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Arkansas' Teachers Perceptions of the Common Core State Standards

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Curriculum and Instruction

by

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> December 2019 University of Arkansas

This dissertation is approved for recommendation to the Graduate Council.

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#### Abstract

The Common Core State Standards were created in 2009 in order to unify the states' own standards and provide a specific set of learning goals for English Language Arts and Mathematics that students should achieve by the end of each schooling year, to ensure an increased college and career readiness by emphasizing skills rather than specific content knowledge. The current quantitative study sought to determine the perceptions that Arkansas teachers had of the Common Core Standards by posing two main research questions: 1. Do Arkansas teachers perceive the Common Core State Standards as beneficial their students? and 2. Do Arkansas teachers perceive the Common Core State Standards as beneficial to them, as teachers? The study used a stratified random sampling process to select sixty Arkansas districts, with a total of 665 survey respondents.

The results suggest that Arkansas teachers had an overall favorable perception of the impact of the Common Core State Standards (CCSS) on their students, and slightly negative perception in terms of the impact of the CCSS on themselves as educators. Novice teachers and teachers in larger classrooms were more positive toward the benefit the Standards would have on both students and teachers, while teachers in high performing districts and Democrat/Independent teachers were more inclined to believe that the Standards would have a positive outcome on their students.

# Acknowledgements

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# **Table of Contents**

#### **Chapter 1 - Introduction**

This quantitative study seeks to determine the perceptions that Arkansas teachers have of the Common Core State Standards (CCSS) by dichotomizing the overall teacher perceptions into two facets: the perception that teachers have of the CCSS in terms of benefit to their students, as well as the perception the teachers have of the Common Core State Standards in terms of benefit to themselves as teachers. The participants in the study were Arkansas public school teachers who were in the classroom during the implementation of the Common Core State Standards and the testing associated with them.

The Common Core State Standards came about as a way to unify the states' own standards and provide a specific set of learning goals that students should achieve by the end of each schooling year, without prescribing how these goals will be achieved. In this way, teachers have the freedom to use any teaching strategies they deem best to reach the specified learning goals. At the same time, the Common Core State Standards were also created to ensure an increased college and career readiness, by emphasizing skills rather than specific content knowledge (Loveless, 2013; Munson 2011). The Standards mostly focus on Mathematics and English Language Arts and were assessed at first through the Partnership for Assessment of Readiness for College and Careers (PARCC) examination and Smarter Balanced, and later on through a variety of alternate testing instruments such as ACT Aspire. In 2010, its inaugural year, the Common Core was embraced extensively by forty five states that saw them as an improved way to prepare students for the rigorous world of college and employment. However, as public dissatisfaction with the Standards and testing grew, more and more states chose to either heavily modify or abandon the Standards entirely. By 2019, the number of states who still relied on the Common Core Standards in their original form had dropped to thirty.

Arkansas began the implementation of the Standards during the 2011-2012 school year with grades K-2, followed by middle school and high school one and two years later, respectively. In the 2014-2015 school year, all grades K-12 were using the Standards, and the new assessment system was introduced across all grades. The implementation of the Common Core in Arkansas was met with skepticism about the rigors and narrow focus on the Standards, as well the lack of preparation teachers had received about to properly implement them in the classroom (Loveless, 2012; Greene, 2013; Endacott & Goering, 2014). Growing dissatisfaction with the Common Core and associated PARCC testing across Arkansas schools led to a push for change and—in 2015—a new framework was adopted under the name of Arkansas State Standards.

# **Problem Statement**

The purpose of this study was to determine the perceptions that Arkansas teachers had of the Common Core Standards; I grouped the overall teacher responses into two facets: the perception that teachers have of the Common Core State Standards in terms of benefit to their students, as well as the perception the teachers have of the Common Core State Standards in terms of benefit to themselves as teachers. The resulting document provides a valuable insight into the concerns that Arkansas teachers had towards the implementation of the Standards and their use in the classroom, as well as a relevant discussion of the role that testing plays in teachers' perceptions of the Standards. The CCSS, especially in terms of their perceived benefit to students and teachers, are important for policymakers, school districts and principals to consider when implementing standards or other initiatives in efforts to serve the student populations within their purview. It is important to stress that teacher buy-in and satisfaction with proposed reform is extremely important, especially when discussing major curricular changes such as the CCSS. As other researchers note as well, major educational changes are not successful in the long term if they are not truly supported by teachers (Kendall, 2011), nor can they be correctly implemented without alleviating potential teacher concerns (Goddard et al., 2000). Further, existing literature on the topic reveals the significant impact that obtaining teacher buy-in has on proposed education reform initiatives. Teacher effectiveness is positively correlated with perceived administration support (Ashton, 1984) and - conversely - mistrust in the process leads to frustration and rejection of change (Ash, 2011; Anderson, 2011; Gallup, 2014). Similarly, adequate and relevant professional development helps with teacher approval of proposed initiatives (Chalmers and Keown, 2006; Owocki, 2012; Cunningham and Allington, 2011), if it is accompanied by clear and goal-oriented information (Cogan et al., 2013; Bomer and Maloch, 2011; Rulison, 2012). In other words, criticism and mistrust of the CCSS by teachers – or any other education reform for that matter – can be alleviated by recognizing teachers' concerns and addressing them, while delivering adequate and timely professional preparation and ensuring ongoing support from school administration.

Given the high level of criticism that has plagued the Common Core in many states and nationally, it is crucial for all education stakeholders in Arkansas to acknowledge the sources of teacher dissatisfaction as they relate to the Standards and use them to foster trust, growth and success.

#### *Problem of Practice*

The 1983 report A Nation at Risk marked the first formal effort to establish standards in American K-12 education. Many stakeholders were alarmed by the findings, since disputed, that students were not adequately being prepared for college or the workplace resulting in several recommendations for a set of consistent standards that would raise achievement in the United States.

In 1986, the National Council of Teachers of Mathematics issued the *Curriculum and Evaluation Standards for School Mathematics*, a document that reflected what the Council believed it is important for all students to know at various grade levels. The Standards were created with the help of professional groups around the country, as well as representatives from the education community and various other professionals.

The discussion around standards gained new momentum in 1991 with the release of the "America 2000" education reform plan by President George H.W. Bush. The plan outlined a framework in which all students would leave school equipped with a specific set of skills and knowledge in English, mathematics, science and social studies so that they can be prepared for the challenges of employment. The goal was taken further in 1994 when President Bill Clinton enacted Goals 2000: Educate America Act, which created a new body tasked with designing national standards. The need for a national set of education standards became even more obvious in 1998, when Fordham Institute published a first academic analysis of the trends in standardsbased education across the country. The report found that many state standards were unclear and not rigorous. Motivated by these findings, the Bill and Melinda Gates Foundation began a push towards establishing national standards, a moment that marked the beginning of the Common Core. The Common Core Standards were met with excitement in 2010, when forty five states expressed an interest in adopting them. However, the unclear nature of the Standards (Hess 2014; Burris, 2014), the lack of adequate professional development for teachers (Karp, 2013) and intensive testing associated with the Stadards (Center on Education Policy, 2016) soon led to

frustration on the part of several states (Shober, 2016). Indiana was the first state to drop the Common Core, quickly followed by Oklahoma, South Carolina and Tennessee. By 2019, only thirty states were still using the Common Core Standards as their framework for education.

A source of dissatisfaction was associated with PARCC testing. Op-eds and articles written by teachers and parents (Hargittai, 2015; Strauss, 2015; Richman, 2018) who had firsthand experience with the PARCC revealed their frustrations: the test was seen as confusing, not applicable to what had been taught in the classroom and difficult to use as a tool for improvement by teachers. What is more, teachers were also not able to access sample test items or see past test items, because they were not made easily available by the PARCC consortia – aspect that I detected firsthand after attempting to find sample test questions. An added strain that appeared throughout these narratives was that students could not successfully use the testing software or encountered technology problems.

But perhaps the most serious complaint was that PARCC was completely experimental in that the PARCC consortia did not publish any information about the test having been validated as a statistical tool to evaluate students. The absence of validity testing is worrying because it means that the test may be correlated strongly only with the concepts that it is testing, not with the skills that are actually being taught in the classroom. Perhaps with this thought in mind, many states dropped out of the PARCC consortia and began looking for other longitudinal measures of student achievement, as well as alternatives to the Common Core Standards, either by heavily modifying them or dropping the Standards altogether in favor of a more locally created framework.

As a classroom teacher myself, I could see the frustration experienced by many teachers across Arkansas. This was yet another education strategy that they were expected to implement

brilliantly, without questioning, without feedback and – equally important – without timely adequate professional development. It was easy to see how teachers could become disillusioned with the Standards when they had seen many similar education initiatives before, proposed by researchers and legislators that had not stepped in a classroom for decades. This feeling is echoed by Kendall (2011) who notes that "changes this significant are not likely to occur successfully without equally significant investments in the knowledge and skills of educators along with necessary material supports". Similarly, Goddard et al. (2000) point out that any substantial modifications on a nationwide scale will only be truly implemented if the architects of the change fully understand teachers' beliefs about the change and how to alleviate potential concerns. It is safe to say that – at least in the case of Arkansas teachers – these concerns were not alleviated by any means. Very closely connected to this is the issue of teacher dissatisfaction stemming from a lack of adequate professional development. According to Chalmers and Keown (2006), teachers' professional development activities should be perfectly aligned with the changes that educators are expected to make in the classroom. Without meaningful teacher preparation and education, any standards would be rendered practically useless, potentially only serving to frustrate teachers and students alike. Wiener (2013) sums up the close relationship between support through professional development and teacher acceptance of change by stating that "professional learning activities should be engaging, meaningful and incorporate intellectually exciting strategies" that teachers can actually use.

When complete, this study may reveal that failing to address ongoing teacher dissatisfaction may lead to possible rejection by educators and – ultimately – a state-wide decision to abandon further education reforms. The next couple of years will be crucial for obtaining teacher buy-in and ensuring that the new Arkansas Framework is doing what it was

meant to do: improve the quality of K-12 schooling across the United States. Any major education reform requires policymakers, school leadership and teachers to be very cognizant of what students specifically require to be successful in college and careers but their ultimate success will rely heavily on how state legislatures and school districts answer to the justifiably fearful or skeptical attitude that teachers have towards education reform strategies.

# Research Questions

To determine Arkansas teachers' perceptions of the Common Core Standards, I posed two interrelated research questions:

- Do Arkansas teachers perceive the Common Core State Standards as beneficial to their students? This research question refers to increased test scores, better preparation for college and careers, as well as serving different subgroups of students and their specific needs.
- 2. Do Arkansas teachers perceive the Common Core State Standards as beneficial to them, as teachers? This question encompasses a less stressful teaching environment, more rigorous content, as well as clarity of teaching requirements.

## Research Method

This study employed a quantitative method to answer both research questions and test the hypotheses. During the 2015-2016 school year, I created and distributed a survey to core subject teachers in a number of Arkansas school districts. Teachers were selected using a stratified random sampling process that ensures survey recipients are representative of the overall segment of teachers in the state. The factors taken into account in the stratified random sampling were the

overall district performance as evidence by previous years' Benchmark results, district size as represented by student enrollment, and geographical location within Arkansas. Each district was then assigned a random number and the first ten districts from each category were picked randomly, with sixty districts forming the survey sample. Reliability testing using independent samples t-tests was carried out to ensure that the resulting random sample is truly representative of the overall Arkansas districts. When comparing the sample with the non-sample districts in terms of overall district performance, district enrollment, percentage of free/reduced lunch students, as well as percentage of minority students, the tests found no significant differences between the sampled district and the overall population.

The sample used for the study targeted English Language Arts and mathematics teachers in grades 3 through 9, since these grades experienced the most implementation changes in terms of the Common Core Standards leading up to that year. The survey instrument was constructed after a careful analysis of past surveys on the same topic (EPE Research Center, 2012; Ballou, 2014; Baldassare et al., 2014; Gallup, 2014), with the intent to capture the perceptions that Arkansas teachers have towards the usefulness of the Common Core State Standards, both in terms of the benefit to students, and to the teachers themselves. It consists of 35 items constructed on a Likert scale, where participants were able to respond to various questions about the implementation of the Common Core State Standards, as well as the correlated testing in their school.

The responses were then grouped and analyzed within two constructs. The student construct measures the perceptions that teachers have on the overall benefit of the Common Core State Standards for their students, while the teacher construct measures the perceptions that teachers have of the overall benefit of the Common Core State Standards for them, as teachers.

The internal consistency of all items was tested using Cronbach's alpha to ensure that both constructs were valid. The two main research questions and seven associated hypotheses were then tested using independent samples t-tests or an analysis of variance (ANOVA). Independent samples t-tests were used to test the hypotheses which used only two independent groups, while the analysis of variance was used to test those hypotheses which used more than two independent groups, in order to determine whether there is statistical evidence that the associated population means are significantly different.

Where one-way ANOVA tests determined a statistically significant result between the groups of respondents, a post-hoc Tukey test was conducted to confirm where the differences occurred between groups.

# Researcher's Role

The problem of practice in this study involved determining whether Arkansas teachers perceived the Common Core State Standards as ultimately beneficial to their students and whether Arkansas teachers perceived the Common Core State Standards as benefit them as educators. My relationship with the problem of practice comes from the perspective of a teacher with four years of classroom experience in Arkansas schools. While in the classroom, I constantly faced the pressure of adapting to the newest educational reforms proposed by the Arkansas legislature, as well as the pressure of lengthy standardized testing associated with these reforms. I noticed that most of the time it was academics with no classroom experience who mostly suggested these fundamental educational changes – and, more often than not, the academics were not even keen on visiting any schools or discussing with teachers.

There were two different worlds: that of the legislature introducing constant reforms and that of educators who had no input in their adoption or implementation. This motivated me to look at standards adoption from the teachers' point of view and investigate whether educators see the merit in the Common Core Standards both for their own growth as well as for students' success.

# Organization of the Dissertation

This dissertation is organized into five chapters.

- Chapter 1 sets out the significance of the study by placing it within the broader context of existing policy and practice.
- Chapter 2 provides an overview of existing quantitative and qualitative studies on teachers' perceptions of the Common Core Standards, as well as a history of standardsbased education in the United States and a discussion of Common Core implementation across the states with a particular focus on Arkansas.
- Chapter 3 identifies the methods used to analyze teachers' perceptions of the Common Core Standards, discusses the sampling used throughout the study and describes the teachers who answered the survey questions.
- Chapter 4 presents the results of my analysis, focused on the two overarching research questions and the hypotheses associated with them and analyzes teachers' perceptions of the testing associated with the implementation of the Standards.
- Chapter 5 places the results in a meaningful context by providing recommendations of policy, research and practice that stem from reflecting on my own findings as well as recent research on teachers' perception of the Common Core Standards.

#### **Chapter 2 - Literature Review**

Because of the ongoing discussion around the effect that the Standards have on students and teachers, it is imperative to understand the perceptions that teachers have toward the Standards themselves. This chapter will present an overview of the history of standards-based education in the United States, how the Standards were implemented across various states, and discuss existing experimental or quasi-experimental published research on teachers' perceptions of the Common Core State Standards.

# Standards-Based Education and the United States

In order to fully understand the Common Core Standards, it is essential to look at how standards-based education began in the United States. While many believe that the birth of standards came about after the No Child Left Behind Act, the first evidence of efforts to introduced standards in American education reaches much further back. Indeed, the No Child Left Behind Act mandated that all schools have standards to help students grow academically and reach proficiency, but it was certainly not the first effort in this direction.

The first concerted efforts to establishing standards in education appeared as a reaction to the 1983 A Nation at Risk: The Imperative for Educational Reform. The report pointed out 40 to 50 point drops in both verbal and mathematics scores from 1963 to 1980 and highlighted that students are not able to successfully solve multi-step problems, make inferences or write persuasively. Over the next three years, several recommendations were made for a set of consistent standards that would raise achievement in the United States. Finally in 1986, the National Council of Teachers of Mathematics published the *Curriculum and Evaluation Standards for School Mathematics*, a document that reflected what the Council believed it is

important for all students to know at various grade levels. The Standards were created with the help of professional groups around the country, as well as representatives from the education community and various other professionals.

Standards-based education received further attention the next year, in 1987, when then Secretary of Education William J. Bennett issued *James Madison High School: A Curriculum for American Students*. The document described a plan under which students would take a specific number of mathematics, English and foreign language courses with content that enable "all students to take from [school] a shared body of knowledge and skills, a common language of ideas, a common moral and intellectual discipline" (Bennett, 1987). The report made it clear that the role of standards is to provide a unifying context in which students "know math, science, history and literature [...] and can respond to important questions, solve problems, pursue an argument, defend a point of view, understand its opposite, and weigh alternatives" (Bennet, 1987). Even at this early stage, Bennett saw a need for standards that, he specified, prepared students "for entry into the community of responsible adults" (p. 12).

The discussion around standards gained new momentum in 1991 with the release of the "America 2000" education reform plan by President George H.W. Bush. The purpose of the plan was to outline a framework in which all students would leave school equipped with a specific set of skills and knowledge in English, mathematics, science, and social studies so that they can be prepared for the challenges of employment. The plan proposed carrying out these goals by developing new standards for evaluating student competencies in an outcomes-based education model. While the plan sounded promising, skepticism towards national standards prevailed and the proposal did not pass Congress. However, later that same year, merit of standards was revisited again with the passing of the Education Council Act, which tasked the National Council

on Education Standards and Testing (NCEST) to examine "the desirability and feasibility of establishing national standards in education". As a consequence, in 1992 the NCEST released *Raising Standards for American Education*, a report that requested the creation of a national set of standards. Even at this stage however, objections to the standards slowed down progress. Koretz et al. (1992, RAND) argued that introducing a set of national standards would hamper local initiatives and lead to teaching to the lowest common denominator.

In 1994, President Bill Clinton put forth Goals 2000: Educate America Act, which created a new body tasked with designing national standards. The newly minted National Education Standards and Improvement Council was composed of educators, administrators, local and state representatives, as well as business and industry individuals. In turn, they were charged with developing a set of national voluntary standards that specified the competencies that all students would need in order to be successful 21<sup>st</sup> Century citizens.

While mathematics national standards were already in existence, the first truly national English Language Standards were released in 1996 by the National Council of Teachers of English. In the introduction, the document cautioned against possible misinterpretations of the Standards while also highlighting their importance: "Because there is not one best way to organize subject matter in a given field of study, rigorous national standards should not be restricted to one set of standards per subject area [...] Content standards should embody a coherent, professionally defensible conception of how a field can be framed for purposes of instruction. They should not be an exhaustive, incoherent compendium of every group's desired content". Interestingly enough, later the same year – out of fear that national standards would lead to a federal over-reach in education – Congress dissolved the National Education Standards and Improvement Council.

The need for a national set of education standards became even more obvious in 1998, when Fordham Institute published a first academic analysis of the trends in standards-based education across the country. The report found that many state standards were unclear, "hostile to knowledge", "obsessed with real-life relevance", gave preference to skills over broad knowledge and that "most states have a long way to go before their standards will be strong enough" (Fordham Institute, 9). Perhaps motivated by these findings, the Bill and Melinda Gates Foundation immediately donated \$1 million to Achieve Inc., a Washington DC- based group, to "support comprehensive benchmarking and review of academic standards and assessments between states" (Fordham Institute, 15).

Standards-based education was again in the spotlight in 2001 with the passage of the No Child Left Behind Act (NCLB). While the act did not specifically provide a set national achievement standard, it did widen the role of the federal government in education by attaching some aspects of school funding to student assessments, scores obtained on these assessments, as well as the hiring of teachers with qualifications. A closer look at the document, however, reveals that a great deal of emphasis was placed on standards developed by the states – which now had to conform to specific requirements (NCLB, 2001). The act demands from each state the development of "one high, challenging standard for students" (NCLB, 2001) – without specific exactly what "challenging" means. This allowed the states to set their own bar, as long as it applied to all students, regardless of any other circumstances. Meanwhile, the federal government assessed whether these standards were actually achieved by using mandatory standardized testing. In other words, NCLB managed to introduce a framework in which standards were linked with measurable student outcomes. Nevertheless, NCLB was plagued by the importance it attached to these outcomes: according to the Act, the federal government could withdraw funding from schools that did not meet the expected Adequate Yearly Progress. This led to the National Education Association calling for an overhaul of the Act by pointing out that "the law's emphasis needs to shift from applying sanctions for failing to raise test scores to holding states and localities accountable for making the systemic changes that improve student achievement" (NEA, 2004). Some critics went even further by stating that the NCLB needed to be scrapped altogether because it "is not about narrowing the achievement gap" or "improving learning", but rather "raising scores [...] at the expense of quality education" (Kohn, 2007). The government's initial response was to release a set of revisions in 2010 which included allowances for a more varied range of assessments, as well as relaxing policies which took away funding from schools that did not make adequate progress (Weinstein, 2017). Then, in 2015, a bill was introduced to Congress to replace the NCLB with the Every Student Succeeds Act, which allowed states further flexibility in framing their own standards, as well as implementing testing associated with measuring student outcomes based on these standards.

The push towards establishing national standards gained more momentum in 2008, when the Bill and Melinda Gates Foundation donated a further \$200 million for the writing of a set of common standards that could be successfully adopted and implemented across the United States – which marked the beginning of the Common Core. The efforts towards establishing a Common Core of skills and competencies were further strengthened by additional monetary support from other foundations (such as Carnegie Mellon) as well as a formal announcement in the summer of 2009 that 49 states were committed to the process of developing the standards. The document was prepared, organized and initially reviewed in the summer of 2009, with various stakeholders (teachers, administrators, local and state agency representatives) being consulted throughout the process. In September 2009 the draft was released for public comment, with more than 1000

responses registered from the general public. Changes, edits and drafts were revisited several times over the next several months until June 2010 when the final Common Core State Standards were released at this point, states began preparing for the implementation of the Standards across school districts.

#### What are the Common Core State Standards?

The Common Core State Standards came about as a way to unify the states' own standards and provide a specific set of learning goals that students should achieve by the end of each schooling year. A big selling point of the Standards was that they did not prescribe how these goals will be achieved, so teachers had the freedom to use any teaching strategies they deemed best to reach the specified learning goals. This is evidenced by the introduction found on the Common Core State Standards Initiative website, which mentions several times that "The standards establish what students need to learn, but they do not dictate how teachers should teach. Teachers will devise their own lesson plans and curriculum, and tailor their instruction to the individual needs of the students in their classrooms" (CCSSI, 2019).

At the same time, the Common Core State Standards were also created to ensure an increased college and career readiness, by emphasizing skills rather than specific content knowledge. Indeed, the creators of the Standards emphasized that the Standards are not a curriculum (Loveless, 2013; Munson 2011), but rather a "clear set of shared goals and expectations for what knowledge and skills will help students succeed [...] Teachers will continue to devise lesson plans and tailor instruction to the individual needs of the students in their classrooms" (CCSSI, 2013).

These assertions have also been challenged by members of the education community and others in the years since the initial release of the standards.

**Mathematics Common Core Standards** are centered on three main concepts: standards, clusters and domains. The standards define what mathematical skills students should have and are grouped into clusters, which summarize groups of related standards. Domains are larger groups of related standards and unify domains that are closely related. For example, the 3<sup>rd</sup> grade domain of Operations and Algebraic Thinking includes several clusters: "Represent and solve problems involving multiplication and division"; "understand properties of multiplication and the relationship between multiplication and division"; "multiply and divide within 100"; and "solve problems involving the four operations" (CCSSI, 2010).

Looking specifically at the last cluster, solve problems involving the four operations, it groups two related standards: CCSS.3.OA.D8 "Solve two-step word problems using the four operations"; "represent these problems using equations", and CCSS.3.OA.D9. "Identify arithmetic patterns and explain them using properties of the four operations" (CCSSI, 2010). Throughout the document, the creators of the Standards make a point out of emphasizing that the listing of the Standards here should not necessarily dictate the in-class student experience in terms of topic order. For example, a 7<sup>th</sup> grade teacher can choose to teach the second geometry standard ("draw geometric shapes with given conditions") before the first one ("solve problems using scale drawings of geometric models"), if they believe students will better understand the content in this way.

It is also interesting to note that, throughout the grades, the Standards focus on broad concepts and processes that are believed to be of paramount importance to college and career success, in an effort to develop a similar set of skills in all students. A close look at the document

reveals that, no matter the grade level, there are certain unifying trends found throughout. Students are expected to:

- 1. Persevere in solving problems and try simpler forms of problems in order to deduce meaning
- 2. "Reason abstractly and quantitatively" (CCSSI, 2013).
- 3. Construct arguments based on logical statements, justify conclusions with sound reasoning and make plausible deductions based on observations
- 4. Use various tools (calculators, spreadsheets, rulers, protractors, models) to solve problems
- 5. Discover patterns and repeated structures in mathematical problems
- 6. Use mathematical reasoning to tackle and solve real-world problems.

In English Language Arts, the skills students should have are centered on four College

and Career Readiness anchor standards that persist throughout the grades:

- 1. Reading: at all grades, students should be able to determine the meaning of a text, cite evidence from it and make logical inferences
- 2. Writing: at all grades, students are expected to write clear, developed and organized arguments in support of a claim providing textual evidence or valid reasoning
- 3. Speaking and Listening: students should be able to present information in a variety of oral and visual formats
- 4. Language: students are expected to use a variety of situational appropriate language that demonstrates knowledge of English grammar, punctuation and spelling. The purpose of the anchor standards is to provide a framework for easy tracking of the progression of

skills throughout the grades, and also to define broad expectations for what students need to know in order to be successful in college and career situations.

At each grade level, the anchor standards are divided into three main sections: grades K-5, grades 6-12 English Language Arts and grades 6-12 Literacy in history, social studies, science and technical subjects. While it may seem somewhat unusual that the English Language Arts standards also make reference to other subjects, a key aspect that the creators emphasize is literacy across the curriculum. History, Social Studies, Science and Technical Subjects are seen as a major component of reinforcing the teaching of reading and writing standards at each grade level, since students may carry out a great deal of informational reading and persuasive writing in these classes. In essence –in a departure from the past - the Common Core Standards make it clear that all teachers, regardless of subject area, are responsible for students' growth in literacy skills that are needed for college and career readiness.

A major aspect of the Standards that received a great deal of public attention from the beginning is on reading comprehension of informational texts – specifically complex passages of the type that students may have to grapple with later on in their college career. For example, Standard RI.7.1 states that students should be able to "Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text" (CCSSI, 2019). Similarly, the Standards also highlight the importance of specific writing types such as argumentative and informational writing. Standard W.7.2 indicates that students should be able to "Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content" (CCSSI, 2019). However, it is important to note that – while informational/non-fiction reading is certainly

a large focus of the Standards, the document also makes detailed specifications for the reading of literature at all grade levels.

# How the Common Core Standards are assessed

#### 1. The first wave of assessment: PARCC

In 2010, a year after the implementation of the Common Core Standards, the Partnership for Assessment of Readiness for College and Careers (PARCC) consortium, received government Race to the Top funding to create a summative assessment common to all states. The reasoning behind this was that, not only would a common assessment make it easier to collect and compare student proficiency data across states, but it would also help with student mobility and transfers (since a passing score in one state would be equivalent to a passing score in another state). The assessment would be fully based on the Common Core Standards and it would involve K-12 educators and administrators in its development, to ensure that all stakeholders have an input in this very important process.

The PARCC assessed the two areas covered by the Standards: English Language Arts and Mathematics. Even though the Standards prescribe goals for grades 1-12, the PARCC was designed to only test grades 3-11. In 2010, after the PARCC was finalized and ready for implementation, twenty-four states (Alabama, Arizona, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, and Tennessee) agreed to use it as a state-wide testing tool. In the following years, citing implementation issues and overall dissatisfaction with the test, many states began withdrawing from the PARCC consortium. By 2014 only 14 states had retained PARCC: Arizona, Arkansas, Colorado, Illinois, Louisiana, Maryland, Massachusetts, Mississippi, New Jersey, New Mexico, New York, Ohio, Oklahoma, and Rhode Island. As of September 2019, only four states still use the PARCC assessment: Maryland, New Jersey, New Mexico, and the District of Columbia.

#### 2. Rethinking assessment: alternative testing instruments

By 2014, many states were heavily dissatisfied with the PARCC testing. A review of magazine articles, interviews and newspaper features with educators and administrators reveals that many school districts faced similar problems in attempting to administer the PARCC examination (Ujifusa, 2015; O'Donnell, 2015; Camera, 2015; Strauss, 2015; Lurye, 2015). The test was seen as confusing – students reported questions with several correct answers or no correct answers. There were very few higher-order thinking questions that would distinguish proficient learners from more basic ones. Further, teachers could not use the assessment in any meaningful way to improve teaching practice because the results were not presented in a way that allowed educators to detect problem areas. Also, they were not able to access sample test items or see past test items, because they were not made easily available by the PARCC consortia. An added strain was that some students had encountered difficulties with the testing software or encountered technology problems. But perhaps the most serious complaint was that PARCC was completely experimental in that it had not been properly validated as a statistical tool to evaluate students as evidenced from lack of information about validity on the PARCC Consortia website. Since no validation means that the test could be correlated strongly only with the concepts that it is testing (instead of the skills that were being taught in the classroom), it is easy to see how many could view it as an unreliable tool of measuring student growth. Perhaps as a consequence of the lack of validity testing, many states dropped out of the PARCC consortia began looking for alternative longitudinal measures of student achievement that could be connected to the Common Core Sate Standards. At this time, ACT Inc., a testing organization with a long history of developing the ACT college entrance examination, introduced the ACT Aspire. Just like PARCC, the ACT Aspire was created as a Common Core-linked measure for college and career readiness that would test students in grades 3-11 in English Language Arts and mathematics (CCSSI, 2019).

Much like the PARCC, the goal of ACT Aspire was to identify areas of weakness in a timely manner and keep students on the path to careers and college. However, much like PARCC, the ACT Aspire was seen as problematic due to its technology requirements, complaints about inability to test science skills accurately and a lack of alignment to many existing standards (Crain. 2017). States found themselves either opting for other well-known assessments in the hope of a better result or developing their own. By June 2019, only the District of Columbia and New Jersey were still using the PARCC assessment in their schools. A further eleven states (California, Connecticut, Delaware, Hawaii, Idaho, Montana, Nevada, Oregon, South Dakota, Vermont, Washington) use Smarter Balanced<sup>1</sup> as a testing measure, while the remaining thirty-seven states use various other assessments (such as ACT Aspire, iLearn or a state-designed test)

#### Implementation of the Common Core State Standards across the United States

In order to best understand the perceptions of the Common Core State Standards in Arkansas, it is necessary to place Arkansas in the broader national context by looking at how other states reacted to the implementation. The excitement about the Common Core State

<sup>&</sup>lt;sup>1</sup> Smarter Balanced is given in grades 3-8 and 11, in Math and English Language Arts. Unlike the PARCC and ACT Aspire, it uses automated essay scoring.

Standards was extensive in 2010 when 45 states (all except for Alaska, Minnesota, Nebraska, Texas and Virginia) expressed an interested in adopting them. However, heralding the Standards as an excellent way to prepare students for the rigorous world of college and employment soon led to frustration (Peterson & Kaplan, 2013; Gallup, 2015; Howell, 2015).

Indiana was the first state to drop the Common Core. Citing an effort to maintain local control and a dislike for federal overreach in education, the Indiana legislature adopted new standards in 2014, in a move supported by then-Governor Mike Pence: "I trust our teachers and professors and business leaders who worked in good faith to craft standards that will serve to guide our schools and challenge our students". Emboldened by the changes taking place in Indiana, Oklahoma quickly followed the same year but took an additional two years to adopt a replacement set of standards. Interestingly enough, Oklahoma's new standards have been found "weak", "in need of significant revisions" and "amounting to weaker preparation for college and careers" (Fordhdam Institute, 2016) – a sentiment echoed by expert reviewers brought in by state officials to assess the state of the standards. At the same time, South Carolina passed legislation that required the development of new standards to replace the Common Core and implemented them for the first time during the 2015-2016 school year. Kathy Maness, executive director of the State Teachers' Association stated: "I like that it is written by South Carolinians for South Carolinians to be used in the public schools of South Carolina. The new standards are more rigorous than what our students have right now" (Maness, 2015).

Also in 2015, the Tennessee state legislature repealed the Common Core State Standards and made provision for the adoption of a new set in 2016. "The Common Core Standards were our starting point", stated Tennessee Board of Education director Sara Heyburn, "the revisions we have made our significant, and significant enough that we consider them new standards. The

formatting is different. We've dropped standards, we've added standards, we've made changes to existing standards".

A similar move took place in South Carolina, where the Board of Education adopted new standards, as well as West Virginia, which voted unanimously to rescind the Common Core State Standards and bring in a state-developed set of skills and competencies.

The following year, in 2016, mounting pressure from the public, dissatisfaction and backlash over the Common Core led Missouri to replace the Standards with a modified version.

A similar move was also carried out by the Arizona State Board of Education, which began revision the standards and implementing the changes, the Massachusetts state legislature, and Louisiana (where new standards were drafted in 2016 and implemented the following school year).

2017 saw a further two states drop Common Core: North Dakota State Superintendent Kirsten Baesler signed the passage of new standards created by in-state stakeholders, while the Kentucky Board of Education approved the adoption of new standards in both content areas.

In 2018, South Dakota followed suit with a repeal of the Common Core and introduction of new standards across grade levels. "Common Core standards in South Dakota are officially gone" (Raposa, 2018) stated South Dakota Secretary of Education Don Kirkegaard.

The latest push to abandon the Common Core Standards took place in early 2019, when Florida Governor Ron DeSantis issued a decree that eliminated the Common Core Standards, and replaced them with its own state-created framework. "I have heard parents from across the state loud and clear and they all agree that it's time to finally end the Common Core", DeSantis stated, "and the order aims to ensure that Florida has the best academic standards in the nation by eliminating the Common Core" (Postal, 2019). The move was cheered by Florida teachers and

parents concerned that the previous standards did not properly prepare students for the workplace. Just a few months later, the Alabama Senate voted to repeal the Common Core Standards from public schools. Senate President Del Marsh emphasized: "State test scores did not improve under the [Common Core] Standards. It's time to move on. We need to clear the slate, just go ahead and get this out of the way. Let's focus on new standards for the state that are going to solve these problems" (Duncan, 2019).

As a result of the continuous abandonment of the Common Core State Standards, there are currently thirty states remaining that are still using the Standards in their classrooms: California, Colorado, Connecticut, Delaware, Georgia, Hawaii, Idaho, Illinois, Iowa, Kansas, Maine, Maryland, Michigan, Mississippi, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Utah, Vermont, Washington, Wisconsin and Wyoming.

#### Implementation of the Common Core State Standards in Arkansas

Soon after their development in 2009, Arkansas began analyzing the Common Core State Standards, in an effort to determine whether the state should keep its longtime Frameworks or adopt the new Standards. Then-Governor Mike Beebe and Education commissioner Ken James ultimately proposed supporting the statewide introduction of the Standards within three years. Further, Arkansas began aligning its curriculum frameworks with the goals outlined in the Standards (Walkling, Ash and Ritter, 2014). Arkansas would now assess student growth using the PARCC assessment, which would be gradually introduced over the course of several years.

In order to facilitate the implementation of the Standards and associated testing, the state adopted a five-year plan. During the 2010-2011 school year, district developed transition plans,

received professional development and the state assessments still reflected the old Curriculum Frameworks. During the 2011-2012 school year, grades K-2 adopted the Standards, teachers continued receiving professional developed and the Curriculum Framework-based assessments remained in place. The 2012-2013 school year saw grades 3-8 adopting the Standards, while retaining the old state assessments. In 2013-2014, grades 9-12 implemented the Standards, and the new assessment system aligned to the Common Core State Standards began its pilot phase. Finally, in the 2014-2015 school year, grades K-12 were using the Standards, and the new assessment system was introduced across most grades.

Before and after the implementation of the Standards in Arkansas, there were mixed reactions from various stakeholders. As the state legislature presented the document as an excellent way for students to become more prepared for the rigors of college and the workplace, it also heard dissatisfaction from the public. While later complains and frustrations about the Standards stemmed from school districts, teachers and parents, early suggestions for revision were put forth by the academic community. A strong voice in this context was Dr. Sandra Stotsky, a professor of education reform at the University of Arkansas. In a testimony during a hearing on the implementation of the Common Core State Standards in Arkansas, Dr. Stotsky spoke about the urgent need for revision of the Standards in both subject areas. Dr. Stotsky criticized the English Language Arts Standards for their focus on information texts to the detriment of literature, especially since Arkansas teachers had not received any specific instruction on how to give informational reading instruction. Further, she pointed out, the Standards asked students even from an early age to provide evidence, claims and arguments, before teachers even have the opportunity to fully introduce and explain these notions – some of which may be too difficult for young learners to understand.

In terms of mathematics, Dr. Stotsky's testimony highlighted that deferring the study of Algebra I concepts to 9<sup>th</sup> grade would make it extremely difficult for students to acquire many of the expected abstract reasoning skills. Dr. Stotsky urged for an international benchmarking and validation of the Standards, inclusion of more relevant stakeholders in revising their content<sup>2</sup> and reducing the focus on informational texts.

In terms of testing, Dr. Stotsky recommended abandoning the non-validated PARCC in favor of end-of-course tests developed by in-state higher education faculty in the respective subjects (Stotsky, 2013). These ideas were echoed by Dr. Jay Greene, who pointed out that "national standards, like Common Core, are inappropriate and likely to be ineffective" (Greene, 2013) and "if they embrace a vague consensus, then they make no difference" while "if they attempt to impose their particular vision of a proper education on those with differing visions, then they are oppressive" (Greene, 2013) – meaning that, either way, the standards are doomed. There were also some Arkansas supporters of the CCSS who voiced their opinion: the Arkansas Education Association submitted a testimony in which it embraced the CCSS and their vision, as long as "they are supported by appropriate curriculum development and appropriate assessments" (Robinson & Walker, 2013). The testimony includes further support of the CCSS by deeming them "an opportunity to put in place the alignment that is necessary to successful education outcomes".

Over the next two years, growing dissatisfaction with the Common Core and associated PARCC testing across Arkansas schools led to a push for change. In April 2015, over nine days, 85 Arkansas teachers came together in a task force created by Governor Asa Hutchinson and revised 65% of the Common Core's mathematics standards. While initially meant to simply and

<sup>&</sup>lt;sup>2</sup> "Neither of the Common Core's chief standards writers, David Coleman and Jason Zimba, has ever taught in K-12, nor published anything on curriculum and instruction" (Stotsky, 2013)

clarify confusions about how the standards were being interpreted, the revisions quickly became the foundation for a new framework: the Arkansas State Standards.

The newly created standards, a heavily modified version of the prior Common Core<sup>3</sup>, were introduced in public school classrooms across the state in the 2016-2017 school year and fully implemented the following year. "We have created a product that is much more positive and has buy-in from Arkansas educators", state Education Commissioner Johnny Key said about the new Standards (Howell, 2016). Key went on to point out that the teachers are much more excited and the changes better fit the needs of students and teachers. He also discussed that - while the new Standards are certainly a modification of the previous Common Core, they still retain the literacy across the curriculum concept which is not set forth in the Arkansas Disciplinary Literacy Standards, a document that outlines literacy skills present in the math, science and social studies classrooms.

In terms of assessment, the first full implementation of the PARCC in Arkansas brought on a large wave of dissatisfaction from teachers and administrators (Hardy, 2015). The test was seen as a technology nightmare, with teachers reporting system failures, blocked tests, and various other computer problems. At the same time, many were not happy with the lengthy testing time and lack of preparation on how to actually run the test from a logistical point of view. In terms of the content, there were also many doubts as to whether a high score on the test truly represented that a student was on the track to college and career success (Brawner, 2015). As a result, the State Board of Education reconvened in June 2011 to discuss the adoption of a new statewide assessment that would reflect the Standards. On the recommendation of the newly founded Council on Common Core Review, Arkansas Governor Asa Hutchinson proposed that

<sup>&</sup>lt;sup>3</sup> The Arkansas Academic Standards modified 62% of the Common Core English Language Arts Standards and 65% of the Common Core Mathematics Standards

the state should partner with the ACT Inc. for a new student readiness assessment, the ACT Aspire. While initially Lieutenant Governor Tim Griffin presented the adoption of the ACT Aspire as an issue that the State Board agreed on (Hardy, 2015), in fact not all board members were happy with the notion of implementing. Among them, Dr. Jay Barth and Vicki Saviers cited difficulties in tracking student achievement in the context of so many assessment changes as well as a hasty adoption of the new ACT Aspire<sup>4</sup>. Ultimately, the state of Arkansas agreed (with a 4-2 vote) to replace the PARCC assessment with the ACT Aspire, which was immediately implemented at the conclusion of the 2015-2016 school year. Arkansas is still currently using the ACT Aspire, which is required for all students in grades 3 through 10. Each student is assessed in English language usage, reading, mathematics, science and writing. The test takes approximately five hours and schools have the options of setting their own testing schedule within a predefined testing window during April-May of each year.

#### Literature Review Process: Application of Selection Criteria and Findings

In my search for existing studies of the teachers' perceptions of the Common Core State Standards, I initially encountered some difficulty in finding a wealth of relevant and rigorous research on the topic. Many resources presenting themselves as studies were simply opinion pieces or fairly simplistic questionnaires on very small convenience samples.

I started my research by accessing the JSTOR, Ebsco and ERIC databases, along with Google Scholar. I used "common core teacher perceptions" and "common core student perceptions" for my keyword search. Since the initial search yielded many resources that were not of a rigorous nature, I narrowed down the search by including the terms "random

<sup>&</sup>lt;sup>4</sup> In the initial June 2015 meeting they both voted against contracting ACT for the assessment, and abstained during the second meeting)

assignment" and "quantitative". Because of the fairly recent nature of articles related to the Common Core State Standards, there were no issues in narrowing down research by date of publication. I then reviewed all abstracts in order to determine if the topic was indeed relevant to the literature review. This further narrowed down the pool of studies, by eliminating articles which did not directly address the subject at hand. I then read all remaining studies in order to determine whether they satisfy a couple of important criteria:

- They are experimental or quasi-experimental. While analyzing the perceptions of the CCSS could be viewed as a lending itself intrinsically to a qualitative approach, I wanted to ensure that my literature review presents and full and clear picture of the entire landscape of research on the topic. This is why I include both experimental and qualitative approaches, but report on them separately.
- They deal directly with the issues of teachers' or students' perceptions of the Common Core State Standards
- The sample size is sufficiently wide

After applying the criteria to all remaining studies, I had to further eliminate some research that included very small sample sizes, which would not offer much confidence in the findings. As a result, the smallest sample size present in the literature review is 99 respondents – however, most actually have a sample size of 300 and up. A close examination of the studies in Appendix A, leads to several interesting conclusions.

1. Mixed opinions on the Common Core Standards

There is no uniform set of findings in terms of teachers' perceptions of the Common Core Standards. While the Gallup 2014 study finds that more experienced teachers have a more favorable attitude towards the Standards, Matlock et al. (2016) and Endacott et al. (2016)

conclude that less experience is associated with a more positive view of the Standards.

Meanwhile, Hall and Hutchinson (2015) report no significant correlation between the two. Similarly, in terms of how the teachers' view the possible positive impact the Standards would have on their students, Gallup (2014), Ballou (2014), Cheng (2012), Kreyling (2013), Bakenhus (2017), Mest (2018), Shabazz (2019) present most teachers as wishing to abandon the Standards in favor of other measures of learning, while EPE (2012), Fisher and Frey (2014), Choppin et al. (2013), Kane et al. (2016) find that the majority of teachers see the benefits of teaching to the Standards. The current study sought to update the existing research on teachers' perceptions of the Standards, by looking at similar questions.

2. Lack of satisfaction with professional development offered

Interestingly enough, all studies that asked teachers whether they feel adequately prepared to teach according to the Standards found that teachers were dissatisfied with how their district had implemented and prepared them for the transition to the Standards (Kreyling 2013; Gallup, 2014; Ballou, 2014; EPE Research Center, 2012; Fisher and Frey, 2014; Hall and Hutchison, 2015; Cheng, 2012; Kane et al., 2016; Sanchez 2016; Ammerman, 2016; Berg 2017). All of the above-mentioned studies reported similar findings: teachers feel stressed (Machamer, 2018), overwhelmed by the introduction of the Standards, unprepared for introducing them in their classrooms (Berg, 2017; Shabazz, 2019), offered low quality professional development by their districts and not confident in their ability to properly implement the Standards. As a result, even though most studies find that teachers believe the Standards to encourage critical thinking and higher order skills (Gallup 2014; Sanchez 2016; Kane et al. 2016; Berg 2017), teachers do not feel confident in their abilities to use the Standards in a way that properly informs instruction (EPE 2012; Choppin et al. 2013; Ballou 2014; Kane et al. 2016).

#### 3. Leadership support leads to teacher satisfaction

In all cases where this outcome was measured, increased support and guidance from school and district leadership on how the Standards should be implemented was highly correlated with an overall increased teacher satisfaction and confidence in the Standards (EPE 2012; Gallup 2014; Endacott et al. 2016; Sanchez 2016).

4. Satisfaction with the Standards differs among teacher groups

Of note for future research is that elementary teachers seem to be more satisfied and less stressed about the implementation of the Standards (Matlock et al. 2015; Hall and Hutchinson 2015). Teachers of English Language Learners tend to be more skeptical of the benefits to their students (Bakenhus, 2017) than their counterparts. Political affiliation seems to matter as well: 53% of the teachers self-reporting as Democrat or Independent had a favorable perception of the Standards compared to only 25% of Republican teachers.

5. Concerns over tying test scores to teacher evaluation

In the light of new assessments that accompanied the implementation of the Common Core, many teachers expressed worry about testing in general (Cheng, 2012) and specifically about students' performance being tied to their evaluation. Ballou (2014) highlights another potential source of teacher dissatisfaction. The stratified random sampling-based study of 27,000 Tennessee teachers finds that 70% of teachers reported being unhappy with their performance on Common Core State Standards-aligned assessments being tied to their evaluation – another issue that has not been discussed much in rigorous studies and warrants more attention.

## A Second Perspective: Common Core Standards and Qualitative Studies

After a careful review of quasi-experimental studies, I decided to collect and assemble a review of existing non-quantitative study for two reasons. First, some of the qualitative studies are cited even by quantitative studies of teachers' perceptions. Second, and perhaps even more importantly, many of these qualitative studies provide very interesting insights into the possible sources of teacher dissatisfaction with the Common Core Standards, especially in terms of the professional development they have received. As a result, after compiling the list of quasiexperimental studies presented in Appendix A, I employed a similar strategy for locating qualitative studies on teachers' perceptions of the Standards. I conducted the search using the same JSTOR, Ebsco and ERIC databases, along with ProQuest Dissertations. I used "common core teacher perceptions" and "common core student perceptions" for my keyword search. I then further narrowed down the search by including the terms "qualitative", "case study", "interviews" and "focus group". I then reviewed all abstracts and eliminated those studies which merely referred to the Standards but did not focus on them specifically. Since my focus this time was on studies of a qualitative nature, I did not eliminate any results based on sample size or method. However, it is worth noting that the vast majority of these studies were based on an indepth interview approach.

The search ultimately yielded 11 qualitative studies ranging in sample size from 8 to 45 teachers, shown in Appendix B, which represent an exhaustive list of qualitative research on teachers' perceptions of the Common Core Standards as of September, 2019.

A closer look at the qualitative studies leads to some compelling conclusions. First, only one study tackles the issue of student perceptions of the Common Core Standards<sup>5</sup>. Fisher and

<sup>&</sup>lt;sup>5</sup> I have not been able to find any quasi-experimental studies that analyze this topic

Frey (2014) find that 98% of the 327 students surveyed across the United States enjoy informational texts more now than before the implementation of the Standards but 72% found the focus on close reading exhausting.

In terms of teachers' perceptions of the Common Core Standards, the studies reveal several interesting themes:

1. Dissatisfaction with the quality and frequency of professional development

Many teachers believe that they are not receiving appropriate and/or sufficient district preparation on how to best integrate the Standards into their teaching, how to align subject content to the Standards and set up students for success (WestEd 2012; Hipsher 2014; Maddrey 2014; Bizon 2015; Murphy and Haller 2015; Robinson 2016; Hirsch 2016)

2. Frustration with the implementation of the Standards

A large percentage of respondents felt that districts rushed into implementing the Standards, which led to confusion, chaos and unanswered questions about procedures related to integrating the Standards into content areas (Hipsher 2014; Robinson 2016; Hirsch 2016)

3. Lack of leadership support

While districts where school leadership offered a high level of support registered a much higher level of teacher satisfaction with the Standards (Murphy and Haller, 2015), it is clear that they represent only a small fraction.

Many of the teachers interviewed believe that there is a huge amount of pressure to adequately implement the Standards without any supplementary guidance (Machamer 2018; WestEd 2012), while most agree that they are frustrated by the lack of resources and appropriate texts for instruction (Fisher and Frey 2014; Hirsch 2016). This is further complicated by a disconnect between the Standards, the expectations of local authorities and the realities of the

classroom (Hipsher 2014), as well as the increased demand for collecting and analyzing student data (Hipsher, 2014).

4. Concern for suitability of Standards

One theme that surfaces again and again throughout teacher interviews is a growing concern for how special needs, English Language Learners and struggling students will cope with expectations. Teachers are afraid that the Standards are developmentally inappropriate for any student who is not on-level because of their heavy focus on literacy, informational reading, higher order and critical thinking (Fisher and Frey 2014; Murphy and Haller 2015; Bizon 2015; Brown 2016; Shabazz 2019) – all of which are skills that pose problems in unconventional classrooms. Instead, they suggest a modification of the Standards that allow special needs students and other struggling learners to spend more time on acquiring foundational skills and competencies rather than for example pushing through to Algebra I when they do not possess the ability to subtract or multiply (Hirsch 2016; Shabazz 2019)

5. The Standards promote critical thinking and inquiry

While frustrations clearly abound, there seems to be an overall agreement that the Standards encourage higher order skills such as critical thinking, inquiry and close reading, which teachers see as beneficial for success in college and the workforce (Fisher and Frey 2014; Hipsher 2014; Murphy and Haller 2015; Hirsch 2016; Machamer 2018;

A final compelling finding is present in only one study (WestEd 2012) but certainly begs for further research. Many non-English and non-mathematics teachers interviewed expressed frustration and concern that a focus on literacy across the curriculum will take time away from their own content standards. While the case can be made that literacy should be woven

throughout all subject areas, it is also easy to see why – in an era of teacher accountability and focus on standardized testing – teachers may be worried about the impact of these changes.

Another aspect that merits further attention is the issue of the Standards altering the subject content in ways that would led to teacher dissatisfaction. Fisher and Frey (2014) tackle this in their teacher questionnaire, which finds that most teachers are exhausted the focus on close reading (even if they understand its benefits) and struggle to find appropriate informational texts for Language Arts classes.

In order to fully understand this very contentious issue, it is worth noting that – while the Standards do not discount literature in Language Arts classes - they place more emphasis on informational texts, in an effort to prepare students for college and the workplace. This focus on informational texts and shift away from the more traditional literature-based high school curriculum has given rise to numerous voices that point to possible sources of teacher dissatisfaction with the Standards.

Bauerlein and Stotsky (2012) challenge the informational text focus of the English Language Common Core Standards by pointing out that the very premise of the Standards is faulty. While the Standards state that the informational text focus intends to prepare students for college and careers, there is no research that supports this theory. In fact, we simply do not know for certain if students spending more time on developing their non-fiction reading skills will translate into a higher college success rate. According to Bauerlein and Stotsky, the validity and merit of the Standards should be viewed with a grain of salt, since the standards were neither internationally benchmarked, nor evidence-based. Further, the authors argue that students should in fact be exposed to a "more meaningful culturally and historically literature-focused curriculum", as has been the American tradition until the 1960s. Goering and Connors (2014)

also talk about teacher dissatisfaction with the English Language Standards, but from a different lens – that of misinformation and lack of clarification. While the Common Core State Standards are inherently not pushing for a specific literature curriculum, many English teachers felt limited and constrained by the exemplars found in the Standards. The official stance of the creators is that literature exemplars "are not an attempt at mandating a curriculum" (Common Core State Standards Initiative, 2016), but rather at providing examples of what teachers may want to include in their literature classes. However, according to Goering and Connors, teachers frequently fail to interpret exemplars in this way and instead take them as a prescribed list of what literature pieces should be taught in the classroom – which leads to further teacher dissatisfaction. While this cannot necessarily be interpreted as a fault of the Standards, the lack of clear communication and clarification may nevertheless be seen as an attempt on the part of the creators of the Standards to steer English teachers towards a narrow path of instruction.

Similarly, Maranto (2015) and Esolen, Highfill and Stotsky (2014) discuss the unspecificity of the English Common Core State Standards as a quite attempt to send an unspoken message to English teachers: workforce-related texts are more important than novels or poetry. Interestingly, Maranto (2015) presents a situation in which Arkansas high school students read Sean Covey's Seven Habits of Highly Effective Teens in English class, rather than discuss classic American novels or poetry. Highfill and Stotsky (2014) similarly discuss instances of tendencies to forgo Chaucer, Shakespeare and Spenser in favor of texts that are supposed to help students in the workforce. While one cannot argue that these points of view have more validity than others that fully support the focus of informational texts, two very interesting conclusions arise. Many articles that decry the clarity of the English Language Standards date back even to 2014. The Common Core Standards architects have chosen so far to not address these concerns

and therefore allow teachers to interpret them individually -a situation that can easily lead to confusion and dissatisfaction in one's career as an instructor.

Secondly, the same architects have had sufficient time to respond to widespread concerns that the focus on informational texts is not backed up by evidence – yet, the Common Core Initiative has not been able to produce any research which points to the relationship between informational text reading skills and college success.

#### What Causes Teacher Dissatisfaction?

One concept that appears over and over throughout all existing studies on teachers' perceptions of the Standards is that of dissatisfaction. In a very evocative policy piece on the Common Core State Standards, Tienken (2010) noted: "The Common Core initiative compartmentalizes complexity and compartmentalizing messy issues allows people to be intellectually lazy. Developing coherent education is more difficult" (p. 9). Indeed, while the Standards might seem like a simple way of achieving uniformity and therefore making teachers' jobs easier, such a fundamental change as the introduction of the Standards has been actually plagued by controversy and dissatisfaction on the part of some teachers. This should come as no surprise, notes Kendall (2011), because "changes this significant are not likely to occur successfully without equally significant investments in the knowledge and skills of educators along with necessary material supports" (p. 6). Similarly, Goddard et al. (2000) point out that any substantial modifications on a nationwide scale will only be truly implemented if the architects of the change fully understand teachers' beliefs about the change and how to alleviate potential concerns. A close analysis of the theoretical literature focused on teachers' perceptions towards change in general and the Common Core State Standards in particular reveals several

common threads. First, many teachers who find themselves opposing the Standards do so out of a lack of familiarity with them. Johnson (2006) points out that, often times throughout the history of American education, teachers have been disinclined to adopt new curriculum or strategies due to an absence in understanding the changes that were proposed. Similarly, Rulison (2012) finds that teachers who were otherwise self-assured in their ability to adapt and react quickly to changes in curriculum were afraid to tackle a set of completely new Standards because of "minimal or no knowledge and understanding". In the same vein, Cogan et al. (2013) and Bomer and Maloch (2011) point out that a lack of information and clarity in what is expected from teachers can often lead to feelings of frustration and stress. A second, and very closely aligned with the previous issue, is that of teacher dissatisfaction with change in general, stemming from a lack of adequate professional development. Chalmers and Keown (2006) stress that teachers' professional development activities should be perfectly aligned with the changes that educators are expected to make in the classroom. The purpose of professional development, thus, should not merely a pro forma act to satisfy legal requirements and authorities, but rather an authentic path resource for teachers to learn and grow. This point of view is shared by Conley (2011), who states that, "as educators begin to translate the Common Core State Standards into practice, they have an opportunity to think about what is important". In other words, while "the standards lay out a road map of major ideas, concepts, knowledge and skills", professional development activities truly help teachers apply this essential road map in the classroom. Without them, instruction is void of meaningful methods and true connections between the Standards and reallife instruction (Owocki, 2012; Cunningham and Allington, 2011). Wiener (2013) sums up the close relationship between support through professional development and teacher acceptance of

change by stating that "professional learning activities should be engaging, meaningful and incorporate intellectually exciting strategies" that teachers can actually use.

A third possible source of teacher dissatisfaction that the theoretical literature reveals is teachers' perceived lack of support from administration. Ashton (1984) indicates a strong belief that teachers' effectiveness in the face of change is strongly correlated with the support they believe they have from principals, and school administration. Further, according to Kendall (2011), a major shift in curriculum such as the Common Core State Standards cannot be effectively implemented without authentic, long-term support of all educational stakeholders (principal, curriculum coordinators, and superintendents).

A special case here that needs to be mentioned is that of teacher dissatisfaction stemming from the lack of targeted, immediate support in critical areas needed to implement the change. Specifically, at the time of the implementation of the testing associated with the Common Core State Standards, many teachers reported feeling unsupported and ignored by their administration in matters of technology and computers (Ash, 2011; Anderson, 2011; Gallup, 2014). To sum up, the existing literature on the CCSS makes it abundantly clear that there historically there has been a lack of consensus on the effectiveness, implementation and future of the CCSS as a whole. However, it is difficult to not notice teacher skepticism and dissatisfaction with the CCSS - both nationally and in Arkansas specifically - which stemmed from a lack of meaningful professional development and administrative support, low self-assurance and expectation that teachers will implement the CCSS without sufficient information and clarity. These aspects provided the impetus for the current study on Arkansas' teachers perceptions of the CCSS and my efforts to uncover whether there are any clear trends in terms of what (if any) subgroups of educators perceive the CCSS as being beneficial to themselves or to their students.

#### **Chapter 3 – Methods**

In this chapter, I identify the methods used to analyze the perceptions that teachers have of the Common Core State Standards. First, I outline the research focus that are at the center of my project; then, I include an explanation of the stratified random sampling process that identified the school district which were part of the research project, as well as the reliability testing which I carried out to ensure that the surveyed sample is representative of the general population of teachers. The chapter includes a description of the teachers who answered the survey questions, as well as the methods used to analyze the survey responses.

## Research Questions

To determine the perceptions that Arkansas teachers have of the Common Core Standards, I dichotomize the overall teacher perceptions into two facets: the perception that teachers have towards of Common Core State Standards in terms of benefit to their students, as well as the perception the teachers have of the Common Core State Standards in terms of benefit to themselves as teachers. The survey instrument was constructed with these two facets in mind, allowing for an equal number of questions that approach both issues. The resulting test items were then assessed for internal consistency. It must be noted, however, that – even though the resulting Chronbach alpha values were high – this does not necessarily mean the scale used is unidimensional. As such, the two main research questions are:

1. Do Arkansas teachers perceive the Common Core State Standards as beneficial to *their students?* This refers to increased test scores, better preparation for college and careers, as well as serving different subgroups of students and their specific needs.

2. Do Arkansas teachers perceive the Common Core State Standards as beneficial to *them, as teachers?* This encompasses a less stressful teaching environment, more rigorous content, as well as clarity of teaching requirements.

For both student and teacher constructs, the research project considered the following hypotheses:

H1. Teachers in large districts will be in favor of the Common Core State Standards because of they are able to access more resources (professional development, assistance) and can therefore be better prepared

H2. Teachers in high performing districts will be in favor of the Common Core State Standards because of higher levels of confidence concerning implementing any curricular or standards changes

H3. Teachers instructing smaller classrooms will be in favor of the Common Core State Standards because they have more opportunities to design and implement the instructional activities that are now required under the Common Core State Standards

H4. Alternatively certified teachers will be in favor of the Common Core State Standards because they are more flexible in terms of implementing new strategies and instructional techniques

H5. Teachers who are not members of teachers unions will be in favor of the Common Core State Standards because of the strong opposition that the unions have expressed towards the Standards

H6. Teachers who self-report as being Democrat or Independent will be in favor of the Common Core State Standards because of the greater acceptance that these groups have expressed towards the Standards

H7. Novice teachers will be in favor of the Common Core State Standards because of a higher flexibility and more positive view of innovation and change.

To answer both research questions and test the hypotheses, I created and distributed a survey to core subject teachers in a number of Arkansas school districts during the 2015 -2016 school year.

## Stratified Random Sampling Process

Since time and resource constraints did not allow for a distribution of survey to all core subject teachers in the state of Arkansas, a stratified random sampling process was carried out to ensure that survey recipients are representative of the overall segment of teachers in the state. Initially, all 254 districts in Arkansas were ranked to their overall district performance, with the first half categorized as high performing and the second half as low performing. The basis for this ranking was the most recent district GPA variable collected from the 2013-2014 Benchmark results. This district GPA, calculated by the Office of Education Policy at the University of Arkansas, represents a composite indicator for all grade levels at all of the schools in the state. Very much like student grades, the district GPA is expressed on a 4-point scale, with 'advanced' scoring 4 points, 'proficient' 3 points, 'basic' 2 points, and 'below basic'1 point.

The districts were then ranked according to their student enrollment, with the first third categorized as large districts, the next third as medium districts and the last third as small districts. The sampling strategy also took into account the region in which the district is located (Northwest, Northeast, Central, Southwest, Southeast). The districts were then categorized as one of the following: low achieving small district, low achieving medium district, low achieving large district, high achieving small district, high achieving medium district or high achieving

large district. Each district was then assigned a random number and the first 10 districts from each category were picked by a randomizer. The result was 60 districts that would constitute the survey sample (Table 1).

| Region    | Total districts | Districts in     | % of Region's Districts |
|-----------|-----------------|------------------|-------------------------|
| Northwest | 76              | Survey Sample 20 | in Sample<br>26.3       |
| Northwest | 70              | 20               | 20.5                    |
| Northeast | 68              | 15               | 22,0                    |
|           |                 |                  |                         |
| Central   | 46              | 9                | 19.5                    |
| Southwest | 40              | 7                | 17.5                    |
| Southwest | 40              | 1                | 17.5                    |
| Southeast | 24              | 9                | 37.5                    |

Table 1: Breakdown of the districts included in the sample

## Reliability Testing

In order to address any possible concern that the resulting stratified random sample might not be truly representative of the overall Arkansas districts, independent samples *t-test* were carried out comparing the sample versus non-sample districts in terms of: district overall GPA, district enrollment, percentage of free/reduced lunch students, as well as percentage of minority students. In terms of comparing the district overall GPA in the sample versus the overall district population, the independent samples t-test found no significant differences between the sampled districts (mean = 3.01, st dev = 0.253) and the overall population (mean = 3.00, st dev = 0.285), t (252) = 0.233, p = 0.816. When comparing the enrollment numbers of the sampled districts versus all Arkansas districts, the independent samples t-test found no significant differences between the sample districts (mean = 1740.78, st dev = 2433.13) and the overall population (mean = 1912.99, st dev = 3115.38), t(252) = -0.392, p = 0.695. Looking at the free and reduced lunch percentages of the sampled districts (mean = 64.01, st dev = 17) in comparison with the overall districts (mean = 65.94, st dev = 16), there are also no statistically significant differences, t (251) = -0.802, p = 0.423. Similarly, the independent samples t-test of the percentages of minority students in the surveyed districts (mean = 26.25, st dev = 27.57) versus the overall population (mean = 27.87, st dev = 26.50) find no statistically significant difference between the two, t (251) = -0.411, p = 0.681. As evidenced from Table 2, the means for all four variables of interest are not significantly different when looking at the districts included in the sample, versus those not included in the sample.

| Criteria           | Sampled Districts  | Overall districts | Test statistic  |
|--------------------|--------------------|-------------------|-----------------|
| District overall   | N= 60, M=3.01,     | N=194, M=3.00,    | t (252)= 0.233, |
| GPA                | st dev=0.253       | st dev=0.285      | p=0.816         |
| District           | N = 60, M=1740.78, | N=194, M=1912.89, | t(252)=-0.392,  |
| enrollment         | st dev=2433.13     | st dev=3115.38    | p=0.695         |
| Free/reduced lunch | N=60, M=84.01,     | N=194, M=65.94,   | t(252)=-0.802,  |
|                    | st dev=17          | st dev=16.07      | p=0.423         |
| Minority           | N=60, M=26.25,     | N=194, M=27.67,   | t(252)=-0.411,  |
|                    | st dev=27.57       | st dev=26.50      | p=0.681         |

#### **Overall Sample**

The sample contains teachers from all schools in the 60 sampled districts that taught in tested subjects under the Common Core State Standards: mathematics and English Language Arts/Literacy. For the purpose of this project, the focus was placed on mathematics and English Language Arts/Literacy teachers grades 3 through 9, because those grades saw the majority of previous year. Table 3 below presents the characteristics of the 665 survey respondents.

| Respondents           | Туре        | Percent%         |
|-----------------------|-------------|------------------|
| Type of school        | Traditional | 96%              |
|                       | Charter     | 4%               |
| Gender                | Female      | 82%              |
|                       | Male        | 18%              |
| Subject               | ELA         | 57%              |
|                       | Math        | 56% <sup>6</sup> |
| Grade                 | 3-5         | 42%              |
|                       | 6-8         | 27%              |
|                       | 9           | 31%              |
| District achivement   | Low         | 40%              |
|                       | High        | 60%              |
| Union member          | Yes         | 31%              |
|                       | No          | 69%              |
| License type          | Traditional | 82%              |
|                       | Alternative | 18%              |
| Political affiliation | Dem/Indep.  | 52%              |
|                       | Rep.        | 47%              |
| Teaching experience   | <5 years    | 22%              |
| reaching experience   | 6-9 years   | 16%              |
|                       | 10-15 years | 19%              |
|                       | >15 years   | 36%              |
| Class size            | <20         | 29%              |
|                       | 21-23       | 26%              |
|                       | 24-25       | 20%              |
|                       | >25         | 19%              |
| Region                | Northwest   | 28%              |
|                       | Northeast   | 24%              |
|                       | Central     | 25%              |
|                       | Southwest   | 8%               |
|                       | Southeast   | 13%              |

Table 3: Summary of the survey respondents

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<sup>&</sup>lt;sup>6</sup> overlap in subjects due to the inclusion of special education teachers in the sample

The breakdown of teacher responses is included in Appendix A: out of the 60 districts sampled, 14 districts had a rate of response of 40% or higher, with only two districts registering a low response rate of under 10%.

#### Instrument

The survey instrument was constructed in January 2015, with an intent to formulate questions that would best capture the perceptions that Arkansas teachers have towards the Common Core State Standards, both in terms of the benefit to students, and to the teachers themselves. As a result, most survey questions center around the student and teacher constructs, and were included after a careful analysis of past surveys that were carried out on the same topic, on a national or regional level, in other states (EPE Research Center, 2012; Ballou, 2014; Baldassare et al., 2014; Gallup, 2014). The process of selecting test items from these past survey began with sorting existing questions by what particular aspect of the CCSS they were attempting to measure and keeping items that dealt specifically with teacher perceptions of the Standards as impacting either themselves or their students. The remaining questions were then used in the final survey together with interspersed reverse-worded items in order to ensure a fuller measurement of teachers' perceptions, keep respondents from answering randomly and correct agreement bias. Data collection took place in February and March 2015. Participants received an initial electronic invitation, asking for their input and stressing the importance of that every teacher voice has in the debate around the Common Core Standards. Frequent reminders were then sent to non-responders. A total of 2293 individual survey invitations were sent, with a survey response rate of 29%.

A complete breakdown of the survey responses by district is included in *Appendix A*. The survey (*Appendix C*) consists of 35 items constructed on a Likert scale, where participants were able to respond to various questions about the implementation of the Common Core State Standards, as well as PARCC testing in their school, with most questions centered around the two constructs. The *student construct* (min = 0.00, max = 2.60, M = 1.429, SD = 0.575) seeks to measure the perceptions that teachers have on the overall benefit of the Common Core State Standards for their students. It was created as a mean of the responses to the following questions:

- 1. I believe that the Common Core Standards will lead to improved student learning for the majority of students I teach.
- 2. The Common Core Standards will help students be better prepared for college.
- 3. The Common Core Standards will help students be better prepared to compete in the workforce.
- 4. The previous Arkansas state standards were better than the Common Core Standards.
- 5. The Common Core Standards encourage students to think more critically compared to the previous standards.
- 6. The Common Core Standards have decreased the amount of time students spend on literature.
- 7. The Common Core Standards have decreased students' understanding of key math concepts.
- 8. Overall, the Common Core Standards are better/same/worse than the previous standards in preparing students
- 9. The Common Core Standards are better/worse than the previous standards.
- 10. Overall, my students will be better off / worse after the introduction of the Common Core State Standards than before.

The *teacher construct* (min = 0.00, max = 2.23, M = 1.133, SD = 0.458) seeks to measure the perception that teachers have on the overall benefit of the Common Core State Standards for them, as teachers. It was created as a mean of the responses to the following questions:

1. The Common Core Standards limit my flexibility to teach what my students need.

- 2. The Common Core Standards were implemented well at my school.
- 3. How prepared do you feel to teach your subject according to the Common Core Standards?
- 4. How has collaboration between teachers changed because of the Common Core Standards?
- 5. Do you think increased collaboration between teachers is beneficial to students?
- 6. Overall, the Common Core Standards are better/worse than the previous standards in preparing students
- 7. If I had the choice, I would keep / elliminate the Common Core State Standards.
- 8. The work I've done to implement the Common Core Standards has made me a better teacher.
- 9. Implementing the Common Core Standards in the classroom has made teaching more stressful than earlier years.
- 10. I like teaching more now than before the Common Core Standards were introduced.
- 11. Under the Common Core State Standards, I feel that I have more freedom to develop my own curriculum than before.
- 12. I don't like the testing involved in implementing the Common Core State Standards.

Given the multitude of constructs that the analysis was based on, it was imperative to verify the reliability of the constructs. For this purpose, the internal consistency of the items that form each construct was tested using Cronbach's alpha (Table 4 and Table 5), since it is "an index of reliability associated with the variation accounted for by the true score of the underlying construct" (Hatcher, 1994). Table 4. Survey questions and reliability testing for the student construct

| Question  | Response choices   | Cronbach's<br>Alpha |
|---|--|---------------------|
| I believe that the Common Core State Standards will lead<br>to improved student learning for the majority of students<br>I teach. | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree | 0.801               |
| The Common Core State Standards will help students be<br>better prepared for college.   | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree | 0.853               |
| The Common Core State Standards will help students be<br>better prepared to compete in the workforce.                             | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree | 0.820               |
| The previous Arkansas state standards were better than<br>the Common Core State Standards.  | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree | 0.698               |
| The Common Core State Standards encourage students to<br>think more critically compared to the previous standards                 | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree | 0.614               |
| The Common Core State Standards have decreased the amount of time students spend on literature.                                   | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree | 0.692               |
| The Common Core State Standards have decreased students' understanding of key math concepts.                                      | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree | 0.707               |
| Overall, the Common Core State Standards arethan<br>the previous standards in preparing students                                  | More helpful<br>Less helpful                             | 0.756               |
| The Common Core State Standards arethan the previous standards.   | More rigorous<br>Less rigorous                           | 0.428               |
| Overall, my students will be after the introduction<br>of the Common Core State Standards than before.                            | Better off<br>Same<br>Worse off                          | 0.786               |

| Question   | Response choices  | Cronbach's<br>Alpha |
|--|---|---------------------|
| The Common Core State Standards limit my flexibility to teach what my students need.                               | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree          | 0.738               |
| The Common Core State Standards were implemented well at my school.  | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree          | 0.425               |
| How prepared do you feel to teach your subject according to the Common Core State Standards?                       | Very prepared<br>Somewhat prepared<br>Not prepared at all         | 0.509               |
| How has collaboration between teachers changed because of the Common Core State Standards?                         | Increased<br>Same<br>Decreased                                    | 0.454               |
| Do you think increased collaboration between teachers is beneficial to students?                                   | Yes<br>No   | 0.656               |
| The Common Core State Standards arein describing what needs to be taught in my subject area.                       | More clear<br>Less clear  | 0.573               |
| Overall I amwith the Common Core State Standards   | Very satisfied<br>Satistifed<br>Dissatisfied<br>Very dissatisfied | 0.819               |
| If I had the choice, I would the Common Core State<br>Standards  | Keep<br>Elliminate  | 0.733               |
| The work I've done to implement the Common Core State<br>Standards has made me a better teacher.                   | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree          | 0.770               |
| Implementing the Common Core State Standards in the classroom has made teaching more stressful than earlier years  | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree          | 0.599               |
| I like teaching more now than before the Common Core State<br>Standards were introduced                            | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree          | 0.700               |
| Under the Common Core State Standards, I feel that I have<br>more freedom to develop my own curriculum than before | Strongly agree<br>Agree<br>Disagree<br>Strongly disagree          | 0.654               |
| I don't like the testing involved in implementing the Common<br>Core State Standards.                              | Strongly agree<br>Agree<br>Strongly disagree                      | 0,566               |

The Cronbach's Alpha for the student construct is 0.911, revealing a high degree of internal consistency among the survey items for this construct. Similarly, the Cronbach's Alpha for the teacher construct is 0.884, pointing to a high degree of internal consistency among the survey items. No survey items were excluded as a result of the reliability testing, since the item reliability statistics for both constructs showed a lower Cronbach's alpha if any items were to be eliminated.

#### Motivation for method choice

The present study was conducted using an experimental research design based on stratified random sampling. The choice to work in a quantitative framework was purposeful. While there are certainly limitations to this approach – which are discussed later in this chapter -I strongly believe that using this specific method afforded me several important benefits.

First, the nature of stratified random sampling ensures that each teacher subgroup – urban, rural, charter, public school, small district, large district, novice, veteran - within the larger teacher population received adequate representation within the sample. This allows me to generalize results to the whole population and ensures a higher reliability of results.

Second, working with a quantitative dataset permits variables of interest to be manipulated in a way that highlights and clarifies possible correlations between aspects that merit attention – for example, the link between teacher satisfaction and political affiliation or years of instructional experience.

Third, the research design I employed is repeatable, which means that results can be verified and compared across categories over time. Referring to my use of surveys in particular, I believe that they reduce bias in data collection and allow for greater objectivity and validity.

Because I did not talk directly to participants, I could not have influenced their answers or provided opportunities for response bias. Further, the anonymous nature of the survey means that participants were more likely to offer sincere answers since they did not see any possible repercussions.

Lastly, the use of a large scale survey allowed me to include a much larger number of subjects than if I had conducted a series of interviews or focus groups and did not require reporting to specific locations to collect the data – which enabled me to cast a wide geographical net across the state of Arkansas.

# Analytic Methods

In order to better understand the hypothesis testing results – and for a more in depth look at the Arkansas' teachers opinions of the Common Core State Standards – I am first looking at the participants' answers to the individual survey questions, by construct (Table 6, Table 7).

I am also presenting the responses to non-construct questions that offer a very interesting glimpse into the perceptions of these core teachers and round out the picture.

Table 6. Overall responses for student construct

| Question   | Strongly disagree     | Disagree           | Agree            | Strongly<br>Agree |
|--|-----------------------|--------------------|------------------|-------------------|
| I believe that the Common Core State<br>Standards will lead to improved<br>student learning for the majority of<br>students I teach. | 6.4%                  | 30.5%              | 46%              | 17.1%             |
| The Co1mmon Core State Standards<br>will help students be better prepared<br>for college.  | 5.8%                  | 27.9%              | 48%              | 18.3%             |
| The Common Core State Standards<br>will help students be better prepared to<br>compete in the workforce.                             | 9.3%                  | 32.6%              | 44.4%            | 13.7%             |
| The previous Arkansas state standards<br>were better than the Common Core<br>State Standards.  | 7.9%                  | 47.9%              | 32.6%            | 11.6%             |
| The Common Core State Standards<br>encourage students to think more<br>critically compared to the previous<br>standards              | 2.8%                  | 21.2%              | 51.6%            | 24.4%             |
| The Common Core State Standards<br>have decreased the amount of time<br>students spend on literature.                                | 14.3%                 | 47.6%              | 28.4%            | 9.7%              |
| The Common Core State Standards<br>have decreased students' understanding<br>of key math concepts.                                   | 13.2%                 | 43.4%              | 29.9%            | 13.5%             |
| Overall, the Common Core State<br>Standards are than the previous<br>standards in preparing students                                 | Less helpful<br>(45%) | More helpful (55%) |                  |                   |
| The Common Core State Standards arethan the previous standards.  | Less rigorous (8.8%)  | More rigorou       | s (91.2%)        |                   |
| Overall, my students will beafter<br>the introduction of the Common Core<br>State Standards than before.                             | Worse off<br>0.5%     | Same: 29.1%        | Better off 40.4% |                   |

# Table 7. Overall responses for teacher construct

| Question   | Strongly disagree                       | Disagree                              | Agree                                     | Strongly<br>Agree |
|--|---|---------------------------------------|---|-------------------|
| The Common Core State Standards<br>limit my flexibility to teach what my<br>students need.                                 | 11.1%                                   | 37.7%                                 | 31.8%                                     | 19.4%             |
| The Common Core State Standards<br>were implemented well at my<br>school.  | 6%                                      | 25.1%                                 | 57.1%                                     | 11.9%             |
| The work I've done to implement<br>the Common Core State Standards<br>has made me a better teacher.                        | 7.3%                                    | 35%                                   | 42.5%                                     | 15.2%             |
| Implementing the Common Core<br>State Standards in the classroom has<br>made teaching more stressful than<br>earlier years | 2.4%                                    | 22.1%                                 | 37%                                       | 38.5%             |
| I like teaching more now than<br>before the Common Core State<br>Standards were introduced.                                | 20.7%                                   | 48%                                   | 26.4%                                     | 49%               |
| Under the Common Core State<br>Standards, I feel that I have more<br>freedom to develop my own<br>curriculum than before.  | 19%                                     | 45.4%                                 | 28.6%                                     | 7%                |
| I don't like the testing involved in<br>implementing the Common Core<br>State Standards.                                   | 1.9%                                    | 11%                                   | 27%                                       | 60.1%             |
| Overall I amwith the<br>Common Core State Standards.   | Very<br>dissatisfied                    | Dissatisfied                          | Satisfied                                 | Very<br>satisfied |
| How prepared do you feel to teach<br>your subject according to the<br>Common Core State Standards?                         | 9.1%<br>Not prepared at<br>all:<br>9.1% | 32%<br>Somewhat<br>prepared:<br>53.4% | 46.2%<br>Completely<br>prepared:<br>37.5% | 12.7%             |
| If I had the choice, I wouldthe<br>Common Core State Standards   | Elliminate<br>46.5%                     | Keep<br>53.5%                         |   |                   |
| How has collaboration between<br>teachers changed because of the<br>Common Core State Standards?                           | Decreased<br>7.9%                       | Increased 52.4%                       |   |                   |
| Do you think increased<br>collaboration between teachers is<br>beneficial to students?                                     | No<br>3.6%                              | Yes<br>92%                            |   |                   |
| The Common Core State Standards<br>arein describing what needs to<br>be taught in my subject area.                         | Less clear<br>33.8%                     | More clear<br>66.2%                   |   |                   |

Some additional, non-construct questions were also posed to the survey participants to get a better grasp of the overall level of satisfaction they have towards the Common Core State Standards. In terms of professional development related to the Standards, 94.7% of respondents had participated in some sort of training to prepare them for the implementation, and 57.8% reported receiving additional support from their district aside from regular professional development, to ensure that they are successful in implementing the Standards in their classroom.

Additionally, out of the large proportion of teachers (74.7%) who reported concern that some student populations might not benefit from the Common Core State Standards, 91.3% point towards below level students as not being served very well by the Standards, 86.3% show concern for special needs students, 69.3% are worried that English Language Learners will not benefit, with only 25% and 11% respectively reporting that on grade level and gifted students will not benefit from the Common Core State Standards.

When asked what option they would choose if they were in charge of student assessment, 21.3% answered they would not test students at all, 25.6% would return to the previous Arkansas Benchmark examination, 19.1% would keep the PARCC test, 9.8% support the development of a new test, and 24.3% would choose another test.

#### Hypothesis testing

Given the nature of the outcomes variables, the two main research questions and seven associated hypotheses were tested using independent samples t-tests, or an analysis of variance (ANOVA). Independent samples t-tests were used to test the hypotheses which used only two independent groups in order to determine whether there is statistical evidence that the associated

population means are significantly different. As such, the following hypotheses were tested using independent samples t-tests:

- Hypothesis 2: Teachers in high performing districts will be in favor of the Common Core State Standards because of higher levels of confidence concerning implementing any curricular or standards changes
- Hypothesis 4: Alternatively certified teachers will be in favor of the Common Core State Standards because they are more flexible in terms of implementing new strategies and instructional techniques
- Hypothesis 5: Teachers who are not members of teachers unions will be in favor of the Common Core State Standards because of the strong opposition that the unions have expressed towards the Standards
- Hypothesis 6: Teachers who self-report as being Democrat or Independent will be in favor of the Common Core State Standards because of the greater acceptance that these groups have expressed towards the Standards

The t-test statistic to test whether the means were significantly different was computed as follows:

$$t=rac{\overline{x}_1-\overline{x}_2}{s_p\sqrt{rac{1}{n_1}+rac{1}{n_2}}}$$

Where " $s_p = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$  and  $\bar{x}_1$  is the mean of the first sample,  $\bar{x}_2$  is the mean of the second sample,  $n_1$  is the sample size of the first sample,  $n_2$  is the sample size of the

second sample,  ${}^{s_1}$  is the standard deviation of the first sample,  ${}^{s_2}$  is the standard deviation of the second sample, and  ${}^{s_p}$  is the pooled standard deviation" (Hastie et al., 2013).

The analysis of variance (ANOVA) was used to test those hypotheses which used more than two independent groups, in order to determine whether there is statistical evidence that the associated population means are significantly different. Where one-way ANOVA tests determined a statistically significant result between the groups of respondents, a post-hoc Tukey test was conducted to confirm where the differences occurred between groups.

ANOVAs were carried out for to test for the following hypotheses:

- Hypothesis 1: Teachers in large districts will be in favor of the Common Core State
   Standards because of they are able to access more resources (professional development, assistance) and can therefore be better prepared
- Hypothesis 3: Teachers instructing smaller classrooms will be in favor of the Common Core State Standards because they have more opportunities to design and implement the instructional activities that are now required under the Common Core State Standards, and
- Hypothesis 7: Novice teachers will be in favor of the Common Core State Standards because of a higher flexibility and more positive view of innovation and change

## Limitations

While this study offers some unique perspectives on teachers' perceptions of the Common Core impacts on themselves as instructors and on their students, it is also a snapshot of a moment in time due to the non-longitudinal nature of the data. In this case, responses provide a glimpse into teachers' feelings during the initial implementation of the Standards in Arkansas – and specifically during the PARCC testing. Therefore, "it's not possible to take information deeply, rather give an overall picture of the variables" (Fidalgo et al. 2014). Further, the fact that the survey was administered during the testing period means that teachers may have experienced fatigue and increased stress which can alter the nature of the responses. From a methodology point of view, it is also important to note that even though the survey items registered high values of Chronbach Alpha, it should not be assumed that the scale used was unidimensional. An exploratory factor analysis to check dimensionality was not used during this study, which means that it is not possible to uncover the trends of how the questions move together.

An ultimate limitation of this study, however, is that the quantitative approach used provides less elaborate accounts of teachers' perceptions, since there is no detailed narrative of participants' thoughts and opinions.

## Conclusion

In order to examine the overall opinion Arkansas teachers have of the Common Core State Standards, I analyzed their views of the benefits that these teachers have towards the Common Core State Standards in terms of benefit to their students, as well as the perception the teachers have of the Common Core State Standards in terms of benefit to themselves as teachers.

I utilized two major constructs, the student construct and the teacher construct, to test seven hypotheses that seek to find what characteristics of teachers are associated with their different perceptions of the Common Core State Standards. I also briefly touch upon the teachers' opinions about the PARCC testing associated with implementing the Standards.

To assess any possible connections between district performance, certification status, union membership, political belonging and perceptions of the Common Core State Standards, I utilized independent samples t-test. Further, to check whether there is any valid relationship

between district size, classroom size, teacher experience and acceptance of the Common Core State Standards, I use an analysis of variance test. The rigorous methods used, in combination with the strict p=0.05 level utilized (only one test accepted at p=0.10), give confidence to any statistically significant results.

To sum up, this research project aimed to determine the perceptions that Arkansas teachers have towards the CCSS in terms of their benefit to students and to themselves as teachers by analyzing how various subgroups of Math and English Language Arts teachers answer a survey on the CCSS.

The sample of 665 teachers from 60 Arkansas districts was obtained using a stratified random sampling process, which was then tested for reliability in order to address any possible concern that it might not be truly representative of the overall Arkansas districts.

The data were then analyzed using a quantitative approach, specifically independent samples t-test and the analysis of variance in order to determine whether there were any statistically significant differences between the various teacher subgroups.

#### **Chapter 4 – Results**

Since the issue of teachers' perceptions of the Common Core State Standards includes multiple facets, this chapter presents the survey results by focusing on the two main research questions: First of all, do Arkansas teachers perceive the Common Core State Standards as beneficial to their students? This refers to increased test scores, better preparation for college and careers, as well as serving different subgroups of students and their specific needs. Second, do Arkansas teachers perceive the Common Core State Standards as beneficial to them, as teachers? This encompasses aspects such as a less stressful teaching environment, more rigorous content, as well as clarity of teaching requirements and expectations.

The following chapter will present the results of my analysis, focused on these two overarching research questions, as well as the hypotheses associated with them, as well as a separate section on teachers' perceptions of the testing associated with the implementation of the Common Core State Standards. Finally, the chapter will include a discussion of the results, in order to provide a meaningful context and possible explanation for the findings.

*Research Question #1:* 

# Which Types of Teachers Are More Likely to View the Common Core State Standards as Beneficial to Their Students?

#### Overall results for impact on students

An examination of the student construct survey results points to an overall favorable perception that Arkansas teachers have of the impact of the Common Core State Standards on their students. Out of the 665 teachers who responded to the survey, the average student construct registered 1.429 (min = 0.00, max = 2.60, SD = 0.575). As such, we can safely

conclude that, overall, Arkansas teachers perceive that the Common Core State Standards as a whole will benefit their students academically and in their future careers.

# Subgroup results for impact on students

Although the overall results show a favorable perception of the impact on students, it is important to focus on the different subgroups of teachers, in order to more accurately see which type of teacher is more inclined to welcome the Standards.

1. Teachers in high performing versus teachers in low performing districts

An independent-samples t-test was conducted to compare the teachers' perceptions in high-performing districts and those in low-performing districts (Fig 1).

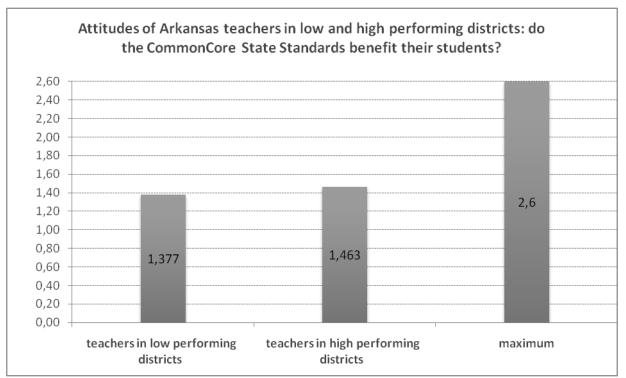


Fig 1. Teachers in high performing versus teachers in low performing districts

There were 257 teachers in the low performing districts and 390 teachers in the high performing districts. The mean for the low performing districts was 1.377, while the mean for the high performing districts was 1.463. The difference, 0.086, is statistically significant between the

two types of districts [t(645) = -1.850, p = 0.065] at the 0.10 level. Therefore, teachers in high performing districts believe in the positive impact of the Standards on students more than the low performing district counterparts.

# 2. Traditionally versus alternatively certified teachers

An independent-samples t-test was conducted to compare the perceptions of teachers who are traditionally certified and those who are alternatively certified (Fig 2).

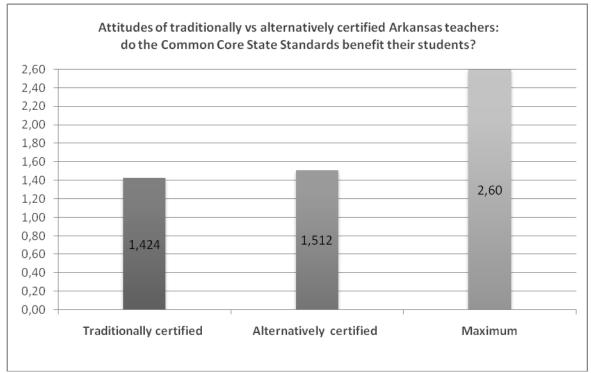


Fig 2. Traditionally versus alternatively certified teachers

There were 545 traditionally certified teachers and 76 alternatively certified teachers, with a mean of 1.424 and 1.512, respectively. The difference, 0.087, was not statistically significant between the two groups of teachers [t(619) = -1.234, p = 0.218]. Therefore, there is no perceptible difference between alternatively and traditionally certified teachers in terms of their perceptions of the CCSS' benefit to their students.

# 3. Union versus non-union members

An independent-samples t-test was conducted to compare the perceptions of teachers who are union members and those who are not union members (Fig 3).

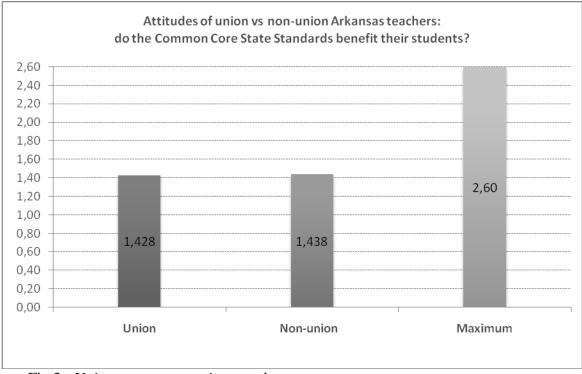


Fig 3. Union versus non-union members

159 of the respondents were union members, while 454 were not union members. Union members registered a mean of 1.428, while their non-union counterparts registered 1.438. The difference of 0.009, is not statistically significant [t(611) = -0.183, p = 0.855]. As such, union membership does not seem to be tied to teachers' perceptions of the usefulness of the Standards for their students.

# 4. Democrat and Independent teachers versus Republican teachers

An independent-samples t-test was conducted to compare the perceptions of teachers who self-reported as Democrat/Independent and those who self-reported as Republican (Fig 4). Out of the total pool of respondents, 239 self-reported as Republican (with a mean of 1.392), and 348 as

Democrat or Independent (with a mean of 1.478). The difference of 0.086 is statistically significant at the 0.10 level [t(585) = -1.798, p = 0.076]. Therefore, Democrat and Independent teachers are more inclined to perceive the Standards as having a positive outcome on their students.

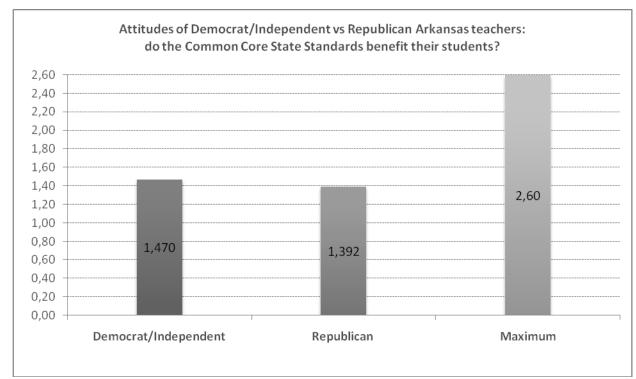


Fig 4. Democrat and Independent teachers versus Republican teachers

# 5. Teachers in large districts versus medium and small districts

A one-way ANOVA was conducted to compare the overall perceptions of teachers in large districts with those in medium districts and small districts. 252 teachers belonged to large districts, while 198 and 215 teachers came from medium and small districts, respectively. The analysis did not find statistically significant differences between the groups, F(2, 644) = 0.733, p = 0.481. Therefore, district size does not have an impact on teachers' perceptions of the usefulness of the Standards for their students' success. 6. Teachers in small versus medium and large classrooms

A one-way ANOVA was conducted to compare the overall perceptions of teachers in smaller classrooms with those in larger classrooms (Fig 5). The analysis found statistically significant differences between the groups, F(3, 617) = 5.300, p = 0.001. Since the one-way ANOVA test determined a statistically significant result between the groups of respondents, a post-hoc Tukey test was conducted to confirm where the differences occurred between groups.

The post hoc Tukey test showed that teachers in classrooms with under 20 students differ significant from teachers in classrooms with 21-23 and teachers in classroom with 24-25 students. As such, the teachers in bigger classrooms (M = 1.464, SD = 0.617; M = 1.550, SD = 0.041) were more positive toward the effect of the Common Core Standards on their students, compared to teachers in smaller classrooms (M = 1.307, SD = 0.552).

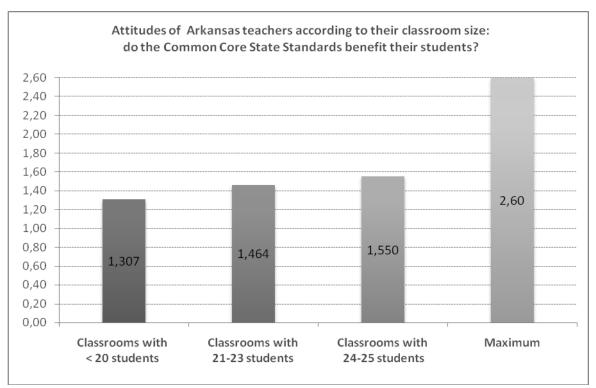


Fig 5. Teachers in small versus medium and large classrooms

## 7. Novice versus veteran teachers

A one-way ANOVA was conducted to compare the overall perceptions of novice teachers with experienced on the students construct (Fig 6). The analysis found statistically significant differences between the groups, F(3, 617) = 5.300, p = 0.001. Since the one-way ANOVA test determined a statistically significant result between the groups of respondents, a post-hoc Tukey test was conducted to confirm where the differences occurred between groups.

The post hoc Tukey test showed that novice teachers differ significantly from veteran teachers. As such, novice teachers (M = 1.561, SD = 0.553) were more positive toward the effect of the Common Core Standards on their students, compared to veteran teachers in (M = 1.340, SD = 0.576).

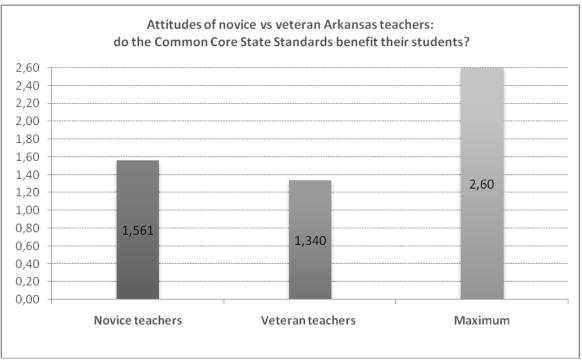


Fig 6. Novice versus veteran teachers

### *Research Question #2:*

# Which Types of Teachers Are More Likely to View the Common Core State Standards as Beneficial to Themselves as Teachers?

#### Overall results for impact on teachers

An examination of the teacher construct survey results points to a slightly unfavorable perception that Arkansas teachers have toward the impact of the Common Core State Standards on themselves, as teachers. Out of the 665 teachers who responded to the survey, the average teacher construct registered 1.133 (min = 0.00, max = 2.23, SD = 0.458).

As such, we can conclude that, overall, Arkansas teachers perceive that the Common Core State Standards as a whole will not have as many benefits for them, as teachers, compared to their students.

#### Subgroup results for impact on teachers

Although the overall results show a slightly unfavorable perception toward the impact on students, it is important to focus on the different subgroups of teachers, in order to more accurately determine which categories of teachers, if any, have a positive outlook on the Standards' benefit to themselves, as instructors.

 Teachers in high performing versus teachers in low performing districts
 An independent-samples t-test was conducted to compare the perceptions teachers in highperforming districts and those in low-performing districts (Fig 7).

386 teachers come from high performing districts (M = 1.150), while 257 teachers come from low performing districts (M = 1.107).

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The difference of 0.042 between the two groups was not statistically significant [t(641) = -1.163, p = 0.245], which leads to the conclusion that district performance does not ultimately impact teachers' perceptions of the benefit of the Standards for themselves as educators.

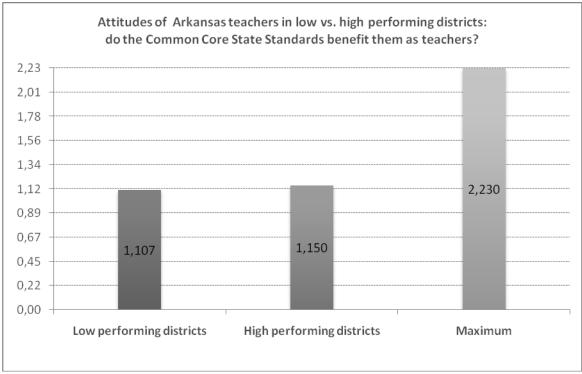


Fig 7. Teachers in high performing versus teachers in low performing districts

## 2. Traditionally versus alternatively certified teachers

An independent-samples t-test was conducted to compare the perceptions of teachers who are traditionally certified and those who are alternatively certified (Fig 8).

545 teachers received traditional certifications (M = 1.125), while 76 were alternatively certified (M = 1.196). The difference, 0.070, was not statistically significant [t(619) = -1.251, p = 0.212]. Therefore, teacher certification does not seem to be ultimately associated with teachers' perceptions of the benefit they would derive from the Standards, as educators.

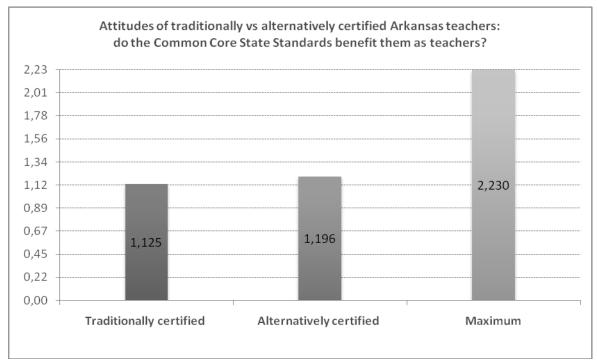


Fig 8. Traditionally versus alternatively certified teachers

3. Union versus non-union members

An independent-samples t-test was conducted to compare the perceptions of teachers who

are union members and those who are not union members (Fig 9).

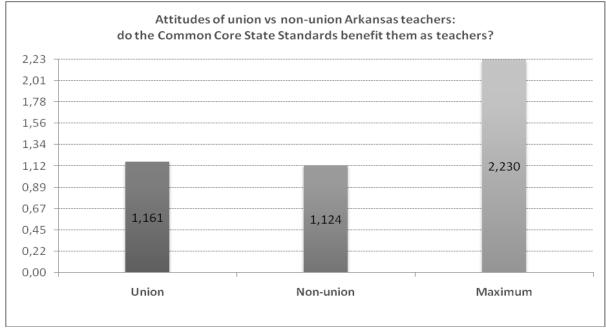


Fig 9. Union versus non-union members

4. Democrat and Independent teachers versus Republican teachers

An independent-samples t-test was conducted to compare the perceptions teachers who self-reported as Democrat or Independent and those who self-reported as Republican (Fig 10).

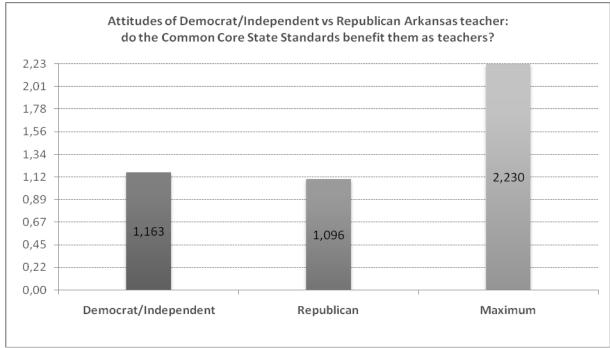


Fig 10. Democrat and Independent teachers versus Republican teachers

Out of the total survey respondents, 159 identified as Republican (M = 1.096), with the remainder of 454 reporting to be either Democrat or Independent (M - 1.163). The difference, 0.037, was not statistically different between the two groups [t(611) = 0.875, p = 0.382], therefore leading to the conclusion that political affiliation is not associated in a significant way with differing perceptions of the CCSS' benefit to educators.

5. Teachers in large districts versus medium and small districts

A one-way ANOVA was conducted to compare the overall perception of teachers in large districts with those in medium districts and small districts. 252 teachers belonged to large districts, while 198 and 215 teachers came from medium and small districts, respectively. The analysis did not find statistically significant differences between the groups, F(2, 640) = 1.220, p = 0.296. As such, district size does not impact teachers' perceptions of the CCSS' benefit to themselves, as educators.

## 6. Teachers in small versus medium and large classrooms

A one-way ANOVA was conducted to compare the overall perception of teachers in smaller classrooms with those in larger classrooms (Fig 11). The analysis found statistically significant differences between the groups, F(3, 617) = 2.775, p = 0.041. Since the one-way ANOVA test determined a statistically significant result between the groups of respondents, a post-hoc Tukey test was conducted to confirm where the differences occurred between groups.

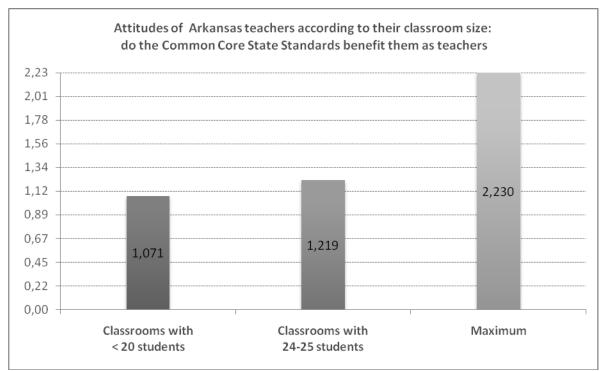


Fig 11. Teachers in small versus medium and large classrooms

The post hoc Tukey test showed that that teachers in classroom with under 20 students (N = 193) differ significant from teachers in classroom with 24-25 students (N = 133).

As such, the teachers in bigger classrooms (M = 1.219, SD = 0.487) were more positive toward the effect of the Common Core Standards on themselves as teachers, compared to teachers in smaller classrooms (M = 1.071, SD = 0.443).

### 7. Novice versus veteran teachers

A one-way ANOVA was conducted to compare the overall perception of novice teachers (N = 147) with experienced teachers (N = 239), (Fig 12). The analysis found statistically significant differences between the groups, F(3, 615) = 5.754, p = 0.001.

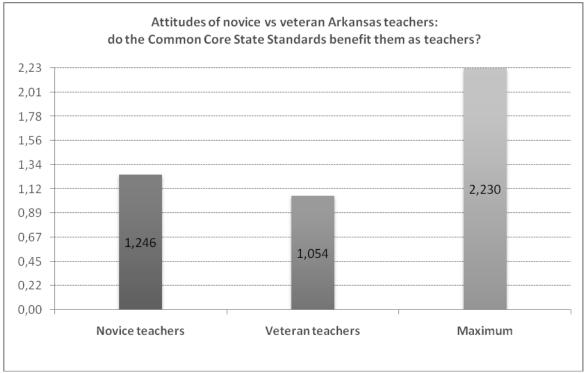


Fig 12. Novice versus veteran teachers

Since the one-way ANOVA test determined a statistically significant result between the groups of respondents, a post-hoc Tukey test was conducted to confirm where the differences occurred between groups. The post hoc Tukey test showed that novice teachers differ significantly from veteran teachers.

As such, novice teachers (M = 1.246, SD = 0.444) were more positive toward the effect of the Common Core Standards on themselves as teachers, compared to veteran teachers in (M = 1.054, SD = 0.440).

#### Perceptions towards Testing

The issue of Arkansas teachers' perceptions towards the PARCC testing associated with the initial implementation of the Common Core State Standards deserves a separate treatment, since nationally there had been an ongoing discussion about the merits and the limitations of the PARCC test even before it was introduced. That is why, aside from examining which types of Arkansas teachers are in favor of the Standards, the survey also asked some specific questions about testing, aimed at extrapolating teachers' views and opinions on the PARCC test and their experiences with PARCC in the classroom.

When asked their opinion of the testing involved in the implementation of the Common Core Standards, 81% of teachers (N = 539) reported a high level of dissatisfaction with the PARCC test. This, combined with the overall favorable perceptions of teachers towards the Standards as a whole (56% of respondents remarked that they were satisfied or very satisfied with the Standards themselves), suggests that some teachers' lack of acceptance of the Standards may be caused by their pronounced dissatisfaction with the new test.

In order to further examine this issue, teachers were also asked what option they would choose if they were in charge of student assessment. 21.3% answered they would not test students at all, 25.6% would return to the previous Arkansas Benchmark examination, 19.1% would keep the PARCC test, 9.8% support the development of a new test, and 24.3% would choose another test. Overall, results clearly point to a high level of disappointment and

dissatisfaction with the PARCC test. Examining the optional comments written in by the respondents, three themes emerged as sources of dissatisfaction towards the PARCC test. The majority of teachers who expressed a negative view of PARCC find the test problematic in its format (especially for some student populations), poorly designed or a barrier to student learning.

First, many teachers surveyed view the PARCC as an inappropriate assessment tool for some learners. One response highlights that "the test does not serve students not on grade level. There should be a list of fundamental skills that have to be mastered, so that special education and below level students can have even a glimmer of hope of doing well on the test". In the same vein, another teacher states "the testing is not developmentally appropriate [...] we are expecting children to do abstract thinking when they are in the concrete thinking stages. We cannot promote brain-based research materials and ignore developmental stages in thinking – which is what the PARCC does". Similarly, another teacher is worried that "many of [her] below level and struggling students, which will not go to college, are not up to the cognitive development the PARCC assumes they are at".

Second, responses also seem to center around the poor design and confusing nature of the PARCC test. "The main problem I have with the PARCC", one teacher points out "is the vagueness in expectations. The lateral alignment between grades is too broad and causes overlapping and overlooked needs". Another teacher notes: "PARCC testing on computer had been awful. Students put through unneeded stress when kicked off test. Students complained of unclear direction in how to record answers. Some calculators embedded in testing program did not work, gifted and talented students struggled. It was a horrible experience plus between actual test and practice tests I have lost at least 2 to 3 weeks of instruction time. It was the worst experience in my 23 years of educating students!" In the same vein, another teacher points out

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that "standardized testing for college preparedness should mirror the ACT or SAT, not be an entirely different test, with new and vague expectations".

A third emergent theme from teacher comments is that preparation and testing for PARCC is replacing learning and becoming too time consuming. "It is robbing our students of their love for learning and affecting their individual growth timelines of maturation and conceptual understanding", complains one teacher. "Standards are good, but PARCC Assessments take up too much time. Students are testing too long. That time could be better spent in the classroom", expressed another concerned teacher. Equally, many responses echo the following: "Too much instructional time lost due to testing. We tested in March and plan to test again in May ?! Our school did not have the manpower to accommodate whole-school testing but did anyway. Students lost out on a lot of instruction time".

Examining these emerging themes in the context of the survey responses which find that 74.7% of teachers are concerned that some student populations will not benefit from the Common Core State Standards, points to a high degree of mistrust and lack of confidence in the PARCC assessment.

#### **Chapter 5 – Recommendations for Policy, Research and Practice**

It has been more than a decade since the first push towards the adoption of a common set of state standards that would allow American students to compete in an increasingly globalized world and be ready for success in college and careers. It is natural, then, to ask the question: have the Common Core State Standards been successful in their proposed goal? For a long time, there was a glaring gap in existing literature, with no studies aiming to explore this particular issue. However, a 2019 study by the American Institutes for Research provides some extremely interesting findings by analyzing at the effects of states' implementation of the CCSS on student achievement, as measured by results on the National Assessment of Education Progress (NAEP). The CCSS are associated with a negative effect on 4<sup>th</sup> graders' reading achievement and 8<sup>th</sup> graders' math achievement. Further, the study finds that particular subgroups of students (English Language Learners, special education students, Latino students) suffered in particular after the introduction of the CCSS compared to the overall sample. The authors' attempts to explain the for a lack of positive effects echoes existing literature on the CCSS: teachers were faced with a lack of adequate preparation to implement the Standards, professional development was lacking in relevant training, and most teachers did not feel ready to teach the Standards in a way that truly served students. Given previous literature findings, as well as those of the current study, it is no surprise that these roadblocks hindered the success of the CCSS.

There is never a shortage of new ideas in education. In fact, in my experience as an educator, I have noticed that many teachers often sigh at the announcement of another reform: they have seen many introduced with accolades and disappear quickly with the introduction of yet another new and exciting approach. This revolving door pattern justifies the jaded view that some teachers have towards the implementation of new curricular changes and can break down

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the trust between teachers, principals and policymakers. While the introduction of the Common Core Standards comes out of desire to make students more successful in their future academic and career pathways, it is important to remember that teachers, administrators and students have – and will continue facing – challenges in their day-to-day use.

Given the high criticism that has already brought down the Common Core Standards in many states, it is imperative for the remaining Common Core supporters to acknowledge the potential pitfalls of the Standards and use them for growth and success. As such, this chapter includes a series of recommendation for policy, research and practice that stem from reflecting on the findings of my own study as well as recent research on teachers' perception of the Common Core Standards.

To sum up the research results in terms of Arkansas teachers' beliefs that the CCSS are beneficial to their students, most teachers do perceive the CCSS as beneficial to their students academically and in their future careers. Further, specific categories of teachers were more inclined to perceive the CCSS as leading an approach with a positive outcome on their students: teachers in high performing districts, Democrat or Independent teachers, teachers in larger classrooms, as well as novice teachers. In terms of Arkansas teachers' beliefs that the CCSS are beneficial to themselves, as educators, the overall finding is that they are not confident in the ability of the CCSS to improve their teaching practice. Looking at the various categories, some report a stronger belief in the positive effect of the CCSS on themselves, as educators. Specifically, teachers in larger classrooms and novice teachers display more confidence in this than their counterparts. Lastly, most teachers reported dissatisfaction with testing involved. These findings are certainly interesting for me as both a researcher and educator, because they point to a couple of important aspects. Novice and Democrat teachers seem to be more open to trying new methods and approaches, and educators who have larger classrooms are also more inclined to be flexible and adopt various initiatives. This goes against my initial thinking that veteran teachers, as experts, would be more flexible when presented with a complex initiative because they require less support and can rely on their vast experience to think on their feet and adapt quickly to new situations. However, it does confirm my previous expectation that educators placed in larger classrooms will be more accommodating to major curricular and instructional changes since it is what they have to do daily in order to serve all students' needs.

A careful examination of the results yields a couple of very important conclusions. First of all, Arkansas teachers have an overall positive perception of the impact of the Common Core State Standards on their students. These results seem to match the overall trend of other studies (Fisher and Frey 2014; Hipsher 2014; Murphy and Haller 2015; Hirsch 2016; Machamer 2018) which find that, in principle, teachers enjoy the increased focus on critical thinking, higher order skills and real-world problem solving.

In terms of Arkansas teachers' perceptions of the impact of the Common Core State Standards on themselves, the results are slightly unfavorable. This could be caused by several factors: a belief that the new Standards limit teachers' flexibility in teaching what students need (49.8% of respondents), a lack of confidence in one's ability to teach to the Standards (51.3% of those surveyed reported they feel only "somewhat prepared"), or stressful work environment (75% of teachers said that implementing the Standards has made teaching more stressful than previous years). All of these findings are supported by existing research. WestEd (2012), Hipsher(2014), Maddrey (2014), Bizon (2015), Murphy and Haller (2015), Robinson (2016), and Hirsch (2016) all conclude that teachers believe that they are not receiving appropriate and/or sufficient district preparation on how to best integrate the Standards into their teaching, how to

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align subject content to the Standards and set up students for success. Further, Arkansas' teachers' perceptions that districts rushed into implementing the Standards mirror findings by Hipsher (2014), Robinson (2016), and Hirsch (2016).

Looking at what types of teachers favor the Standards, it seems that novice teachers and teachers in larger classrooms (with over twenty-five students) are more positive toward the benefit the Standards will have on both students and teachers. Further, teachers in high performing districts and Democrat/Independent teachers are more inclined to believe that the Standards will have a positive outcome on their students. I propose that these very interesting patterns that emerged stem from the propensity that the groups have for change. While one could argue that veteran teachers would have an easier time adapting to the Standards since they have lived through numerous curricular changes, younger teachers are more adaptable and accepting of major shifts because they are not (yet) jaded by the revolving door of educational fads that are tried on and quickly discarded year after year. Simply put, novice teachers are more accepting of the Standards. As a former teacher who was a novice not that long ago, it is not surprising to me that novice are more enthusiastic about adopting the Standards than their more experienced counterparts. The latter have probably been through several education trends and are therefore – one would argue - more reluctant and "set" in their ways.

Teachers in high performing districts could be more open to the Standards because, one would think, they are more supported by their districts – an aspect that existing research shows is essential to teacher buy-in (EPE 2012; Gallup 2014; Endacott et al. 2016; Sanchez 2016). Also, one would imagine that high performing districts have reached that bracket by frequently trying out and reflecting on best practices in the field of education – a process that requires adaptable teachers who are willing to embrace new methods, in the hope that their students will benefit

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academically. Similarly, teachers in larger classrooms are probably flexible individuals, capable of adjusting to diverse students' needs and therefore more inclined to have a favorable view of the introduction of new standards. It is worth noting that, at this point, this statement is merely an assumption based on my own experience in the educational system as well as informal interviews I have had with educators along the years.

Lastly, the fact that Democrat and Independent teachers are more accepting of the Common Core State Standards comes as no surprise, since historically these two groups have been more flexible, nuanced and curious about system-wide change (Whitman, 2015). These findings also seem to fit with the propensity of the Republican Party to shun the Common Core over the past couple of years. While initially the Standards were the subject of great acclaim from Republican leaders such as former New Jersey Governor Chris Christie and former Arkansas Governor Mike Huckabee, they quickly became the poster child for everything wrong with American education. Shortly after the Standards were introduced, Mike Huckabee became a very vocal opponent by suggesting that the move was a take-over by the federal government and an attempt to exert a great deal of control of local matters<sup>7</sup>.

Not surprisingly, that many Arkansas teachers who self-reported as Republican had a similar distrust of the Common Core Standards. It is worth noting; however, that the general skepticism towards the Standards could also be a direct result of the negative sentiments many Arkansas teachers had towards the PARCC assessment. Much like the participants surveyed by Cheng (2012) and Ballou (2014), Arkansas teachers worry about testing, doubt the ability of testing consortia to adequately align testing with subject content and are afraid that students' performance will be a major component of their professional evaluation. In this context, it is not

<sup>&</sup>lt;sup>7</sup> Similarly, Louisiana Governor Bobby Jindal initially praised the Common Core but then later stated: "Let's face it: Centralized planning didn't work in Russia, it's not working with our healthcare system and it won't work in education" (Washington Post, 2014).

surprising that the negative sentiments of Arkansas teachers towards the PARCC assessment finally gave way to the state abandoning PARCC for the ACT Aspire after just one year. This pattern was then seen around the country as more and more states quickly became disillusioned with the PARCC consortia and opted for alternative assessments such as SmarterBalanced or instate developed tests.

#### Recommendations for Policy

1. Existing research on teachers' perceptions of the Common Core Standards shows that much of the frustration, fear and anxiety stem from a concern about how assessment data will be used for evaluation. This anxiety is inevitable during times of unclarity about how testing scores will be integrated in evaluation or when policymakers seem to push for an increasing role of achievement scores in determining teacher quality. A common sense recommendation is for policymakers – and researchers who inform policy – to stop basing major consequences (determining teacher quality, teacher termination and pay) on the scores of a single test – regardless of whether the test is PARCC, SmarterBalacend, ACT Aspire or an in-state developed examination. Use of testing data should be backed by responsible, well-designed accountability policies that treat scores as one piece in a complex fabric of many factors instead of the single most important piece in assessing student growth and success. Further, policymakers should ensure that teacher evaluation frameworks take into account student characteristics such as English Language Learner and special needs status. Any system that does not - regardless of how much it is lauded -will only lead teachers to either game the system or choose to back out of serving the classrooms and districts that probably need them the most.

- 2. While the importance of testing is frequently touted by the majority of policymakers and researchers, it is surprising that test score data are often presented in a way that only individuals with a high degree of training in statistics would understand. Policymakers should focus on **making student data accessible** to teachers by presenting it in a way that can inform instruction (grouped by Standard and student segments). In this way, teachers can perform a mini-evaluation of their own rather than being surprised by school leader ship with the results.
- 3. Often times, curricular reform is done entirely by individuals who have not stepped in a classroom for many years or even worse have no contact with teachers on a regular basis. Policymakers need to give educators an active role in selecting and developing training and curricular materials related to the Standards. In this way, teachers will not only feel actively involved and listened to but as research shows are more likely to report satisfaction with their implementation.
- 4. Currently, many policymakers do not look at disaggregated data when assessing student growth. This incentivizes school to exclude special needs students from the evaluation system since they would only serve to pull down test scores. It is time policymakers begin to investigate the possibility that a standardized assessment such as PARCC, SmarterBalanced or ACT Aspire is not the best or most equitable way to monitor the growth of special needs students.

My recommendation would be an in-depth investigation into what alternate standards or assessments can be used by school districts to measure the skills and competencies acquired by special needs students. These alternatives need not be "dumbed down". Instead, they should be achievable, realistic, focused on the students rather than other key players, and -

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quite possibly –incorporate an evaluation of whether students have managed to go beyond academic skills and learn the career, vocational and life skills they will need first and foremost. While the road to setting adequate standards and evaluate measures for special needs students is certainly difficulty, state legislatures can work closely with special education specialists, curriculum coordinators and teachers to ensure that students with disabilities are given the best possible education to live a full, productive life – even if it means heavily modifying the Common Core Standards.

#### Recommendations for Future Research

1. It is obvious that the most important question at this point in time is whether the Common Core Standards have succeed in making students college and career ready. With the exception of the Song et al. (2019) longitudinal study that looked at NAEP test scores after the implementation of the Common Core State Standards, very little rigorous analysis has been completed on this issue. It is easy to see why.

First, there can be no gold standard completed since states were not randomly assigned to implement the Standards or not so that we can analyze whether states which were chosen to adopt them fared better than their counterparts.

Second, it is difficult to successfully establish when each state truly began implementing the Standards. Is it the moment when the state legislature adopted it? Is it the moment when school districts began professional development?

Third, even if we compare results between states who never adopted the Common Core with those that ultimately did, there are serious endogeneity concerns. Perhaps states that refused implementation have other, preexisting differences, that would ultimately lead to biased estimates of any findings. While all of these considerations may seem to dampen the prospect of further research into the effects of the Common Core on student growth, it is nevertheless possible to produce quality studies, as long as scholars employ a research design capable of disentangling at least some of these interconnected effects.

- 2. Further, for research purposes it is necessary to establish what constitutes student success. In my study, as well as in most other existing research, teachers suggest that a strength of the Standards lies in their ability to promote critical thinking, problem solving and higher level reading. Therefore, it would be useful for future studies to establish an adequate method of assessing whether the Standards were capable of inducing growth in these areas. What is more, it may be worth analyzing the effectiveness of the CCSS through the lens of alternative measures of what constitutes success. Researchers like Angela Duckworth view noncognitive skills such as grit and persistence as better predictors of preparedness for an everchanging globalized world.
- 3. As the Standards were still in the early stages of implementation in Arkansas at the time of my study, it would be particularly interesting to see a replication of the study. This would provide excellent insight into whether the implementation process has truly changed – from the point of view of Arkansas teachers.
- 4. Everyone is interested in success. However, there is also something to be learned from failure. Another compelling research angle could focus on states in which the Common Core failed and the reasons behind it. Was it the implementation, teacher dissatisfaction, political pressure, testing or other factors?

- 5. One perspective that merits attention is the perceptions of students on the impact of the Common Core Standards. Incorporating student voices into the overall discourse on the Standards will shed new light on the difficulties and successes of teaching and testing the Standards that could inform policy and practice.
- 6. Lastly, as seen in the current study as well as in the majority of existing research, teachers are concerned about the possible lack of **alignment between Standards**, **local agency expectations and assessment**. This leads to a thought-provoking avenue for further research into whether the Common Core is truly aligned with what states, school districts and principals expect from teachers in the classroom and whether existing state assessment adequately measure what is being taught through the Standards.

### Recommendations for Practice

1. In order to be successful in the classroom, educators must have a mastery of the Common Core Standards. Educators cannot be expected to face the demand of the Standards and testing associated with them unless they provided with **adequate**, **timely**, **ongoing quality professional development**. Unfortunately, as the research presented in this study shows, professional development offered by districts is low quality, insufficient, presented as a onetime fix at the beginning of the year, and created without input from teachers. It is clear that any state who wants the Common Core to succeed in the long term need to focus on developing professional development that adequately trains teachers, thus setting them up for future success in the classroom.

In order to achieve this, professional development must:

- i. Be ongoing, at key points throughout the year, and whenever teachers believe they need additional curricular support
- ii. Model itself on what teachers expect from students. Most teachers can testify to having sat through training sessions that remind them of the importance of using close analysis, interactive lessons and differentiated instruction -- all while sitting through a formal, "sit-and-get" slide presentation. Teachers will take more away from these events if the professional support they receive is delivered using the same methods that they are expected to use in the classroom. Preparation seminars on constructing meaning and close reading, for example, should not be based on hand-outs, but rather on intellectually demanding activities that require teachers to test out different strategies together before introducing them to the classroom. This ensures not only teacher buy-in, but also a chance to receive feedback, adjust instruction, reflect and become a better educator.
- iii. Fill the void in training all teachers, regardless of content area. Even though a major emphasis of the Common Core is on literacy across the curriculum, professional development materials are usually targeted towards English Language Arts and mathematics educators while neglecting to provide guidance on how science and social studies teachers should ensure they are adequately incorporating the Standards in their own content areas.
- 2. Ever since the Standards were first introduced, teachers have been expressing concern about how their performance will be evaluated. It is essential for states, school districts and school leadership to ensure that curriculum, professional development, student assessments and teacher evaluations and **aligned with the Standards**. Many states, for example, use the

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Framework for Teaching developed by Charlotte Danielson for end-of-year teacher evaluations. Since the Framework was not initially developed with the Common Core Standards in mind, it is normal for teachers to ask themselves: do Danielson's rubrics expect the same type of performance from teachers as the Standards? Ensuring that the answer is "yes" should be an imperative for all school districts.

- 3. While obtaining student achievement data is extremely important for assessing the suitability of the Common Core Standards, it is also necessary to address teacher concerns that **testing** could become the main focus of instruction or worse that it may be used as a punishment tool for teachers. Common Core assessments, whether they are PARCC, SmarterBalanced, or ACT Aspire should not cause frustration and anxiety in teachers or be the focal point of classroom instructions. They should merely serve as one tool (out of many) that is being used to inform policy, practice and continual monitoring of the efficacy of the Common Core.
- 4. Research has been clear that there is a high correlation between teacher satisfaction with the Standards and leadership support. While state legislatures seem to often overlook principals, they play an essential role in creating large-scale support of the Standards. As such, school principals need to ensure that they are constantly aware of the latest research on the effectiveness of the Standards, best practices in their implementation and be proficient and proactive in providing ongoing support for teachers as they effect these changes in the classroom.
- 5. English Language Learners and special education students are two fast-growing segments that can be easily overlooked when implementing the Standards. No education reform can be considered truly effective if it leaves out these two subgroups of students. It is obvious that these two categories face distinct challenges from their counterparts: they may

not use the same verbal and organizational patterns and they may have difficulty approaching wordy mathematics problems or constructing rich argumentative answers. While there are certainly many ways to make the Standards more accessible to these students, schools should ensure that educators have some flexibility in implementing them by allowing the intertwinement of academic goals with life skills and permitting some flexibility in the pacing of the Standards. The purpose of this chapter was to lay out a set of reasonable and practical recommendations for policy, practice and future research that will address many of the educators' concerns about the Common Core Standards. While some of the recommendations may seem daunting, it is worth keeping in mind that failing to address ongoing teacher dissatisfaction may lead to possible rejection by educators and – ultimately – a state-wide decision to abandon further education reforms.

The next couple of years will be crucial for obtaining teacher buy-in and ensuring that the new Arkansas Framework is doing what it was meant to do: improve the quality of K-12 schooling across the United States. Any major education reform requires policymakers, school leadership and teachers to be very cognizant of what students specifically require to be successful in college and careers but their ultimate success will rely heavily on how state legislatures and school districts answer to the justifiably fearful or skeptical attitude that teachers have towards education reform strategies.

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# Appendix

# Appendix A.

| Study   | Method                     | Sample   | Outcome measured   | Results   |
|---|----------------------------|--|--|---|
| EPE Research<br>Center (2012)                       | Random sampling            | 670 K-12<br>teachers across<br>the United<br>States, from<br>states that had<br>adopted the<br>Standards | Familiarity with the<br>Standards, satisfaction with<br>professional development,<br>general perceptions of the<br>Standards | <ul> <li>78% of respondents were at least somewhat familiar with the Standards</li> <li>30% had not received any professional development about the Standards prior to their implementation</li> <li>74% of teachers reported that they would feel more comfortable with the Standards if they received more professional development and access to Standards aligned-resources</li> <li>Only 9% of teachers who responded had received any type of curriculum resources related to the Standards</li> <li>49% of teachers felt prepared or very prepared to teacher according to the Standards</li> <li>93% of responses agreed that the Common Core State Standards were of a higher quality than their previous state standards</li> </ul> |
| Cheng (2012)  | Mixed methods              | 99 California<br>teachers  | Teachers' perceptions of<br>the Common Core State<br>Standards   | <ul> <li>58% of teachers did not feel prepared by the professional development to transition to the Common Core State Standards</li> <li>34% reported they feel that the work they put into preparing and transitioning will be worthwhile</li> <li>40% saw the implementation of the Standards as a step in the right direction of education reform</li> <li>30% of teachers expressed concern that their students will spend too much time on testing preparation</li> <li>25% felt that the Standards will help them become a more effective teacher</li> </ul>  |
| Choppin,<br>Davis, Drake,<br>and McDuffie<br>(2013) | Random stratified sampling | 366 middle<br>school teachers<br>in 42 states  | Middle school teachers'<br>perceptions of the math<br>Common Core State<br>Standards   | <ul> <li>93% of teachers report being familiar with the Standards</li> <li>84% of teachers believe the math Standards to be more rigorous than their previous State Standards</li> <li>84% of respondents state that the new Standards will encourage students to explore more and become critical thinkers</li> <li>51% of teachers feel prepared to teach the math Standards</li> <li>57% of teachers have curriculum materials aligned to the math Standards</li> </ul>  |

A review of experimental or quasi-experimental published research on teachers' perceptions of the Common Core State Standards

| Study                  | Method                     | Sample                                       | Outcome measured   | Results   |
|------------------------|----------------------------|--|--|---|
| Kreyling (2013)        | Mixed methods              | 93 teachers<br>across Missouri               | Teachers' perceptions of the effectiveness and             | • 15% of teachers reported satisfaction with the training received on the implementation of the Standards   |
|                        |                            |  | implementation of the CCSS                                 | • 31% of teachers felt that they students could successfully adapt to the CCSS  |
|                        |                            |  |  | • Only 19% of teachers felt they had access to appropriate and adequate materials for the implementation of the Standards   |
| Gallup (2014)          | Random sampling            | 854 K-12<br>teachers across                  | Perceptions of the<br>Common Core State                    | • 44% of teachers viewed the CCSS negatively, in terms of how it would affect both them and their students  |
|                        |                            | 50 states                                    | Standards  | • More experienced teachers had a more positive attitude towards the CCSS   |
|                        |                            |  |  | • A majority of teachers (72%) supported the premise of the CCSS, by considered that the implementation was faulty  |
|                        |                            |  |  | • 62% of teachers reported being frustrated by support they had received to implement the Standards   |
|                        |                            |  |  | • Teachers self-reporting as Democrat or Independent had a more favorable attitude than Republican teachers (53% vs. 25%)   |
| Ballou (2014)          | Stratified random sampling | 27,000<br>Tennessee K-12                     | Perceptions of the<br>Common Core State                    | • 56% of teachers are in favor of abandoning the Standards for othe measures of learning  |
|                        |                            | teachers                                     | Standards  | <ul> <li>39% of teachers view the Standards as improving student learnin</li> <li>70% of teachers reported being unhappy with the performance or</li> </ul>       |
|                        |                            |  |  | <ul> <li>CCSS-aligned assessments being tied to their evaluation</li> <li>74% of teachers were dissatisfied with how their district had</li> </ul>                |
|                        |                            |  |  | <ul> <li>implemented and prepared them for the transition to the Standards</li> <li>71% of respondents stated they were stressed and anxious by the</li> </ul>    |
|                        |                            |  | <b>T</b>   | introduction of the Standards   |
| Matlock et al. (2015)  | Stratified random sampling | 1303 teachers<br>across the<br>United States | Teachers' views of the<br>CCSS and their<br>implementation | <ul> <li>Elementary teachers had more positive views on the CCSS</li> <li>Less experienced teachers had a more favorable attitude towards the Stendard</li> </ul> |
|                        |                            | United States                                | mprementation  | <ul> <li>Standards</li> <li>An indifference towards the Standards is associated with thoughts o<br/>leaving the profession early</li> </ul>                       |
| Hall and<br>Hutchinson | Random sampling            | 250 teachers<br>across eight                 | Teachers' perceptions of the implementation of             | • Elementary teachers felt more prepared to teach the Writing Standards   |
| (2015)                 |                            | states                                       | CCSS in Writing  | <ul> <li>Years of experience does not impact teachers' perceptions of their ability to teach the Standards</li> </ul>   |
|                        |                            |  |  | <ul> <li>72% of teachers reported a need for more professional development<br/>and assistance with the Standards</li> </ul>                                       |

| Study                     | Method                      | Sample   | Outcome measured  | Results  |
|---------------------------|-----------------------------|--|---|--|
| Ammerman<br>(2016)        | Convenience<br>sampling     | 442 teachers in a<br>large Kentucky<br>district  | Teachers' perspectives on<br>the implementation of the<br>Standards, with a focus on<br>relationship between<br>teachers and school<br>leadership | <ul> <li>Teachers are not confident in how administrators support their implementation of the Standards</li> <li>Teachers believe they need more structured professional learning communities to support them I implementing the Standards</li> </ul>  |
| Kane et al.<br>(2016)     | Representative<br>sampling  | 1498 teachers in<br>five states<br>(Delaware,<br>Massachusetts,<br>Maryland, New<br>Mexico, and<br>Nevada) | Teachers' perspectives on<br>the implementation of the<br>Standards   | <ul> <li>85% of ELA teachers believe that the Common Core ELA standard encourage students to think more critically and deeply</li> <li>73% of teachers report having successfully embraced the Standards</li> <li>69% of teachers agree that the Standards will have a positive effect on student learning in the long run</li> <li>82% of teachers report having changed their instructional style in a significant way to accommodate the Standards</li> <li>33% of teachers feel prepared to teach the students what they need know to succeed in the CCSS-aligned assessments</li> <li>23% of teachers used technology to prepare their students for the CCSS-aligned assessments</li> </ul> |
| Endacott et al.<br>(2016) | Random stratified<br>sample | 951 teachers<br>across the<br>United States  | Teachers' views on the<br>implementation of the<br>Standards and factors that<br>influence job satisfaction                                       | <ul> <li>There is a high correlation between district/building leadership involvement and a positive implementation of the Standards</li> <li>Teachers with less knowledge of the Standards reported higher perceived level of change in their autonomy and flexibility post-implementation</li> <li>Years of teaching experience is positively correlated with thoughts leaving the teaching profession due to the CCSS (38% of veteran teachers vs. 3% of novice teachers)</li> <li>An open leadership style is positively correlated with willingness o teachers to remain in the profession, even if dissatisfied with the Standards</li> </ul>  |
| Sanchez<br>(2016)         | Mixed methods               | 47 teachers in a<br>California<br>school district  | Teachers' perceptions of<br>the CCSS  | <ul> <li>High school teachers had less concerns about their ability to implement the CCSS compared to junior high teachers</li> <li>Most teachers believe the CCSS to benefit students because of the emphasis on real life math, critical thinking and problem solving</li> <li>Teachers who experienced a slow roll out of the Standards were happier with the implementation</li> <li>Many participants reported a higher level of teacher collaboration a a result of the Standards</li> <li>Study found a high level of dissatisfaction with the quantity and quality of district professional development related to the CCSS</li> </ul>   |

| Study              | Method                  | Sample  | Outcome measured   | Results  |
|--------------------|-------------------------|---|--|--|
| Bakenhus<br>(2017) | Convenience<br>sampling | 82 teachers in a<br>large urban<br>district             | Teacher's perspectives of<br>the ability of the Standards<br>to produce growth in<br>English Language Learners | • 57% teachers have a negative perception of how the Standards can positively impact English Language Learners   |
| Berg (2017)        | Convenience<br>sampling | 150 teachers in a<br>California<br>school district      | Teachers' perceptions of<br>the Standards and how they<br>influenced instruction                               | <ul> <li>57% of teachers were in favor of the CCSS</li> <li>73% reported the Standards influenced their instruction at least to some extent</li> <li>A majority of teachers did not feel that professional development is adequately preparing them to use the Standards</li> </ul>  |
| Mest (2018)        | Random sampling         | 179 teachers in<br>grades 7-9<br>across<br>Pennsylvania | Mathematics teachers'<br>perceptions of the CCSS   | <ul> <li>60% of respondents felt that professional development had prepared them for the CCSS</li> <li>29% of teachers reported that the Standards are helping their Students be college and career ready</li> <li>80% of respondents mentioned the Standards significantly changed the way they teach content</li> <li>27% of teachers believe the Standards promote higher order thinking</li> </ul> |

# Appendix B.

| A review of qualitative | published research of | on teachers' | perceptions of | f the Common | Core State Standards  |
|-------------------------|-----------------------|--------------|----------------|--------------|-----------------------|
| 11 review of quantative |                       |              |                |              | core brare branaan ab |

| Study                     | Sample   | Outcome measured  | Results  |
|---------------------------|--|---|--|
| WestEd Report<br>(2012)   | Unspecified number of<br>teachers across three<br>urban centers in<br>California | Teachers' preparedness for the implementation of the CCSS                   | <ul> <li>Non-ELA and non-math teachers expressed concern that a focus on literacy across the curriculum will take time away from their own content standards</li> <li>Mathematics teachers expressed the need for more training on the CCSS</li> <li>Novice teachers were more likely to report the need for extra guidance on the CCSS</li> </ul>   |
| Fisher and Frey<br>(2014) | 45 teachers<br>327 students<br>From various states                               | Teacher and student perception of<br>ELA Common Core Standards              | <ul> <li>72% of students and 86% of teachers described the focus on close reading as exhausting, but they understand the benefit</li> <li>82% of teachers struggled to find appropriate texts for many of the ELA Standards</li> <li>55% of teachers were concerned about special needs and ESL students in their classrooms post implementation</li> <li>98% of the students reported enjoying informational texts more now than before the implementation of the Standards, largely because of the new emphasis on close reading</li> </ul>                      |
| Hipsher (2014)            | 14 teachers in a large<br>non-specified school<br>district                       | The impact of the CCSS on<br>teachers' need for professional<br>development | <ul> <li>All teachers expressed that they believe the CCSS will be beneficial to their students but expressed frustration with the way they were being implemented</li> <li>Most teachers felt there is a disconnect between the Standards, the expectations of local authorities and the realities of the classroom</li> <li>Most teachers stated they are expected to implement the Standards too quickly and are not given enough time to fully prepare</li> <li>Too much demand for data is associated with teacher frustration and dissatisfaction</li> </ul> |
| Maddrey (2014)            | 15 teachers in a<br>Maryland school<br>district                                  | Elementary teachers' perceptions<br>of the Mathematics CCSS                 | <ul> <li>Participants referred to increased collaboration among colleagues, but also mentioned inadequate professional development and the need for more leadership support</li> <li>Less than half of the respondents felt that the training received was high quality</li> </ul>   |

| Study                       | Sample   | Outcome measured  | Results  |
|-----------------------------|--|---|--|
| Bizon (2015)                | 11 teachers in a school<br>district in the<br>Northwest                      | Teachers' perceptions of the ELA<br>Standards and how they have<br>impacted classroom instruction | <ul> <li>Teachers were mostly dissatisfied with the quality of professional development on the Standards</li> <li>Most felt that the Standards were developmentally inappropriate and asked too much of older students</li> <li>Teachers believed that, while the Standards are clear and explicit, their number is too excessive</li> </ul>   |
| Murphy and<br>Haller (2015) | 13 teachers in an urban<br>school district in the<br>Northeast United States | English teachers' perceptions of<br>the CCSS for ELL and SPED<br>students                         | <ul> <li>Most teachers agreed that the Standards encourage critical and higher order thinking</li> <li>A majority of participants felt they were given very little guidance on how to implement the Standards and align them with the content</li> <li>Most teachers conveyed a need for more training and support from their school</li> <li>Teachers with positive leadership support were more likely to enjoy the Standards and see their benefit</li> <li>Many participants expressed concerns that the Standards are more difficult to implement in SPED and ELL classrooms than with onlevel students because of the heavy focus on literacy and informational reading</li> </ul> |
| Robinson (2016)             | 8 teachers in one<br>Alabama school district                                 | Teachers' perceptions in their<br>confidence to implement the<br>CCSS                             | <ul> <li>Most participants did not feel confident about teaching the Standards as a result of low quality professional development</li> <li>A frequent theme in the responses is confusing about what the Standards expect teachers to do</li> <li>Responses mention frustration with a quick roll out of the Standards</li> <li>Most respondents felt that the Standards could help student growth if teachers are given sufficient preparation and support</li> </ul>  |
| Brown (2016)                | 29 teachers in an urban<br>district in Georgia                               | Teachers' perceptions of how the<br>CCSS have influenced their<br>teaching                        | <ul> <li>Most teachers reported that professional development helped them<br/>understand the Standards, but expressed dissatisfaction with their<br/>wordiness and lack of clarity</li> <li>Teachers were more concerned about math standards and their focus<br/>on word-problems which are difficult for many struggling learners</li> </ul>   |

| Study           | Sample  | Outcome measured  | Results   |
|-----------------|---|---|---|
| Hirsch (2016)   | 14 teachers in three<br>California school<br>districts                                      | Teachers' perceptions of the<br>CCSS                                      | <ul> <li>The majority of teachers had mixed feelings about the introduction of the CCSS</li> <li>Many felt that the transition was rushed, chaotic and done without adequate teacher preparation</li> <li>There is an overall frustration with the lack of resources provided</li> <li>Elementary teachers were less happy than their high school counterparts with the quality and quantity of professional development offered</li> <li>Teachers saw the CCSS as problematic for struggling learners who lack basic competencies, but were happy with the focus on critical thinking and reasoning</li> <li>Most teachers suggested a modification of the Standards to allow for more instruction in foundational skills</li> </ul>   |
| Machamer (2018) | 11 teachers in four<br>schools across separate<br>school districts (state<br>not specified) | Kindergarten teachers'<br>perceptions of CCSS and their<br>implementation | <ul> <li>Responses frequently mention administrative pressure to increase academic content and the high content load of the CCSS</li> <li>Most see the Standards as a way for students to be challenged in their critical thinking</li> </ul>   |
| Shabazz (2019)  | 8 teachers in California<br>school districts  | Teachers' perceptions of the<br>CCSS impact on SPED students              | <ul> <li>Respondents did not feel that the Standards are beneficial for SPED students because of the emphasis on close reading and abstract thinking</li> <li>Many teachers reported that some of the mathematics standards that require extrapolation, higher order thinking skills and generalization are very difficult to implement in a SPED context</li> <li>Participants expressed frustration with the Standards being a one-size-fits-all approach that assesses SPED students on the same skills that on-level students are expected to have</li> <li>Many believe there is a disconnect between SPED students' actual needs (vocational skills) and the advanced mathematical concepts presented in the Standards</li> </ul> |

# Appendix C.

| District Name     | # Teacher Surveys<br>Sent | # Teacher Surveys<br>Opened | # Teacher Surveys<br>Completed | % Response Rate fo<br>District |
|-------------------|---------------------------|-----------------------------|--------------------------------|--------------------------------|
| Armorel           | 14                        | 6                           | 6                              | 42.8                           |
| Bay               | 15                        | 3                           | 3                              | 20                             |
| Cabot             | 157                       | 59                          | 49                             | 31.2                           |
| Cedar Ridge       | 20                        | 7                           | 7                              | 35                             |
| Clarksville       | 43                        | 10                          | 8                              | 18.6                           |
| Cleveland         | 23                        | 4                           | 4                              | 17.3                           |
| Crossett          | 48                        | 8                           | 7                              | 14.5                           |
| Decatur           | 12                        | 3                           | 3                              | 25                             |
| Dollarway         | 36                        | 6                           | 6                              | 16.6                           |
| Dumas             | 25                        | 13                          | 10                             | 40                             |
| Emerson-Taylor    | 34                        | 8                           | 7                              | 20.5                           |
| Flippin           | 22                        | 13                          | 12                             | 54.5                           |
| Fort Smith        | 226                       | 105                         | 92                             | 40.7                           |
| Glen Rose         | 19                        | 8                           | 7                              | 36.8                           |
| Gurdon            | 18                        | 8                           | 5                              | 27.7                           |
| Guy Perkins       | 16                        | 11                          | 11                             | 68.7                           |
| Hartford          | 8                         | 3                           | 3                              | 37.5                           |
| Hillcrest         | 10                        | 8                           | 6                              | 60                             |
| Hughes            | 29                        | 4                           | 3                              | 10.3                           |
| Izard             | 22                        | 1                           | 1                              | 4.5                            |
| Jasper            | 25                        | 4                           | 4                              | 16                             |
| KIPP Delta        | 69                        | 20                          | 16                             | 23.1                           |
| Lakeside (Chicot) | 24                        | 10                          | 9                              | 37.5                           |
| Lakeside-Garland  | 70                        | 17                          | 16                             | 22.8                           |
| Lavaca            | 18                        | 7                           | 5                              | 27.7                           |
| Lawrence          | 24                        | 11                          | 11                             | 45.8                           |
| Lincoln           | 20                        | 9                           | 8                              | 40                             |

Breakdown of survey responses by district

|--|

| District Name            | # Teacher Surveys<br>Sent | # Teacher Surveys<br>Opened | # Teacher Surveys<br>Completed | % Response Rate for<br>District |
|--------------------------|---------------------------|-----------------------------|--------------------------------|---------------------------------|
| Marmaduke                | 59                        | 25                          | 19                             | 32.2                            |
| Monticello               | 51                        | 19                          | 16                             | 31.3                            |
| Mount Ida                | 8                         | 0                           | 0                              | 0                               |
| Nemo Vista               | 14                        | 8                           | 7                              | 50                              |
| North Little Rock        | 153                       | 43                          | 37                             | 24.1                            |
| NWA Classical Academy    | 11                        | 5                           | 4                              | 36.3                            |
| Ouachita                 | 15                        | 4                           | 3                              | 20                              |
| Ouachita River           | 18                        | 11                          | 9                              | 50                              |
| Ozark Mountain           | 19                        | 9                           | 9                              | 47.3                            |
| Pangburn                 | 15                        | 8                           | 7                              | 46.6                            |
| Pea Ridge                | 24                        | 8                           | 7                              | 29.1                            |
| Prairie Grove            | 41                        | 28                          | 26                             | 63.4                            |
| Salem                    | 29                        | 12                          | 9                              | 31                              |
| Scranton                 | 11                        | 5                           | 2                              | 18.1                            |
| Searcy                   | 60                        | 29                          | 21                             | 35                              |
| Sheridan                 | 50                        | 28                          | 24                             | 48                              |
| Siloam Springs           | 58                        | 33                          | 31                             | 53.4                            |
| Sloan-Hendrix            | 10                        | 6                           | 6                              | 60                              |
| Smackover                | 14                        | 7                           | 5                              | 35.7                            |
| South Mississippi        | 60                        | 20                          | 17                             | 28.3                            |
| South Side               | 39                        | 10                          | 8                              | 20.5                            |
| Star City                | 38                        | 13                          | 13                             | 34.2                            |
| Fexarkana                | 80                        | 27                          | 21                             | 26.2                            |
| Valley Springs           | 20                        | 5                           | 5                              | 25                              |
| Valley View              | 37                        | 23                          | 18                             | 48.6                            |
| Waldron                  | 25                        | 14                          | 13                             | 52                              |
| Warren                   | 37                        | 15                          | 12                             | 32.4                            |
| West Side (Greers Ferry) | 35                        | 15                          | 9                              | 25.7                            |
| Westside (Johnson)       | 78                        | 26                          | 21                             | 26.9                            |
| Wonderview               | 8                         | 3                           | 2                              | 25                              |

**Note:** Some districts do not appear at all in the table, because of lack of contact information for teachers in those districts. These are: Camden-Fairview, Helena/W. Helena and Magnet Cove

## Appendix D.

### Survey Instrument

Note: Since the survey is administered in an electronic format, survey items marked with an asterisk (\*) are only displayed to participants that answer "yes" to the preceding question, or – in the case of survey items #9 and #10, if the participants marked ELA or Math on item 2.

1. Please select the grade band that includes the grade in which you teach: O grades 3-5O grades 6-8O grade 9 O other grades 2. Which content areas(s) do you teach? Check all that apply. ELA and math ELA Math Other 3. Have you read the Common Core Standards for your grade level and content area? O Yes O No 4. I believe that the Common Core Standards will lead to improved student learning for the majority of students I teach. O Strongly agree O Agree O Disagree O Strongly disagree 5. The Common Core Standards will help students be better prepared for college. O Strongly agree O Agree O Disagree O Strongly disagree 6. The Common Core Standards will help students be better prepared to compete in the workforce. O Strongly agree O Agree **O** Disagree O Strongly disagree 7. The previous Arkansas state standards were better than the Common Core Standards. O Strongly agree O Agree O Disagree O Strongly disagree 8. The Common Core Standards encourage students to think more critically compared to the previous standards. O Strongly agree O Agree O Disagree O Strongly disagree

9. The Common Core Standards have decreased the amount of time students spend on literature.

O Strongly agree O Agree O Disagree O Strongly disagree

10. The Common Core Standards have decreased students' understanding of key math concepts. O Strongly disagree O Strongly agree O Agree O Disagree 11. The Common Core Standards limit my flexibility to teach what my students need. O Strongly agree O Agree O Disagree O Strongly disagree 12. The Common Core Standards were implemented well at my school. O Strongly agree O Agree O Disagree O Strongly disagree 13. How prepared do you feel to teach your subject according to the Common Core Standards? O I feel completely prepared O I feel somewhat prepared O I do not feel prepared at all 14. Have you participated in professional development related to the CCS? O Yes O No 14\*. Has the Common Core Standards professional development you received helped you in implementing the Standards? O Yes O No 15. Aside from professional development, did you receive any other support to implement the Common Core Standards in your classroom?

O Yes O No

16. How has collaboration between teachers changed because of the Common Core Standards?

O Collaboration has increased O There has been no change in the amount of collaboration O Collaboration has decreased

16\*. Do you think increased collaboration is beneficial to students?

O Yes O No

17. Overall, the Common Core Standards are \_\_\_\_\_\_ than the previous standards in preparing students

O more helpful O less helpful

18. The Common Core Standards are \_\_\_\_\_ than the previous standards.

O more rigorous O less rigorous

| 19. The Common Core Standards are | _ in describing what needs to be taught in my subject |
|-----------------------------------|---|
| area.                             |   |

O more clear Oless clear

20. Are there any student populations that you are concerned will not benefit from the Common Core Standards?

O Yes O No

20\*. Which of these groups are you concerned about? Check all that apply.

| <ul> <li>Students who are working below grade-level</li> <li>Special education students</li> <li>English language learners</li> <li>Students who are working on grade level</li> <li>Students who are gifted or working above grade level</li> </ul> |                     |                     |                     |  |  |  |
|--|---------------------|---------------------|---------------------|--|--|--|
| 21. Overall I am   | with the Com        | non Core Standards. |                     |  |  |  |
| O very satisfied   | O somewhat satisfie | ed O dissatisfied   | O very dissatisfied |  |  |  |
| 22. If I had the choice, I would   |                     |                     |                     |  |  |  |
| <ul> <li>O eliminate the Common Core Standards from the school curriculum</li> <li>O keep the Common Core Standards in the school curriculum</li> </ul>  |                     |                     |                     |  |  |  |
| 23. The work I've done to implement the Common Core Standards has made me a better teacher.  |                     |                     |                     |  |  |  |
| O Strongly agree   | O Agree             | O Disagree          | O Strongly disagree |  |  |  |
| 24. Implementing the Common Core Standards in the classroom has made teaching more stressful than earlier years.   |                     |                     |                     |  |  |  |
| O Strongly agree   | O Agree             | O Disagree          | O Strongly disagree |  |  |  |
| 25. I like teaching more now than before the Common Core Standards were introduced.  |                     |                     |                     |  |  |  |
| O Strongly agree   | O Agree             | O Disagree          | O Strongly disagree |  |  |  |

| 26. Overall, my students will be  |            | after the introduction | of the CCS than before. |  |  |  |
|---|------------|------------------------|-------------------------|--|--|--|
| O better off  | O the same | O worse off            |                         |  |  |  |
| 27. Under the Common Core Standards, I feel that I have more freedom to develop my own curriculum than before.  |            |                        |                         |  |  |  |
| O Strongly agree  | O Agree    | O Disagree             | O Strongly disagree     |  |  |  |
| 28. I don't like the testing involved in implementing the Common Core Standards.  |            |                        |                         |  |  |  |
| O Strongly agree  | O Agree    | O Disagree             | O Strongly disagree     |  |  |  |
| 29. If I were in charge of student assessment, I would  |            |                        |                         |  |  |  |
| <ul> <li>O Not administer standardized assessments to students</li> <li>O Return to Arkansas Benchmark and End of Course exams</li> <li>O Continue PARCC testing</li> <li>O Develop a new state assessment for students</li> <li>O Purchase another assessment (like ITBS, NWEA, or ACT)</li> </ul> |            |                        |                         |  |  |  |
| 30. On average, how many students do you have in each of your classes?  |            |                        |                         |  |  |  |
| O 20-22 O 23-25 O more than 25  |            |                        |                         |  |  |  |
| 31. How many years of full-time teaching experience do you have? Select one answer from the choices below:  |            |                        |                         |  |  |  |
| O 1year or less O 2   | - 4 years  | O 5 - 10 years         | O more than 10 years    |  |  |  |
| 32. Which best describes the way you have obtained your teaching license?   |            |                        |                         |  |  |  |
| O as part of a traditional teacher education program (B.A. in Childhood Education or M.A.T.)<br>O as part of an alternative teacher certification program (APPEL, NTL, TFA or similar)  |            |                        |                         |  |  |  |
| 33. Please select your gender:  |            |                        |                         |  |  |  |
| O Female O Male   |            |                        |                         |  |  |  |
| 34. Are you a member of a teachers' union?  |            |                        |                         |  |  |  |
| O Yes O No  |            |                        |                         |  |  |  |
| 35. Do you consider yourself:   |            |                        |                         |  |  |  |
| O Republican  | O Democrat | Oneither               |                         |  |  |  |

## Appendix E.

Survey Participant Invitation

I am pleased to invite you to participate in a short, anonymous online survey about teachers' perceptions of the Common Core Standards. This survey was developed by a team of students and staff at the University of Arkansas interested in understanding what teachers think about the Common Core. The survey is completely anonymous, so the answers will never be connected to you in any way.

Filling it out will take no more than 10 minutes and – if you complete the survey by March 15th – you can enter into a drawing for one of two \$100 Walmart gift cards. Your thoughts on the Common Core are valuable in the discussion about K-12 education in Arkansas! Please note: This survey is not sponsored by or associated in any way with any other institutions or organizations, political or otherwise. The students and staff involved are part of a research center in the College of Education and Health Professions at the University of Arkansas and feel it is important to gather information about what Arkansas teachers actually think about the Common Core Standards. Responses will never be connected to individual teachers or schools. If you have any questions about the survey or your participation in it, please feel free to contact me, Alexandra Vasile at avasile@email.uark.edu or Dr. Sarah McKenzie at scmcken@uark.edu.

Follow this link to the survey: Or copy and paste the URL below into your internet browser:

Thank you!

Alexandra Vasile College of Education and Health Professions University of Arkansas

### Appendix F.

**IRB** Approval



Office of Research Compliance Institutional Review Board

February 25, 2015

| MEMORANDUM               |   |  |
|--------------------------|---|--|
| то:                      | Alexandra Vasile<br>Gary Ritter<br>Sarah Clark McKenzle<br>Robert Maranto |  |
| FROM:                    | Ro Windwalker<br>IRB Coordinator  |  |
| RE:                      | New Protocol Approval   |  |
| IRB Protocol #:          | 15-02-482   |  |
| Protocol Title:          | Arkansas Teachers' Perceptions of the Common Core Standards               |  |
| Review Type:             | EXEMPT EXPEDITED FULL IRB   |  |
| Approved Project Period: | Start Date: 02/25/2015 Expiration Date: 02/24/2016                        |  |
|                          |   |  |

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (https://vpred.uark.edu/units/rscp/index.php). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

This protocol has been approved for 4,200 participants. If you wish to make any modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 109 MLKG Building, 5-2208, or irb@uark.edu.