35. Rate your level of effectiveness as a literacy teacher.

- Highly effective
- Effective
- Somewhat effective
- Not very effective

Open-ended Questions

36. Explain how your literacy instructional practices have changed since the implementation of the ELA CCSS?

37. What have been the biggest challenges you have faced in implementing the ELA CCSS?

Thank you very much for taking the time to complete this survey. I greatly appreciate your time and effort.

APPENDIX D

BONFERRONI PAIRWISE COMPARISONS DATA TABLES

Table D1

Bonferroni's Pairwise Comparisons for School and District Professional Development Ratings

Pairwise Comparisons

Measure: MEASURE_1

(I) factor1	(J) factor1	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	-.093	.076	.222	-.243	.057
2	1	.093	.076	.222	-.057	.243

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

Table D2

Bonferroni's Pairwise Comparisons for the Standards for Effective Professional Development

Pairwise Comparisons

Measure: MEASURE_1

	(I) Factor2	(J) Factor2	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
						Lower Bound	Upper Bound
1		2	.185*	.050	.009	.025	.344
		3	-.242*	.056	.001	-.420	-.064
		4	.599*	.080	.000	.344	.854
		5	.045	.048	1.000	-.108	.198
		6	-.350*	.056	.000	-.527	-.174
		7	.045	.054	1.000	-.126	.215
		8	-.013	.053	1.000	-.180	.155
2		1	-.185*	.050	.009	-.344	-.025
		3	-.427*	.059	.000	-.613	-.240
		4	.414*	.067	.000	.201	.627
		5	-.140	.047	.100	-.291	.010
		6	-.535*	.066	.000	-.745	-.325
		7	-.140	.055	.313	-.314	.033
		8	-.197*	.055	.013	-.373	-.022
3		1	.242*	.056	.001	.064	.420
		2	.427*	.059	.000	.240	.613
		4	.841*	.078	.000	.593	1.089
		5	.287*	.046	.000	.140	.433
		6	-.108	.043	.355	-.245	.028
		7	.287*	.050	.000	.127	.447
		8	.229*	.051	.000	.067	.391

4	1	-.599*	.080	.000	-.854	-.344
	2	-.414*	.067	.000	-.627	-.201
	3	-.841*	.078	.000	-1.089	-.593
	5	-.554*	.071	.000	-.781	-.327
	6	-.949*	.073	.000	-1.182	-.716
	7	-.554*	.073	.000	-.786	-.322
	8	-.611*	.072	.000	-.839	-.384
	5	1	-.045	.048	1.000	-.198
2		.140	.047	.100	-.010	.291
3		-.287*	.046	.000	-.433	-.140
4		.554*	.071	.000	.327	.781
6		-.395*	.049	.000	-.552	-.238
7		.000	.045	1.000	-.144	.144
8		-.057	.049	1.000	-.213	.098
6		1	.350*	.056	.000	.174
	2	.535*	.066	.000	.325	.745
	3	.108	.043	.355	-.028	.245
	4	.949*	.073	.000	.716	1.182
	5	.395*	.049	.000	.238	.552
	7	.395*	.048	.000	.241	.549
	8	.338*	.047	.000	.187	.488
	7	1	-.045	.054	1.000	-.215
2		.140	.055	.313	-.033	.314
3		-.287*	.050	.000	-.447	-.127
4		.554*	.073	.000	.322	.786
5		.000	.045	1.000	-.144	.144
6		-.395*	.048	.000	-.549	-.241
8		-.057	.032	1.000	-.158	.043

8	1	.013	.053	1.000	-.155	.180
	2	.197*	.055	.013	.022	.373
	3	-.229*	.051	.000	-.391	-.067
	4	.611*	.072	.000	.384	.839
	5	.057	.049	1.000	-.098	.213
	6	-.338*	.047	.000	-.488	-.187
	7	.057	.032	1.000	-.043	.158

Based on estimated marginal means

* The mean difference is significant at the .05 level.

^a Adjustment for multiple comparisons: Bonferroni.

Table D3

Bonferroni's Pairwise Comparisons for Knowledge Items

Pairwise Comparisons

Measure:MEASURE_1

(I) factor1	(J) factor1	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	.551*	.095	.000	.223	.878
	3	-.114	.076	1.000	-.376	.148
	4	-.266	.084	.130	-.556	.024
	5	-.032	.086	1.000	-.328	.265
	6	-.456*	.084	.000	-.744	-.167
	7	-.070	.087	1.000	-.369	.230
	8	.019	.083	1.000	-.265	.302
	9	.703*	.084	.000	.414	.991
	10	.861*	.087	.000	.561	1.161
	11	.886*	.084	.000	.597	1.175
	12	.867*	.085	.000	.576	1.158
	2	1	-.551*	.095	.000	-.878
3		-.665*	.071	.000	-.909	-.420
4		-.816*	.076	.000	-1.076	-.557
5		-.582*	.077	.000	-.848	-.317
6		-1.006*	.076	.000	-1.269	-.744
7		-.620*	.077	.000	-.885	-.356
8		-.532*	.069	.000	-.768	-.295
9		.152	.075	1.000	-.105	.408
10		.310*	.078	.007	.043	.577
11		.335*	.080	.003	.060	.611
12		.316*	.080	.008	.040	.592

3	1	.114	.076	1.000	-.148	.376
	2	.665*	.071	.000	.420	.909
	4	-.152	.055	.409	-.340	.036
	5	.082	.063	1.000	-.136	.300
	6	-.342*	.061	.000	-.550	-.133
	7	.044	.059	1.000	-.159	.247
	8	.133	.061	1.000	-.077	.342
	9	.816*	.067	.000	.586	1.047
	10	.975*	.066	.000	.748	1.201
	11	1.000*	.072	.000	.753	1.247
	12	.981*	.067	.000	.751	1.211
	4	1	.266	.084	.130	-.024
2		.816*	.076	.000	.557	1.076
3		.152	.055	.409	-.036	.340
5		.234*	.049	.000	.065	.404
6		-.190*	.043	.001	-.338	-.041
7		.196*	.052	.015	.018	.375
8		.285*	.063	.001	.069	.501
9		.968*	.072	.000	.721	1.216
10		1.127*	.070	.000	.886	1.367
11		1.152*	.078	.000	.883	1.421
12		1.133*	.071	.000	.890	1.376
5		1	.032	.086	1.000	-.265
	2	.582*	.077	.000	.317	.848
	3	-.082	.063	1.000	-.300	.136
	4	-.234*	.049	.000	-.404	-.065
	6	-.424*	.045	.000	-.579	-.269
	7	-.038	.047	1.000	-.198	.122
	8	.051	.064	1.000	-.169	.270
	9	.734*	.069	.000	.498	.970
	10	.892*	.069	.000	.654	1.131
	11	.918*	.073	.000	.665	1.170
	12	.899*	.068	.000	.663	1.134

6	1	.456*	.084	.000	.167	.744
	2	1.006*	.076	.000	.744	1.269
	3	.342*	.061	.000	.133	.550
	4	.190*	.043	.001	.041	.338
	5	.424*	.045	.000	.269	.579
	7	.386*	.051	.000	.210	.563
	8	.475*	.061	.000	.266	.683
	9	1.158*	.070	.000	.916	1.400
	10	1.316*	.071	.000	1.071	1.561
	11	1.342*	.072	.000	1.094	1.590
	12	1.323*	.068	.000	1.089	1.556
	7	1	.070	.087	1.000	-.230
2		.620*	.077	.000	.356	.885
3		-.044	.059	1.000	-.247	.159
4		-.196*	.052	.015	-.375	-.018
5		.038	.047	1.000	-.122	.198
6		-.386*	.051	.000	-.563	-.210
8		.089	.066	1.000	-.137	.314
9		.772*	.066	.000	.546	.999
10		.930*	.067	.000	.699	1.161
11		.956*	.072	.000	.708	1.203
12		.937*	.065	.000	.713	1.161
8		1	-.019	.083	1.000	-.302
	2	.532*	.069	.000	.295	.768
	3	-.133	.061	1.000	-.342	.077
	4	-.285*	.063	.001	-.501	-.069
	5	-.051	.064	1.000	-.270	.169
	6	-.475*	.061	.000	-.683	-.266
	7	-.089	.066	1.000	-.314	.137
	9	.684*	.067	.000	.453	.915
	10	.842*	.068	.000	.608	1.076
	11	.867*	.068	.000	.634	1.100
	12	.848*	.068	.000	.615	1.081

9	1	-.703*	.084	.000	-.991	-.414
	2	-.152	.075	1.000	-.408	.105
	3	-.816*	.067	.000	-1.047	-.586
	4	-.968*	.072	.000	-1.216	-.721
	5	-.734*	.069	.000	-.970	-.498
	6	-1.158*	.070	.000	-1.400	-.916
	7	-.772*	.066	.000	-.999	-.546
	8	-.684*	.067	.000	-.915	-.453
	10	.158*	.044	.033	.005	.311
	11	.184*	.044	.003	.033	.334
	12	.165*	.044	.016	.014	.315
	10	1	-.861*	.087	.000	-1.161
2		-.310*	.078	.007	-.577	-.043
3		-.975*	.066	.000	-1.201	-.748
4		-1.127*	.070	.000	-1.367	-.886
5		-.892*	.069	.000	-1.131	-.654
6		-1.316*	.071	.000	-1.561	-1.071
7		-.930*	.067	.000	-1.161	-.699
8		-.842*	.068	.000	-1.076	-.608
9		-.158*	.044	.033	-.311	-.005
11		.025	.039	1.000	-.109	.160
12		.006	.041	1.000	-.133	.146
11		1	-.886*	.084	.000	-1.175
	2	-.335*	.080	.003	-.611	-.060
	3	-1.000*	.072	.000	-1.247	-.753
	4	-1.152*	.078	.000	-1.421	-.883
	5	-.918*	.073	.000	-1.170	-.665
	6	-1.342*	.072	.000	-1.590	-1.094
	7	-.956*	.072	.000	-1.203	-.708
	8	-.867*	.068	.000	-1.100	-.634
	9	-.184*	.044	.003	-.334	-.033
	10	-.025	.039	1.000	-.160	.109
	12	-.019	.039	1.000	-.152	.114

12	1	-.867*	.085	.000	-1.158	-.576
	2	-.316*	.080	.008	-.592	-.040
	3	-.981*	.067	.000	-1.211	-.751
	4	-1.133*	.071	.000	-1.376	-.890
	5	-.899*	.068	.000	-1.134	-.663
	6	-1.323*	.068	.000	-1.556	-1.089
	7	-.937*	.065	.000	-1.161	-.713
	8	-.848*	.068	.000	-1.081	-.615
	9	-.165*	.044	.016	-.315	-.014
	10	-.006	.041	1.000	-.146	.133
	11	.019	.039	1.000	-.114	.152

Based on estimated marginal means

* The mean difference is significant at the .05 level.

^a Adjustment for multiple comparisons: Bonferroni.

Table D4

Bonferroni's Pairwise Comparisons for Self-Efficacy Scores for Different Groups of Students

Pairwise Comparisons

Measure: MEASURE_1

(I) factor1	(J) factor1	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	.724*	.058	.000	.559	.889
	3	.744*	.072	.000	.538	.949
	4	.321*	.049	.000	.181	.460
	5	.487*	.051	.000	.342	.633
2	1	-.724*	.058	.000	-.889	-.559
	3	.019	.070	1.000	-.181	.219
	4	-.404*	.060	.000	-.575	-.232
	5	-.237*	.060	.001	-.409	-.065
3	1	-.744*	.072	.000	-.949	-.538
	2	-.019	.070	1.000	-.219	.181
	4	-.423*	.069	.000	-.619	-.227
	5	-.256*	.067	.002	-.448	-.065
4	1	-.321*	.049	.000	-.460	-.181
	2	.404*	.060	.000	.232	.575
	3	.423*	.069	.000	.227	.619
	5	.167*	.037	.000	.060	.273

5	1	-.487*	.051	.000	-.633	-.342
	2	.237*	.060	.001	.065	.409
	3	.256*	.067	.002	.065	.448
	4	-.167*	.037	.000	-.273	-.060

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

a. Adjustment for multiple comparisons: Bonferroni.

Table D5

Bonferroni's Pairwise Comparisons for Levels of Preparedness for Different Entities

Pairwise Comparisons

Measure: MEASURE_1

(I) Factor3	(J) Factor3	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	.019	.049	1.000	-.121	.159
	3	.019	.051	1.000	-.125	.163
	4	.096	.053	.708	-.054	.245
	5	.420*	.067	.000	.229	.611
2	1	-.019	.049	1.000	-.159	.121
	3	.000	.027	1.000	-.077	.077
	4	.076	.039	.513	-.034	.187
	5	.401*	.061	.000	.227	.576
3	1	-.019	.051	1.000	-.163	.125
	2	.000	.027	1.000	-.077	.077
	4	.076	.033	.229	-.018	.171
	5	.401*	.056	.000	.243	.560
4	1	-.096	.053	.708	-.245	.054
	2	-.076	.039	.513	-.187	.034
	3	-.076	.033	.229	-.171	.018
	5	.325*	.050	.000	.183	.466

5	1	-.420 [*]	.067	.000	-.611	-.229
	2	-.401 [*]	.061	.000	-.576	-.227
	3	-.401 [*]	.056	.000	-.560	-.243
	4	-.325 [*]	.050	.000	-.466	-.183

Based on estimated marginal means

^a Adjustment for multiple comparisons: Bonferroni.

^{*} The mean difference is significant at the .05 level.

Table D6

Bonferroni's Pairwise Comparisons for Needs for Textbooks and Informational Text

Pairwise Comparisons

Measure: MEASURE_1

(I) Factor4	(J) Factor4	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	-.526 [*]	.060	.000	-.644	-.407
2	1	.526 [*]	.060	.000	.407	.644

Based on estimated marginal means

^{*} The mean difference is significant at the .05 level.

^a Adjustment for multiple comparisons: Bonferroni.

Table D7

Bonferroni's Pairwise Comparisons for Extent of Instructional Change by Content Area

Pairwise Comparisons

Measure: MEASURE_1

(I) factor1	(J) factor1	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	.076	.055	1.000	-.072	.224
	3	.433 [*]	.066	.000	.257	.609
	4	.529 [*]	.064	.000	.357	.700
2	1	-.076	.055	1.000	-.224	.072
	3	.357 [*]	.078	.000	.149	.564
	4	.452 [*]	.065	.000	.277	.627
3	1	-.433 [*]	.066	.000	-.609	-.257
	2	-.357 [*]	.078	.000	-.564	-.149
	4	.096	.037	.065	-.003	.194
4	1	-.529 [*]	.064	.000	-.700	-.357
	2	-.452 [*]	.065	.000	-.627	-.277
	3	-.096	.037	.065	-.194	.003

Based on estimated marginal means

^a Adjustment for multiple comparisons: Bonferroni.

^{*} The mean difference is significant at the .05 level.