AN INFORMED ELECTORATE: THE RELATIONSHIP BETWEEN THE STANDARDIZATION OF PUBLIC EDUCATION AND VOTER PARTICIPATION

by

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DISSERTATION ABSTRACT

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Title: An Informed Electorate: The Relationship Between the Standardization of Public Education and Voter Participation

This exploratory investigation examined the relationship between states' educational standardization and voter turnout, using cultural and critical theory lenses. The study documented the problem of low voter participation and current education standardization policies.

The study used a complementarity mixed-methods design with sequential quantitative and qualitative components. The quantitative component developed a tool for measuring states' levels of educational standardization, the Standardized Education Index (SEI). Data for voter age population (VAP) and voter eligible population (VEP) in state presidential elections between 2000 and 2012 were used as measures of voter turnout. A weak correlation was found between the SEI and voter turnout for VEP in 2000 and VAP in 2000, 2004, and 2008, with between 6% and 14% of variability explained. While no evidence of a positive relationship between higher levels of SEI and higher voter turnout was found, no counter argument could be established either.

The qualitative component utilized case studies of exemplars of states with high SEI/low voter turnout and high SEI/low voter turnout, which were Arkansas and New Hampshire, respectively. Investigated elements were educational Administrative Rules,

voting regulations, and cultural/geographic and demographic attributes. Data were compiled and compared. A binary sort, a *Dichotomous Sort of Accountability Concepts*, framed the critical analysis of educational standards data. Arkansas was found to be a location of standardized education and restrictive voting regulations. New Hampshire was a location of more differentiated education supporting civic engagement with easier access to voting.

This study's results are a baseline for further investigation of the relationship of educational standardization to voter participation. If standards based reform has a positive effect on voter participation, then future correlation analysis will produce a moderate to strong positive relationship. If the relationship remains negative, then it will provide evidence that standards reform does not engender an informed electorate.

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Dedicated to my mother, Dr. Claudia Patricia Pineo

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CHAPTER I

THE PROBLEM

Making claims about the goals of public education is "complicated and multifaceted, reflecting a range of beliefs" (Farenga & Ness, 2005, p. 49). Eisner (1978) advised us that defining what quality education is depends upon one's conception of schooling. Eisner described "five major views about the mission or purposes of schooling" (p. 21): (a) development of a student's thinking or cognitive process; (b) "initiation into the intellectual disciplines" (p. 21); (c) helping students discover their own interests; (d) adapting students to earn a living; and (e) preparing children to become active in solving inequities in society. Farenga and Ness (2005) described Eisner's work as the five basic orientations towards the goals of curriculum. Moreover, they combined Eisner's fourth and fifth views into one and added a new fifth element, curriculum as technology, which "stresses accountability - often in relation to student standardized testing" (p. 49). Table 1 presents a summary of the concepts.

Table 1

Six Purposes of Education (Eisner, 1978; Farenga & Ness, 2005)

Purpose	Description
Development of cognitive processes	Development of students' cognitive processes
Academic rationalism	Fosters intellectual growth of students
Personal relevance	Allows students to pursue individual learning interests
Social adaptation	Preservation of the status quo in preparing students for employment
Social reconstruction	Students are encouraged to question and challenge the values and structures of society
Curriculum as technology	Stressing accountability and promoting student learning of specific testable objectives

Eisner (1978) elaborated on his fifth a goal for education, social reconstruction, as a goal of public education that was "not to create adaptive or pliant citizens [but rather] . . . to help children become aware of the inequities so they will eventually do something about altering them" (p. 21). He pointed out that at the time of his writing, half of all those eligible did not vote in presidential elections and that participation in school board elections was much lower (16%). He identified a mission to "prepare people who can create a better social order" (p. 21).

Public Education Should Have a Positive Influence on Participation in a Democracy

"An education that creates a disposition to active citizenship is a necessary condition of free societies" (Crick, 1999, p. 337). Drawing on the ideas of Locke (1766, 1769), Rousseau (1773) and Mill (1861), Nie, Junn and Stehlik-Barry (1996) found that "a common theme throughout western Enlightenment political philosophy is the importance of education in developing the cognitive and moral qualities necessary for citizenship in a democratic polity" (p. 12). They pointed out that

> the continued importance of education to citizenship is illustrated by the extent to which government directs public education in the United States; . . . there is common agreement that education provides both the skills necessary to become politically engaged and the knowledge to understand and accept democratic principles. (p. 12)

King (1947) suggested that "the function of education is to teach one to think intensively and to think critically. Intelligence plus character – that is the goal of true education" (para. 5). The famous civil rights advocate warned that "education which stops with efficiency may prove the greatest menace to society" (para. 3). As reported in

W. E. B. Du Bois Speaks: Speeches and Addresses (1970), in 1906 Du Bois delivered the *Niagara Address* in which he called for real education for Blacks, by which he meant "the development of power and ideal, . . . a right to know, to think, to aspire" (p. 172) which he contrasted with schools whose purpose is "to educate black boys and girls simply as servants and underlings, or simply for the use of other people" (p. 172).

Public education could and should play a pivotal role in producing an informed electorate. In 1787, Jefferson wrote to Madison that "above all things I hope the education of the common people will be attended to, convinced that on their good sense we may rely with the most security for the preservation of a due degree of liberty" (2012, para. 12). Continuing to advocate for public education to prepare citizens for participation in democracy, in 1820 Jefferson wrote:

> I know of no safe depository of the ultimate powers of the society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion by education. (para. 2)

Jefferson, Du Bois, King, and Eisner articulated a mission for public education that it should empower citizens.

Voting Is an Indicator of Participation in a Democracy

The prime indicator of empowerment of citizens is voter participation. The literal definition of democracy is "rule by the people" (Dahl, 2012, para. 1). Voting, the "machinery of democracy" (Bird, Campbell, & Briggs, 2012, para. 1), is the most obvious and most important indicator of participation in a democracy (Baek, 2009; Dahl, 1971; Lijphart & Aitkin, 1994; G. Parry & Moyser, 2001). In order for a democratic

process to be viewed as legitimate, citizens must have the opportunity to determine their preferences, to communicate these preferences effectively, both as individuals and collectively, and to be able to express these preferences without discrimination (Dahl, 1971). Furthermore, Dahl stated that these opportunities depend on several required institutional guarantees, including: the "right to vote, . . . alternative sources of information, . . . [and] free and fair elections" (p. 3). Lack of voter participation reduces the perceived legitimacy of those who are elected to govern (Ross, 2012). In other words, voter participation is the hallmark of a democracy.

Problems with Voter Turnout in the United States

Unfortunately, there have been problems with voter turnout in the U.S. These issues included lower voter participation in the U.S. as compared to other countries, a reported decline in voter participation, fluctuation in voter turnout, difference in voter turnout for various groups, and varying challenges found in voting procedures.

Voter participation was lower in the U.S. compared to other countries (International IDEA, 2012; Powell, 1986). Causes for high voter turnout included institutional rules such as mandatory voting (International Institute for Democracy and Electoral Assistance, 2012).

Much has been reported about a decline in voter turnout in the U.S starting in 1960 (Blais & Rubenson, 2012; Kahne & Westheimer, 2003; Pearson Education, 2012; Reuters, 2011; Ross, 2012; U.S. Census Bureau, 1991). One researcher argued that these concerns were over-stated and that a more careful analysis of the data would take into account residents who were not entitled to vote (M. McDonald, 2012c).

U.S. voting rates fluctuated widely from one election to the next (Reuters, 2011; U.S. Census Bureau, 1991). There were clear differences of level of participation based on the type of election being held. Voter turnout was lowest in primary elections, and lower in off-year elections as compared to general elections (The Center for Voting and Democracy, 2013; U.S. Census Bureau, 2010a). Voter participation rates in the U.S. varied greatly across demographic attributes of educational level and age (Baum, Ma, & Payea, 2010) and from state to state (U.S. Census Bureau, 2012b, 2012c)

To summarize, there has been a long-standing problem with voter turnout in the U.S. The electoral process has been distorted by a variety in voter registration laws some of which create obstacles to voting. Impediments to voting were not distributed equally. Distribution of laws that create blocks to voting affected persons of color disproportionately and were concentrated in states with the greatest amount of minority population growth (Haygood, 2012).

Voter participation was lower in the U.S. as compared to other countries. Some found evidence that voter turnout has declined, fluctuated, and varied by age and education level. In particular, there was a wide range of levels of voter participation across the states. As voter turnout continued to be a problem in the U.S., education was changing as a result of the standards based reformed movement. One well documented change in public education was a narrowing of the curriculum in K-12 public education.

Narrowing of the Curriculum

The increase in standardization of education can be traced back to the early part of the 20th century during the progressive movement. During that time, standardized tests were widely adopted for use in sorting students into two kinds of high schools, those

which prepared students for college and those which prepared students for work. Another turning point in the standardization movement was the publication of *Why Johnny Can't Read* (Flesch, 1955) and the launch of Sputnik in 1957 (Garber, 2007), which built on Cold War anxieties to foster the claim that U.S. education was falling behind in the race for world domination. One highly influential report, *A Nation at Risk* (National Commission on Excellence in Education, 1983), offered claims that the U.S. was falling behind our competitors for global supremacy because of the failure of our education system. The pressure to improve education forced waves of reform based on higher standards and greater accountability of educators to produce outcomes which were increasingly defined as student scores on large-scale high risk-tests. The reauthorization of Elementary and Secondary Education Act in 2001as the *No Child Left Behind of 2001* (NCLB) ("No Child Left Behind Act of 2001," 2002) codified increased testing, accountability, and standardization mandates such as "ensuring that all groups of students reach proficiency within 12 years" (U.S. DOE, 2001, para. 5).

As a result of standards based reform of education, instructional time has become more focused on teaching standards to prepare students for mandated tests. As a result, there has been a documented narrowing of the curriculum to focus on science, technology, engineering and math (STEM) or even more narrowly on just reading and math (Dillion, 2006; Gunzenhauser, 2003; K. V. King & Zucker, 2005, p. 5; Mathis, 2003; Pedulla et al., 2003; Robelen, 2011; Vogler, 2003; von Zastrow & Janc, 2004). This narrowing of the curriculum has been at the cost of class room time devoted to civics and social studies content.

Reduction of Civics and Social Studies Instruction

Standards based reform focuses on science, technology, engineering, and math (STEM) or more specifically, the Common Core Standards which address reading and math; "we continue to focus on reading and math while ignoring the other studies that are essential elements of a good education" (Ravitch, 2010, p. 226). "Federal expenditures by the Department of Education on civic education totaled less than half of one percent of the overall department budget (Kahne & Westheimer, 2003, p. 35) and in a time of ever increasing mandated tests of Common Core content for public school students, "social studies and civic education, the areas of the curriculum most tied to the democratic mission of schools, share no such requirements" (p. 35). The content areas of social studies, which encompasses civics, U.S. history, and other knowledge that would be fundamental to engendering voting behavior, are not key parts of standards based movement reform and time committed to instruction in these content areas has declined (Duncan, 2011). Eisner was pointed in addressing that which is not taught in public schools:

> Schools have consequences not only by virtue of what they do teach, but also by virtue of what the neglect to teach. . . . We can identify the null curriculum — the options students are not afforded, the perspectives they may never know about, much less be able to use, the concepts and skills that are not part of their intellectual repertoire. (Eisner, 1979, pp. 103, 106-107).

Convergence

If educational standardization improved the quality of education in the direction of empowering students to become active citizens, one result would be greater voter participation. However, as school reform efforts pressured states to standardize education, voter turnout continued to decrease, or at least to fluctuate, while variability of voter turnout was evident across several measures such as in comparisons between and among states. Figure 1 represents a theory of the relationship between standardization of K-12 public education and voter turnout; as standardization increases, voter participation declines. The dashed lined represents increased educational standardization while the solid line presents the decline in voter turnout (Pearson Education, 2012), hypothesizing a negative correlation.

Is it possible that standardization actually goes hand in hand with lower voter turnout? On the other hand, a positive correlation would indicate that educational standardization was related to increased voter turnout and would provide support for recent implementation of policies that support the standards based reform movement. The policy theory that drives this work is that K-12 public education could and should produce an informed electorate (voters).

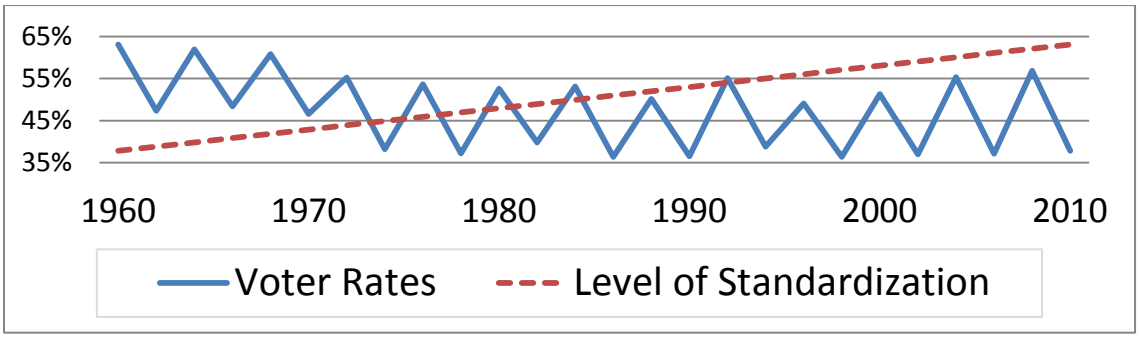


Figure 1. Hypothetical Relationship of Educational Standardization and Voter Participation

If there is a correlation between standardization of education and voter turnout, what might cause this phenomenon? Because evidence reveals a wide range of voter participation levels among the states, something must drive that variation. This exploratory research was intended help inform a framing of the issue of the goals of a public education, investigating both the presence and direction of the relationship between educational standardization and voter turnout and then probing for elements that might have influenced covariance of the variables.

CHAPTER II

LITERATURE REVIEW

A synthesis of the literature relevant to this dissertation is presented in two parts. The first section describes the larger context of voter turnout and the myriad of researched potential causes of voter participation and then narrows the focus to discuss reports of research linking education to voting behavior. The second section reviews the history, trajectory, and forces supporting the standardization of K-12 education in the U.S., some background on education for civic knowledge, and describes the contrast between standardized and differentiated education.

Voter Participation

Voting is a fundamental indicator of participation in a democracy (Dahl, 1971, 2012; Enclopaedia Britannica, 2012; M. Johnson, 2001; Pillsbury & Johnannesen, 2010); voting is the "machinery of democracy" (Bird et al., 2012, para. 1). In other words, voter participation is the hallmark of a democracy.

One example of the consequences of low voter turnout was reported by Halcoussis, Ng, and Virts (2009), who found evidence of the negative effects of variation in rates of voter participation on educational opportunity for disadvantaged students who already faced the challenge of being a minority race. Levels of voter turnout in county elections had a direct effect on differential school funding for racially segregated schools with white students benefiting as compared to black students. The next section will describe concerns about voter participation in the U.S.

Problems with Voter Turnout in the United States

Voter participation in the U.S. compared to turnout in other countries. In the 1980s, concerns were voiced that voting rates were lower in the U.S than in other countries (Powell, 1986). Since that time, voter turnout in other countries has remained higher than in it was the U.S (International IDEA, 2012). Figure 2 provides a graphical representation of voter turnout for some countries from 1991 to 2000. Voter turnout in the U.S. is higher for presidential elections than mid-term elections. When graphed, these peaks and valleys create a picket fence effect, clearly shown in Figure 1. In general, the national elections depicted in Figure 2 are for each country's national general election which may include, as in the U.S., high interest and low interest national contests. The graph reveals that U.S. is not one of the countries with high voter turnout. Causes for high voter turnout include institutional rules such as mandatory voting (International Institute for Democracy and Electoral Assistance, 2012).

A decline in voter participation in the U.S. Much has been reported about a decline in voter turnout in the U.S that started in 1960. One researcher argued that these concerns are over-stated and that a more careful analysis of the data would take into account residents who are not entitled to vote.

Evidence for a decline in voter participation. The U.S. Census Bureau called attention to the issue of low voter participation in its report *The Decline in American Voter Turnout* (1991). Voter participation has been declining in the U.S. since 1960 (Blais & Rubenson, 2012; Kahne & Westheimer, 2003; Pearson Education, 2012; Reuters, 2011; Ross, 2012), from 63% to 57% in presidential election years, and from 47% to 38% in off-year elections (Pearson Education, 2012). In 2003 Kahne and

Westheimer found that “twenty-five percent fewer citizens go to the polls today than in 1960, and the largest declines are among young people. Political participation, such as working for a political party, is at a 40-year low” (p. 35). Voter turnout in the U.S. and “across a wide range of advanced democracies” (Blais & Rubenson, 2012, p. 95), has consistently declined since the 1980s as “the result of young people abstaining” (p. 95). Other research has shown that the decline in voter participation in the U.S. is coupled with the phenomena that older people vote more than younger people (Ross, 2012).

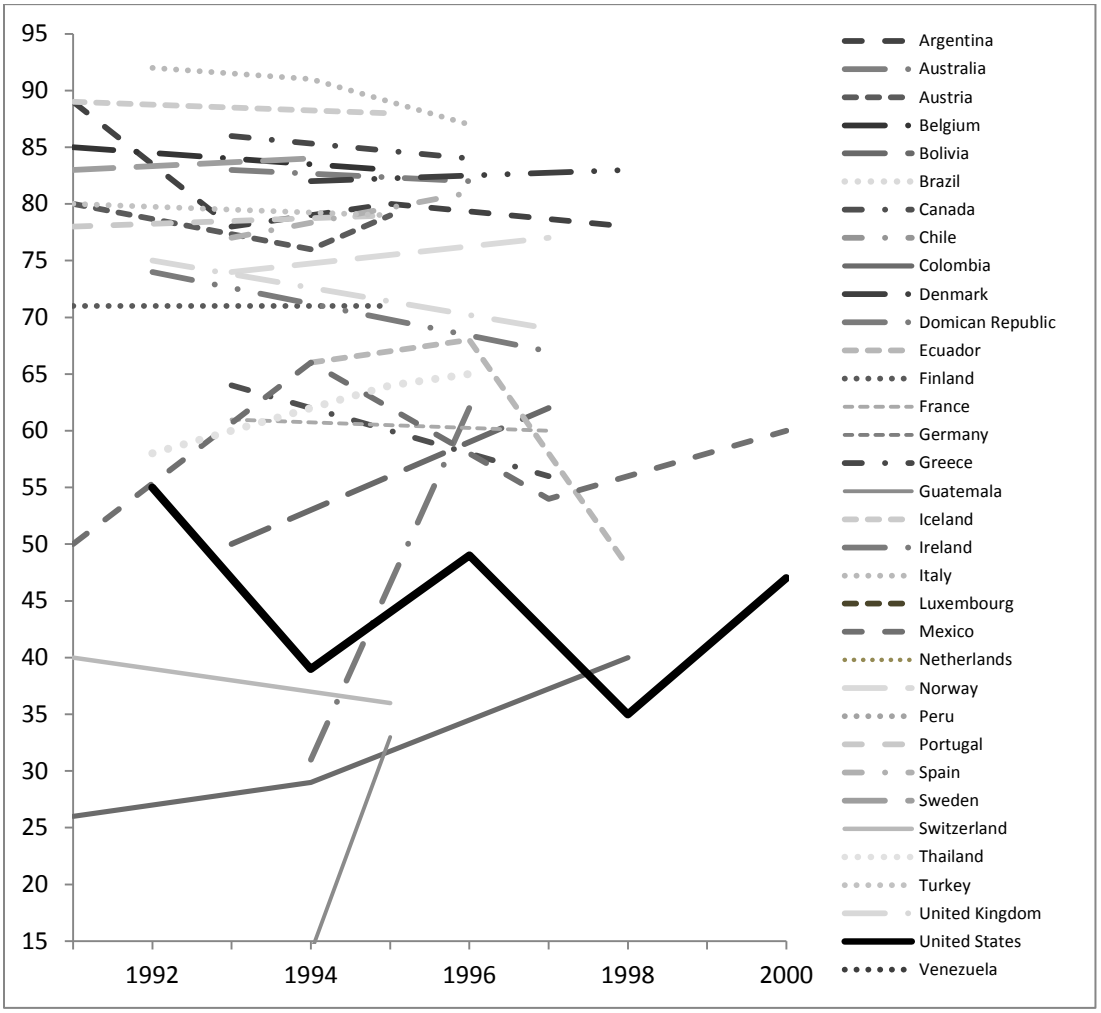


Figure 2. Comparison of Voter Turnout 1992-2000 (International IDEA, 2012)

Figure 3 shows an overall trend of declining voter participation from 1952 to 2008 with identification of the contests associated with the elections that had the strongest turn-outs – Kennedy/Nixon in 1960, Clinton/Bush in 1992, and Obama/McCain in 2008.

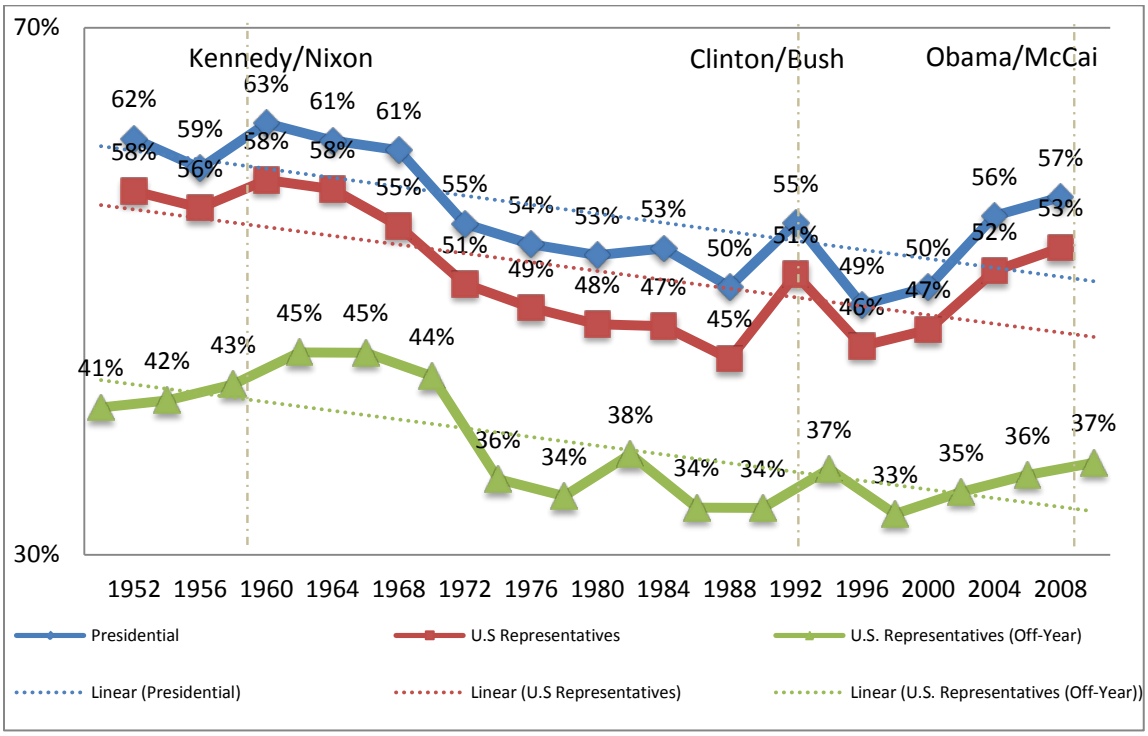


Figure 3. Decline in U.S. Voter Participation (U.S. Census Bureau, 2010a)

A challenge to claims of voter decline. The reported decline in voter participation in the U.S. was challenged by McDonald's (2012c) analysis of voter turnout. State voter participation was reported either as Voting Age Population (VAP) or Voting Eligible Population (VEP). VAP was calculated by dividing the number of votes cast by the number of state residents older than 18 as reported in the U.S. Census. VEP was calculated with same operation but the denominator was adjusted using U.S. Census reports of residents and estimates of non-citizens, Department of Justice prison, probation, and parole reports, and Federal Voting Assistance Program estimates of

overseas (non-resident citizen) voters. McDonald claimed that “the much lamented decline in voter participation is an artifact of poor measurement” (M. McDonald, 2012c). Figure 4 represents McDonald’s evidence that VEP turnout rates revealed smaller decline in voter turnout than VAP rates. In the graph, the lower line is the VAP data.

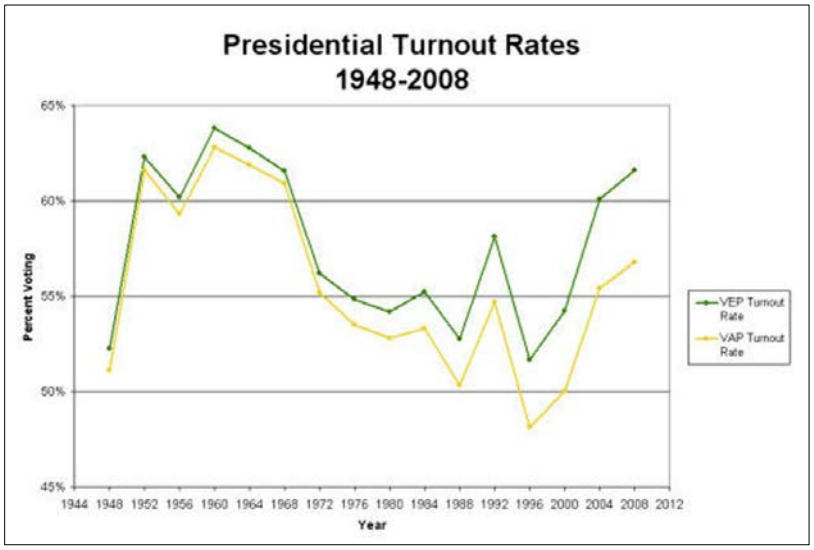


Figure 4. VEP and VAP for Presidential Elections (M. McDonald, 2012c)

Fluctuations in voter turnout. U.S. voting rates fluctuated widely from one election to the next. (Reuters, 2011; U.S. Census Bureau, 1991). The previously described picket fence effect is clearly visible in any depiction of U.S. national voter turnout that reports both the years of presidential elections and the years in-between (off year elections). Voter turnout was lower in primary elections compared to general elections, local elections compared to general elections, and lower in off-year elections as compared to presidential elections (The Center for Voting and Democracy, 2013). Figure 3 shows clear differences between voter turn-out between different types of races.

Variability of voter turnout. Voter participation rates in the U.S. varied greatly across demographic attributes of educational level and age, ranging from 27% to 78%

(Baum et al., 2010). Additionally, U.S. voting rates varied greatly from state to state, ranging from 36% to 59% in 2010 (M. McDonald, 2011c) and from 40% to 75% in 2012 (M. McDonald, 2012b). Figure 5 reveals large differences in voting behavior; the more education a person had the more likely that person was to vote in every age category. For the youngest age bracket, 18 to 24, 27% of non-high school graduates voted while 70% of those with Bachelor's Degrees or higher voted. Voter participation also varied by age, with voting behavior generally increasing as age increased except for a slight decline in the oldest age category, 75 and over.

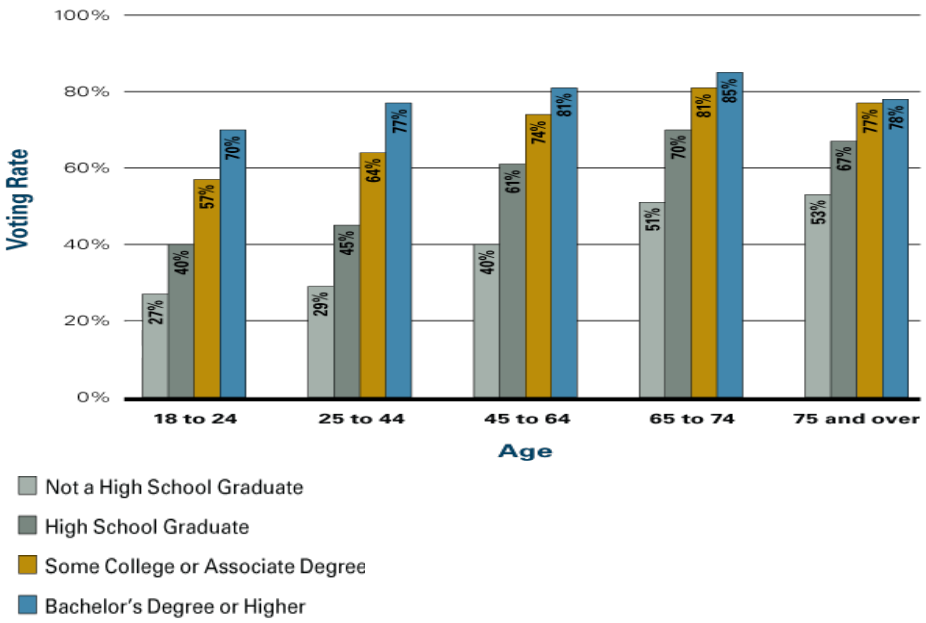


Figure 5. Voter Turnout by Education Level and Age (Baum et al., 2010, p. 33)

Here, and throughout this document, Washington D.C. (DC) is treated as though it is a state. Figure 6 reveals a wide disparity in voter participation among states (U.S. Census Bureau, 2012b) ranging from a low of 36% to a high of 59% (U.S. Census Bureau, 2012c). The electoral process in the U.S. was distorted by variety in voter registration laws and other obstacles to voting and these impediments to voting were not distributed equally.

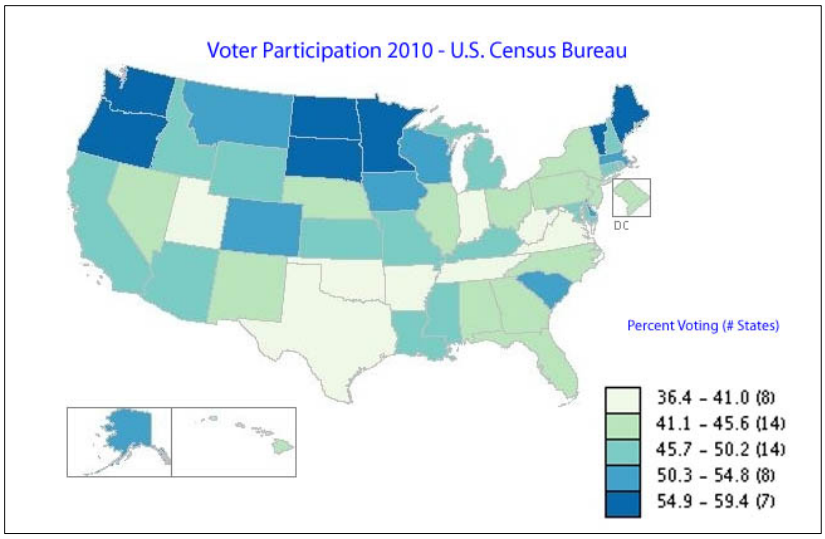


Figure 6. Variation in U.S. Voting Rates by State (U.S. Census Bureau, 2012c)

After improved voter participation by people of color in the 2008 presidential election, an "assault on voting rights that is historic both in terms of its scope and intensity . . . [of] restrictive voting measures . . . threatens to . . . suppress . . . the political participation of people of color, the poor, the elderly, and the young" (Haygood, 2012, p. 1019). Haygood reported that since 2010, fifteen states had passed restrictive voting measures that affected persons of color disproportionately, and that the distribution of these blocking laws was concentrated in "the very same states that experienced high rates of minority population growth and political participation over the last decade" (p. 1030). Figure 7 presents voter turnout by state for the 2012 general election for VEP and VAP which ranged from approximately 40% to 75%.

Summary. Voter participation has been a problem in the U.S. Voter turnout is the U.S. is lower than many other countries. Some found evidence that it was declining. U.S. voter turnout fluctuated, varied by age and education level, and in particular, there was a wide range of levels of voter participation among the states. Determining what causes

voter participation has been the subject of much study; the research on this subject will be presented in the next section.

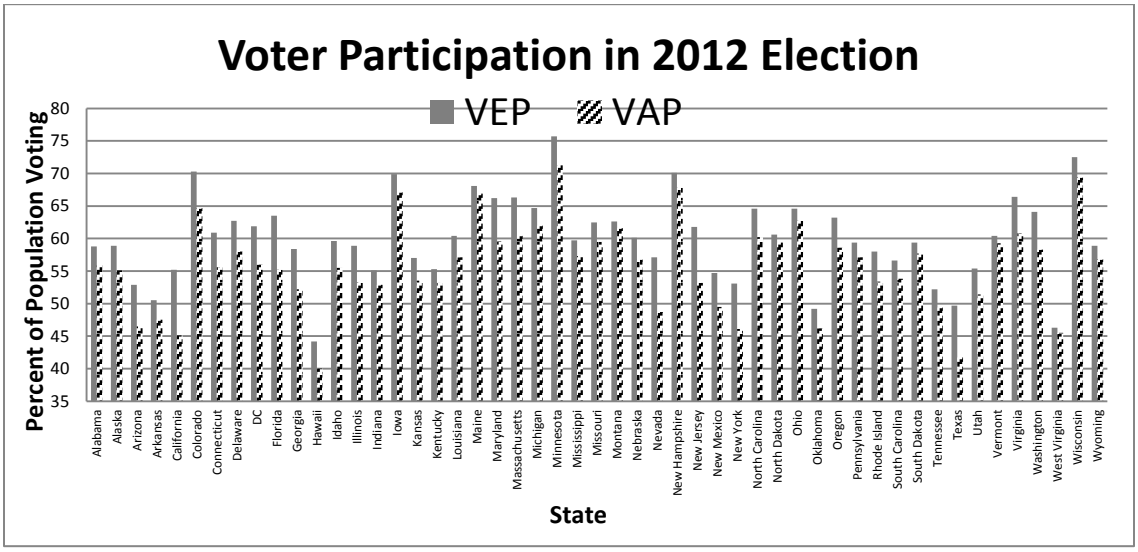


Figure 7. Voter Participation by State (M. McDonald, 2012b)

Investigated Causes of Voter Participation in General

A variety of factors have been investigated to determine the strength of their effect on voter participation. Causes of voter participation have been well studied for some criteria, less well for others. This examination of the purported causes of voter turnout depends on peer reviewed research as well as reports and other work in an attempt to conceptualize all the major areas of study of the causes of the voter participation. Voter turnout has been described on three levels, national, district, and individual.

National level factors. Between-country comparisons evaluated a variety of factors including: legal and institutional structures including constitutional rules and registration laws (Powell, 1986); the configuration of party systems, unicameral government systems in which the legislature consists of one chamber as compared to bicameral chambers (Jackman, 1987); two party systems as opposed to multiparty

systems (Jackman, 1987; Powell, 1986); and mandatory voting requirements and proportional representation (Jackman, 1987). Political situations were considered such as nationally competitive electoral districts (Jackman, 1987), the effect of polarized two party systems compared with fractionalized parties (Wang, 2012), and the newness of a country's democracy, which positively influenced voter participation when paired with government expenditures (Drazen & Brender, 2006), and in the context of historical legacies and the mode of transition to democracy (Kostadinova & Power, 2007, p. 363).

Demographic variables were evaluated including macro social and economic conditions, socioeconomic status, and educational attainment (Powell, 1986). Contrary to the general finding that increased income is related to increased voter participation, poor voters were more likely to vote in times of economic downturn in order to "express their grievances at the polls" (Aguilar & Pacek, 2000, p. 995). Cultural factors were studied including the case of poor people who were more aware of global environmental issues and linked these concerns with their local region demographic variables (Jacobs, 2002) and positive attitudes towards government (Powell, 1986). Studies of the effect of media advertising campaigns found that they increased voter turnout. (Baek, 2009; Hall & Bonneau, 2008).

District level factors. Within-country factors that were studied revealed that competitiveness of a particular election as well as group and party get-out-the-vote GOTV efforts increased voter turnout and that urban areas had a higher turnout than rural areas due to the distance to polling places and access to registration (Blais, 2000; M. Johnson, 2001; Rosenstone & Wolfinger, 1978; Verba, Nie, & Kim, 1978). Being a

member of a minority party increased the likelihood of voting (Gimpel, Dyck, & Shaw, 2004) as did residence in a wealthy area (Solecki, Mason, & Martin, 2004).

Institutional structures of state registration and voting laws profoundly influenced voter turnout. The introduction of more demanding voter registration laws decreased voter participation by several percentage points while Election Day registration increased voter participation (Ansolabehere & Konisky, 2006; Neiheisel & Burden, 2012). The effect of term limits, intended to increase voter participation, was in the other direction; voter turnout decreased in districts where term limits were implemented (Nalder, 2007).

Other factors that were investigated include electioneering communication, advertising campaigns, and candidate election spending and party efforts to get-out-the-vote (GOTV) (Francia & Herrnson, 2004). Voter participation increased in districts where residents were informed about voter participation levels (Lassen, 2005). Areas defined by zip codes were analyzed for the effect of foreclosure rates (Estrada-Correa & Martin, 2012) which were related to decreased voter turnout.

Individual level factors. Some of the research looked at individual attributes in the context of a group designation or affiliation. Membership in a group (racial group being one example) was considered as an individual characteristic in some studies, described in terms of "overall group differences in electoral participation" (Logan, Darrah, & Oh, 2012, p. 993), but also as a "collective act . . . [such that] indicators of the things group members have in common support the conclusion that the group context of participation influences choices to register and vote" (p. 1016). Individual factors that influence voting have been described in terms of three categories, demographic, attitudinal, and political affiliation (M. Johnson, 2001). Stein, Leighley, and Owens

categorized individual level factors that influence voter participation somewhat differently, as “institutional rules, social and demographic traits, psychological resources, and the mobilization efforts of parties and their candidates” (p. 2). The next sections will describe research on demographic, attitudinal, political affiliation and other attributes of individuals that have been studied in relationship to voter participation.

Demographic attributes. Studied demographic attributes included socio-economic status, gender, age, race and level of educational attainment. Members of higher socio-economic groups had greater levels of voter participation than those who were less well off (A. L. Campbell, 2002; K. Greene & Nikolaev, 1999; Rosenstone & Hansen, 1993; W. J. Scott & Acock, 1979). Generally speaking, individual characteristics affected voter turnout in the U.S. such that the men voted more than women, older more than younger, dominant race/ethnicity more than non-white race/ethnicity (given that this attribute was confounded with a strong relationship with educational attainment and income); and of particular interest to this study, better educated more than less well educated (M. Johnson, 2001; Leighley & Nagler, 1992; Powell, 1986; Stein et al., 2005; Verba, Schlozman, & Brady, 1995; R. E. Wolfinger & Rosenstone, 1980). Health status was also studied (Blakely, Kennedy, & Kawachi, 2001). Healthy people were more likely to vote than people with health challenges.

Race has been a focus of several studies on voter turnout (R. A. Jackson, 2003; Logan et al., 2012; Xu, 2005). Non-whites voted less than members of the dominant group; some of this variability was explained by socio-economic status (R. A. Jackson, 2003; Xu, 2005). Increase of same-race candidates increased voter participation (Barreto & Masuoka, 2004; Logan et al., 2012). African-American voter participation increased

when there was a group-based assessment of economic advantage (Kinder, Adams, & Gronke, 1989; Wilson, 2012) and Latino voters were more likely to vote if they had been contacted through door-to-door GOTV efforts (Michelson, 2003). Marital status, age, and level of education by race were studied (R. A. Jackson, 2003) showing differences in voter turnout among races for these attributes.

Tied to racial demographics, the relationship of voting to demographic attributes of immigrants was studied regarding nation of origin for new citizens (Bueker, 2005; Xu, 2005) and immigration status, length of residency, and measures of acculturation and assimilation (Xu, 2005). Voting regulations and state policies related to treatment of immigrants was found to be a factor in decreased voter participation for Hispanic voters (Logan et al., 2012; Xu, 2005). Not surprisingly, these studies found that level of education mitigated obstacles to voting which were faced disproportionately by immigrants.

Attitudinal attributes. The influence of personal attributes of attitude and other psychological resources have been investigated for relationships to voter participation. While it was posited that citizen satisfaction would lead to complacency and low voter turn-out, (Hirschman, 1970), this was not the case; positive attitudes about the democratic institutions of a country were related to higher voter participation (Powell, 1986).

Other studies found a relationship of civic engagement to increased voter turnout (Almond & Verba, 1963; A. Campbell, 1960; Lijphart, 1997; Pacheco & Plutzer, 2007; Verba & Nie, 1972), although Stein et al. (2005) challenged the effect claiming it was a mixed or “moderate effect” (p. 5). Previous voting behavior predicted later voting behavior (Brody & Sniderman, 1977; Gerber, Green, & Shachar, 2003; Green & Shachar,

2000; Nownes, 1992; Plustzer, 2002; Stein et al., 2005). Perceptions of political efficacy increased voter participation (Almond & Verba, 1963; A. Campbell, 1960; Stein et al., 2005; Verba & Nie, 1972); decline in perceptions of political efficacy were related to a decline in voter participation (Abramson & Aldrich, 1982; Rosenstone & Hansen, 1993; Timpone, 1998) although others challenged these results (W. Miller, 1980, 1992; Stein et al., 2005).

As previously reported regarding race, increases in voter participation were related to individuals' group membership and the perception of relevance of a candidate or ballot issue to the group. Such groups included poor seniors (A. L. Campbell, 2002), public employees (K. Greene & Nikolaev, 1999), farmers (R. E. Wolfinger & Rosenstone, 1980), and veterans (Lipset, 1960). Ballot issues in general increased voter turnout in otherwise low-turnout elections (Tolbert & Smith, 2005).

Adolescent characteristics were studied in relation to later voter behavior. Attributes that were related to the likelihood of later reduced voter participation included: divorce of parents (Sandell & Plutzer, 2005), early parenthood, and drop-out status, (Frisco, Muller, & Dodson, 2004). Adolescent attributes that were related to the likelihood of later increased voter participation included: adolescent membership in voluntary organizations (Frisco et al., 2004), civic engagement, and political socialization (Pacheco, 2008).

Political affiliation. Engagement in the political process was studied to identify attributes that increase voter participation. Characteristics of affiliation included strength of party identification, the amount of time the person worked for political candidates and parties, and contact with government officials. The more attributes of affiliation an

individual had, the greater the chances that the person voted (M. Johnson, 2001; Powell, 1986).

The Internet and social media. Voter participation levels were higher for those with access to: the Internet and online election news (Tolbert & McNeal, 2003) and information from social networks, media coverage of campaigns and elections, and exposure to campaign advertising (Freedman, Franz, & Goldstein, 2004; Patterson & Caldeira, 1983; Stein et al., 2005, p. 3). Social connectedness was a related factor that was found to increase individual political participation (M. Johnson, 2001).

Summary. This exhaustive search of the causes of voter participation turned up one key relationship that is a matter of interest to this research project: the more education a person had, the more likely she or he was to vote. The next section will illuminate research relating to this factor.

Research on the Relationship of Education and Voter Participation

Many assumptions and inferences are required in order to discuss the relationship of education to voter turnout. The most crucial issue is that most definitions of education are general or imprecise; they do not differentiate between private and public education or between K-12 and higher education. The focus of this research project was K-12 public education, but there has been little research on the effects of education on voting that defines education that narrowly. Be that as it may, there was a wealth of reports of research on the role of education in association with voter participation that helped to contextualize and frame the research project. This section discusses demographic variables, the possibility of causal relationships, the difference between educational

attainment as an absolute or relative variable, and the moderating effect of education for voters in circumstances that would otherwise reduce participation.

Demographic variables. Level of formal education, as a demographic variable that counts the number of years of education a person has attained, was probably the single most important correlate to voting; "education is everywhere the universal solvent, and the relationship is always in the same direction" (Converse & Campbell, 1972, p. 324).

Historical consideration of the issue found that regardless of whether social status was defined as a measure of income, occupation, or education, "citizens of higher social and economic status participate more in politics" (Verba & Nie, 1972). College graduates, white-collar workers, and the rich voted more than high school graduates, blue-collar workers, and the poor, respectively and "these variables are related to each other" (R. E. Wolfinger & Rosenstone, 1980, p. 13).

Most research found a strong positive relationship between voting and education (Barber, 1969; A. Campbell, 1960; Milbrath & Goel, 1965; Stein et al., 2005; R. E. Wolfinger & Rosenstone, 1980). A few researchers (Milbrath & Goel, 1965; Verba et al., 1978) found that income had a stronger relationship to voter turnout than did education.

Evidence of causality. Some aspects of education were found to have a causal relationship to voter participation. Educational interventions for preschool and fifth grade students was a "causal influence on [later] electoral participation" (Sondheimer & Green, 2010, p. 180). Tenn (2007) challenged the role of education as a causal factor in voter turnout, wondering if it might be "spuriously correlated with voting" (p. 446). He suggested that a selection bias of "unobserved factors, such as family background

characteristics, influence both education and voter turnout, which generates a positive correlation between the two variables" (p. 458). Burden (2009) discounted Tenn's notion that the effect of education on voter turnout is spurious, citing research on the positive effect of certain college curricula (Hillygus, 2005) and of on-campus political discussions (Klofstad, 2007) on later political participation. In examining education as a variable related to voter participation, it is important to recognize the difficulty of isolating education from related and confounding variables. It is less defensible to impute causation from relationships between voter participation and education, however it is measured, than it is to suggest root causes that drive the correlation.

Absolute or relative. Education, whether described as a causal or correlative variable related to voter turnout, can be thought of as *absolute* or *relative*. Absolute education is the number of years of education a person has attained. In earlier times, more education meant a high school education. More recently, more education has come to mean a college degree. Relative educational level was defined variously by different researchers, but always positioned the level of education as a comparison of an individual or group with other individuals or groups, rather than just a count of the number of years of schooling or degrees a person had acquired.

Absolute levels of education. There is "an empirically observable relationship [to support the claim that] . . . more educated and better informed individuals are more likely to vote than those less educated and informed" (Stein et al., 2005, p. 3). The more education a person had, the more likely that person was to vote (Burden, 2009; Dee, 2004; Freedman et al., 2004; Lassen, 2005; Leighley & Nagler, 1992; Nie et al., 1996; Powell, 1986; Rosenstone & Hansen, 1993; Sondheimer & Green, 2010; Verba et al.,

1995; R. E. Wolfinger & Rosenstone, 1980) or as the U.S Census reported in a 1991 statistical brief, “chances of voting increase with education” (para. 6).

Some of the reasons given to explain how more education led to increased voter turnout included: education provided skills needed to interpret voting procedures and make educated decisions; education increased political knowledge and interest; and going to school increased social interaction and networking and that more community involvement improved voter participation (Sondheimer & Green, 2010).

Higher education was found to improve voter participation. Improved language skills and participation in social science curriculum in college that fostered the development of civic skills was related to increased voter participation (Hillygus, 2005). Kim and Palmer (2008) challenged the causality of this relationship, finding that most of the variability in voter participation between high school and college graduates was a function of other underlying factors, such as socio-economic status.

Relative levels of education. Tenn (2005) called attention to a paradox, sometimes described as “Brody’s Puzzle” (Brody, 1978), in which an increase in the level of educational attainment for an individual increased the likelihood that the person would vote, but national increases in level of education did not increase the likelihood of an increase in national voter turn-out. He suggested that the relationship was relative, in other words, that whether voter turnout increased, decreased or remained stagnant, those who had more years of education relative to others in the voter pool continued to be more likely to vote than those who had fewer years of education. Relative educational levels had strong explanatory power in several studies (Nie et al., 1996; Persson, 2012; Tenn, 2005).

The moderating effect of education. Increased education was a characteristic identified with the ability of individuals to negotiate obstacles to voting more successfully than others with less education. Evidence for the moderating effect of education was found for voting obstacles of: complicated voting procedure (Gallego, 2010); voter registration requirements (Milligan, Moretti, & Oreopoulos, 2004); and distance from and difficulty of locating polling places, as well as mobility (Squire, Wolfinger, & Glass, 1987). Milligan et al. found education had a moderating effect in the U.S. where "registration rules present a barrier to participation" (p. 1667) but not in the United Kingdom, where such barriers did not exist.

Summary. For individuals, the more education a person had, the more likely it was that the person would vote. This finding did not extend to the nation as a whole; when the average number of years of education increased for the entire population, this did not translate into increased voter participation, in fact voter participation declined. Early intervention programs at school focused on high-risk students and improved their outcomes in several ways; one of them was increased likelihood of voting. Education had a moderating effect for various classes of individuals who were faced with obstacles to voting; those with more education surmounted obstacles to voting more often than similarly positioned peers with less education.

Much has been speculated about the cause of the relationship between increased education and increased voting behavior, but there were no compelling explanations for the phenomena.

Conclusion

This section described the scholarly discussion of one variable of this study, voter turnout, including problems with voter turnout and researched causes of voter participation. As voter turnout continued to be a problem in the U.S., education was changing as a result of the standards based reformed movement. This literature review now turns to an examination of the literature and other background information to develop an understanding the other variable, standardization of education.

Standardization in K-12 Public Education

Standardization of public education appears to be widely accepted in the U.S. This section begins by describing the original view of public education at the foundation of the country as important in producing an informed electorate. It will then report the key milestones in the gradual altering of goals and values that have fostered a reform of American education to become more standardized. The following sections will describe the strongest advocates for educational standardization and the consequential narrowing of the curriculum as a result of reform. Next will be an examination of the potential for civic knowledge to be an attribute of an education that fosters an informed electorate. This section will conclude with a description of the difference between a standardized education and one that differentiates instruction to meet the needs of unique and diverse learners.

The History of Educational Standardization in the U.S.

The most basic rationale for an education system that is financed by taxes is that it benefits society. How this public good is framed influences education policies and accountability systems. Several goals have been postulated for public education. An

examination of the roots of public education in the United States will help to understand how the goals of public education have drifted from the original intentions of the founders and how the current emphasis on large-scale high-risk testing has been driven by an emphasis on efficiency and accountability, or standardization.

Original rationale for public education. The influence of the Enlightenment, before the foundation of the nation, fostered the earliest commitment to public education in support of the "responsibility of government to ensure the participation of citizens in government" (Heck, 2004, p. 45). Democracy required an educated populace; Jefferson was influential in advocating for a free public school system, arguing that "peace and stability in the new nation were best preserved by giving people access to education" (p. 46). Mann promoted free public education in the early 1800s; "public schools became a means for ensuring the transfer of knowledge between generations" (p. 47). Up to that point, public education provided for the transmission of culture and the development of literacy as a prerequisite for voting.

Progressivism. The late 1800s saw the start of the progressive movement, which was a response to industrialization, migration from rural to urban areas, and immigration. Public education acquired another domain of public utility beyond literacy for citizenship and communication of culture; health education was added to the goals for education as it "became a self-conscious instrument of social change" (Mintz & McNeil, 2012, para. 3). Among other health initiatives in public schools in the early part of the twentieth century, massive programs of immunization of children at school were implemented (Rosen, 1958). With the addition of health education, the basic charge to educators had been enlarged. In the early 1900s, John Dewey was the most famous advocate for progressive

education, which moved educational practice away from rote learning to active learning; emphasizing the needs of the whole child was in vogue.

Concurrent with the rise of the progressive movement was the rise of the power of corporations. As the American frontier was exhausted in the 1890s, the election of McKinley was supported by "commercial and manufacturing interests . . . [using] the new political methods of mass advertising" (Heck, 2004, p. 86). "The cultural values of the corporate state were politically unassailable in twentieth century America" (Goodwyn, 1978, p. 278). As the 20th century proceeded, Dewey's theories gave way in the transition towards more bureaucratic and meritocratic ideals which matched business values of efficiency and accountability.

Meritocracy. As school districts and states implemented progressive aspirations of free and compulsory education for all, public financing gave rise to the need for accountability and efficiency. "Municipal Reform . . . put the power in the hands of business elites . . . with superintendents overseeing school operations as scientific educational managers" (Heck, 2007, p. 93). Efficiency became a dominate theme and corporate-ethic models were now applied to educational systems.

Standardized testing was introduced, based on the perceived success of Stanford-Binet IQ tests that were used as a sorting tool by the U.S. Army in World War I. Following the war, the development of standardized achievement tests for public education was "among the most important developments. [The tests] caught on quickly because of the relative ease of administration and scoring and the [perception of a] lack of subjectivity or favoritism. . . . [They were] less expensive and more efficient than essay tests. Their use proliferated widely" (R. M. Kaplan & Saccuzzo, 1989, pp. 15-16).

The goals of education had not changed much, but differentiated high schools tracked some students towards college and others towards blue collar jobs, based on their supposed merit as determined by their scores on standardized tests. Testing students allowed educational systems to sort students efficiently but not equitably. This system did not benefit members of what we now refer to as subgroups who did not do as well on tests contextualized in the culture and norms of the dominant group (Shea, 1977). The stage was set for the standards-based movement.

The Cold War. Throughout these eras, American education continued to be viewed as the development of a public good, an educated society, which also benefitted the individual. The publication of *Why Johnny Can't Read* (Flesch, 1955) challenged the notion that our schools were doing a good job of fostering an educated society. The launch of Sputnik in 1957 (Garber, 2007) built on Cold War anxieties to escalate the influence of the claim that U.S. education was falling behind in the race for world domination. Concerns about the quality of public education in the U.S. crystalized with the publication of *A Nation of Risk*, (Gardner, 1983). The document was the product of the National Commission on Excellence in Education, which examined existing analysis and reports commissioned from experts but also depended on public hearings, symposiums, meetings, and letters. The report also relied on conjecture founded on "descriptions of notable programs and promising approaches" (pp. 2-3). The author commended "public-minded citizens who took the trouble to share their concerns . . . [and noted the] diversity of opinion it received regarding the condition of American education, [commenting that] . . . how we have treated their suggestions is, of course, our responsibility alone" (p. 3). In the introductory materials, the author did not cite scientific

research in support of the claims made in the document but rather framed the document as the representation of the opinions of those who testified at public hearings.

The opening pages of *A Nation of Risk* presented a series of claims, that the United States was "being overtaken by competitors throughout the world" (p. 5), that American education was "mediocre" (p. 5) and that we had "lost sight of the basic purposes of schooling" (p. 5). The document supplied a list of risk indicators, as claimed by presenters at commission hearings: poor U.S. performance compared to international competitors on academic tests, the large amount of illiterate Americans, lower achievement on standardized tests, poor performance of gifted students, decline in Scholastic Assessment Test (SAT) and other College Board scores, low levels of higher order intellectual skills, increase in remedial courses required for entering college students, lower college exit scores, and complaints from business and the military that entry level students lack basic math and reading skills. Here the author sounded a dire warning: "We are raising a new generation of Americans that is scientifically and technologically illiterate" (p. 10).

Researchers at Sandia Laboratories investigated the claims of the National Commission on Excellence in Education. Overall, their evidence contradicted *A Nation at Risk*, finding that "the present system [of education] has shown a steady or improving trend" (Huelskamp, 1993, p. 718). Their analysis of high school graduation found that when students taking longer than four years to complete high school or who later obtained a GED were included, graduation rates had remained stable, and were "among the best in the world" (p. 719). They evaluated SAT and National Assessment of Educational Progress (NAEP) scores and found gradual improvement in NAEP scores

and misrepresentation of the meaning of the decline in SAT scores, that is, that decline in scores was caused by the increased participation of low-achieving students and those from formerly underrepresented groups were taking the SAT more than ever before. Sandia researchers dismissed the international comparisons as not meeting their expectations for the appropriateness of the comparisons, or yielding contradictory findings showing that the U.S. was performing well compared to international counterparts.

Because of the lack of rigor associated with the data collection, analysis, and conclusions of *A Nation at Risk*, it is appropriate to discount it as political posturing based on opinions. The Sandia Laboratories report revealed the need for greater scientific basis for educational policy decisions. Nonetheless, *A Nation at Risk* was highly influential in driving the standards-based movement, with its commonly accepted assumptions that education in the United States no longer served the public good. This major change in the goals of education came along with the clamor for reform of education. Public education was now expected to be competitive. This new emphasis featured the United States pitted against international rivals in a contest to produce the largest gross national product and be the greatest influence on the world. Higher standards and testing would be key components of new goals for education.

The War on Poverty. In a move that enlarged the federal government's role in education far beyond anything that had been done before, Congress passed The Elementary and Secondary Education Act of 1965 (ESEA) as part of President Johnson's War on Poverty. Building on the goals of the civil rights movement and designed to improve educational equity, ESEA was "the first major social legislation to mandate

project reporting" (McLaughlin, 2011, p. v). The evaluation requirement of ESEA was intended to provide political accountability so that local constituents would be able to see if the money from the federal government was being spent appropriately to improve the education of disadvantaged students. It was also hoped that federal management of education programs would be brought in line with business accounting methods. Data would be presented in "cost-benefit terms . . . leading to more effective local practices and more efficient federal decision making" (p. v). There was opposition to ESEA policies by those who "contended that evaluation was inconsistent with best practice in that it consumed already limited program resources and employed invidious and inappropriate measures of 'success' – achievement scores" (p. v). Such resistance to ESEA did not slow the incremental increase in the use of standardized tests.

A shift to industry published tests. Slowly but surely, states moved towards adoption of large-scale high-stakes standards-based assessments. Formerly relying on off-the shelf standardized products from the testing industry, states now sought to match their testing materials with their specific curriculum and standards. By the mid-1990s, test publishing companies were being hired by states to help design these assessment materials (Jorgensen & Hoffman, 2003). This rise of a profit driven testing materials industry was a consequence of the refocusing of national and state education policies on standards and accountability.

No Child Left Behind. With the 2002 reauthorization of ESEA as NCLB, a new "accountability regime" (McGuinn, 2006, p. 194) completed the move from the War on Poverty's focus on equity and improved access for the disadvantaged to improved education for "all students, . . . with increased accountability for school performance" (p.

194). While NCLB was positioned as intending to reduce federal influence over education, it is widely accepted that it enlarged the federal role in education (Education Week, 2004). Standards and accountability components led it to be described as "the most sweeping federal intrusion into state and local control of education in the history of the United States" (Kelderman, 2004). In order to continue to receive federal funding, states, districts, and schools were mandated, among other things, to test virtually all students annually and to meet targets for achievement on the tests. "According to NCLB, all public school students should perform at grade level (be proficient) in reading and mathematics by the end of the 2013-2014 school year" (ALSDE, 2011, p. 1).

Obama's *Blueprint*. As of 2010, not much had changed since the publication of *A Nation at Risk* in the political framing of education in America as ineffective and in need of reform. In *A Blue Print for Reform*, (U.S. DOE) national goals for education were still articulated in terms of competition. President Obama claimed that "the countries that out-educate us today will out-compete us tomorrow" (p. 1), echoing the competitive and alarmist language of *A Nation of Risk*.

Comparing the educational system of the United States to that of other countries is a tricky business; it is really comparing apples and oranges. A critical concept presented by Darling-Hammond (2007) is that "most high-achieving countries not only provide high-quality universal preschool and healthcare for children, they also fund their schools centrally and equally, with additional funds going to the neediest schools" (p. 3). Darling-Hammond reported that successful schools systems in other countries had high quality teacher preparation and professional development programs, while NCLB

ironically called for “alternative routes that often reduce training for the teachers of the poor” (p. 3).

Furthermore, Herman (2008) suggested that “there is only so much that public schools can do to close an achievement gap that grows out of greater social and historical inequities” (p. 227). He recommended health care clinics at schools, comprehensive early childhood education, and intensive after school and summer school programs, higher teacher salaries, and smaller class sizes, which matched Darling-Hammonds description of what other countries were doing well.

The intensity of the demands of the standards-based movement increased with the mandates of NCLB: students, teachers, schools, districts, and states, were now evaluated on the basis of students’ scores on annual high-stakes tests. Competition and a business model were applied more fully to educational policies and practice. In capitalism, companies that cannot compete fail and go out of business. In applying these principles to education, schools were labeled failing and increases in parental choice through vouchers allowed some parents to move their children to other public or private schools. Some schools were taken over by the state and some were closed, a market forces solution.

Race to the Top. President Obama’s *American Recovery and Reinvestment Act of 2009* (H.R. 1--111th Congress, 2012) provided funding for education in the form of the *Race to the Top Fund* which offered competitive grants for innovation that were expected to result in improved student outcomes, increases in school system capacity, and “increased productivity and effectiveness” (U.S. DOE, 2009, p. 2). Race to the Top positioned states as rivals for grant money to support innovation and reform of education polices. Winners of the competition were expected to achieve “significant improvement

in student outcomes, including making substantial gains in student achievement, closing achievement gaps, improving high school graduation rates, and ensuring student preparation for success in college and careers; and implementing ambitious plans in four core education reform areas" (p. 2).

Summary. This section has described the evolution of the American system of public education from the generation of a public good, an informed electorate that was seen as necessary for a democracy of the people, to a more businesslike operation organized around producing workers ready to compete for jobs in global markets. In the reformed practices of education, teachers were directed to produce student outcomes quantified as rigorous standards measured as scores on high-stakes tests. The next section will examine what forces have advocated effectively for standardization of American educational policies and practices.

Advocates for Standardization

The National Academy of Sciences' National Research Council (NRC) (2013) published a summary of its workshop *Assessing the Role of K-12 Standards in States* (Beatty, 2008). They reported a "vigorous response" (p. vii) to the call for higher standards promoted in *A Nation at Risk*. They reported that every state and Washington D.C had adopted academic standards in the core subjects. NRC called standards-based education reform a "catch all term for measures that states have taken to improve instruction and learning by organizing both policy and practice around clear, measurable standards" (p. 2). They described the progress of standards-based reforms the "move toward national standards in core academic subjects" (p. vii) with an assumption of inevitability, given that educational leaders "generally take standards based reform and

accountability for granted [as the] . . . central framework guiding state education policy and practice" (p. 4). The report defined standardization this way:

> It should be noted that the general term "standards" is somewhat imprecise. In the context of the workshop it was generally used to refer to both content standards, which describe material that students should be expected to learn, and performance standards, which describe the level of proficiency or mastery expected of students. Most state standards specify both. (2008, p. 2)

Many different goals have been ascribed to the standards based movement, including equity for disadvantaged students and improving the quality of education (Beatty, 2008). NCLB drew on the premise that by setting high standards with measurable goals, all students would reach proficiency in reading and math by the end of the 2013-14 school year and that this would improve the outcomes for individual students. These measurable goals have come to be accepted as scores on large-scale high-risk tests and scoring well on standardized tests is assumed to be a reliable predictor of improved life outcomes and a path out of poverty. The following sections will describe the strongest advocates for these conceptions of the goals and values that have lately come to dominate education policy in the U.S.

College- and career-ready. In recent years, new attention has been focused on standards for high school graduates. Standardization in education has had no greater champion than Gates. A corporate leader, he played a role in "framing the debate about high schools" (Hess, 2005, p. 113). In an influential 2005 speech to the National Governors Association, Gates, echoing *A Nation at Risk*, claimed that "America's high

schools are obsolete . . . broken, flawed, and under-funded . . . [and] cannot teach our kids what they need to know today" (pp. 1-3). He made an economic argument about our nation's lack of the "workforce of tomorrow," comparing our high school and college graduation rates unfavorably to "all industrialized nations" (p. 3). Gates proposed to the governors that they adopt this goal: "declare that all students can and should graduate from high school ready for college, work, and citizenship" (p. 5). Through his Bill & Melinda Gates Foundation, Gates was an influential force in the American Diploma Project (ADP) (Hess, 2005, p. 131), which was administered under the non-profit educational policy advocacy group Achieve. Gates launched the latest language of the standards based movement; high school students are expected to graduate "college and career ready" (U.S. DOE, 2010a). Being career-ready was seen as requiring the same education as being college-ready, and the standardization reform movement's goals of high standards with testable objectives invigorated efforts to redefine a high school diploma as not the accomplishment of passing sufficient numbers and types of courses but rather by passing rigorous tests to demonstrate mastery of such content as Algebra II. ADP encouraged states to adopt high school exit examinations in an attempt to certify what students have learned. "College and career readiness for all students seems to be idea whose time has come" (Conley, 2010).

Achieve. Achieve (2012e) was a non-profit educational policy advocacy group created in 1996 by a "a bipartisan group of governors and corporate leaders . . . dedicated to supporting standards-based education reform efforts across the states" (2012d, para. 1). Achieve was ranked by *Education Week* in 2006 "as one of the most influential education

policy organizations in the nation" (para. 2). The Bill & Melinda Gates Foundation was a contributor, along with other corporate sponsors. See Appendix A for a complete list.

Achieve reported their analysis of states' efforts to standardize educational policy in *Closing the Expectations Gap 2011: Sixth Annual 50-State Progress Report* (2011). In December of 2012, a detailed online presentation of the report, *The States* (2012e), described how well aligned each state was to Achieve goals of standardization of educational policy and practice regarding standards, high school diploma, assessment, P-20 longitudinal data collection system, and accountability as well as membership in national standardization groups. Achieve's ratings for states college-and career ready policies are available online (Achieve, 2012f).

Common Core State Standards Initiative. Common Core State Standards Initiative (CCSSI) was a joint effort of the National Governors Association and the Chief State School Officers (CCSSO). "Governors and state commissioners of education from across the country have committed to joining a state-led process to develop a common core of state standards in English-language arts and mathematics for grades K-12" (2013, para. 5). In March of 2013, CCSSI reported that 45 states and DC had adopted the Common Core Standards (CCSSI, 2013b).

Educational Testing Service. Another powerful advocate for the standardization of K-12 public education has been Educational Testing Service (ETS). ETS identified *A Nation at Risk* as sounding the "call" (Barton, 2009, p. 3) for educational reform. They cited the urgency of "strong voices . . . arguing that the nation is in crisis without standards" (p. 7).

Partnership for Assessment of Readiness for College and Careers. States that joined the Partnership for Assessment of Readiness for College and Careers (PARCC) consortium agreed to work together "to develop a common set of K-12 assessments in English and math anchored in what it takes to be ready for college and careers" (2013, para. 1). PARCC's vision was of building a K-12 assessment system that "creates high-quality assessments that measure the full range of the Common Core State Standards, . . . makes better use of technology in assessments, and advances accountability at all levels" (para. 3).

WestEd. WestEd made a serious commitment to supporting schools and districts with standardization efforts (WestEd, 2013). WestEd drew financial support from the some of the same corporate sponsors as Achieve, such as the Bill and Melinda Gates Foundation (WestEd, 2012a), and provided support to states for college- and career-readiness with some of its resources (WestEd, 2012c). WestEd also supported educational differentiation in a variety of ways. One example was found in their *Inclusive Education Starter Kit*; they pointed out that "differentiated instruction is based upon the belief that students learn at different rates and in different ways. To accommodate the diverse learners in any classroom, teachers must differentiate their instruction. Differentiation is a proactive" (WestEd, 2012b, para. 1). Partnership with WestEd was an indication that a state embraced differentiation in education policy.

Summary. There have been a number of advocates for standardization as part of the reform of the American educational system, but Achieve has probably been the most articulate and effective. Achieve's focus has gone beyond merely advocating for adoption of the Common Core Standards, supplying customer/states with testing materials, or

preparing Race to the Top applications. Achieve has identified many discrete measures of standardization and maintains a comprehension data base on this subject which is available to the public at no charge. The next section examines evidence of a narrowing of the curriculum as a direct consequence of the educational reform around standardization.

Narrowing of the Curriculum

The challenge of meeting curriculum targets expressed as testable standards on large scale high-risk tests has resulted in narrowing of the curriculum (Gunzenhauser, 2003; Mathis, 2003; Vogler, 2003) so that teachers focus on tested subjects of reading and math at the expense of social studies, physical education, arts, foreign languages, vocational education, etc.

Findings in a survey by the National Board on Educational Testing and Public Policy (Pedulla et al., 2003) revealed that in states with accountability testing, 79% of teachers reported that instruction in the tested subject areas had either increased a great deal or moderately. Additionally, more educational minutes were committed to curriculum that was tested than on content that was not tested. “This change is seen as a nearly unavoidable reaction to the pressure on teachers from district and state educational leaders to raise test scores. These effects have been documented in education research” (K. V. King & Zucker, 2005, p. 5). A study by the Council for Basic Education “found that the greatest erosion of the curriculum is occurring in schools with high minority populations—the very populations whose access to such a curriculum has been historically most limited” (von Zastrow & Janc, 2004, p. 7). Narrowing of the curriculum

has had consequences for many content areas. The effect on social studies and science will be described next.

Social studies. The National Council for the Social Studies (NCSS, 2013) identified ten themes of social studies; two of them were: "power, authority, governance" (para. 32), and "civic ideals and practices" (para. 56). Social studies has been the content area most associated with teaching about how the electoral process works, particularly the role of voting. According to the U.S. Secretary of Education:

> NCLB . . . has created flawed incentives for states and school districts to narrow their curricula to English and math. This fundamentally misguided practice leaves out core disciplines that are essential to a well-rounded curriculum, including social studies . . . as well as science, the arts, physical education, and others necessary for a well-rounded education. (Duncan, 2011, p. 124)

The solution offered by the Secretary was to "set higher standards and develop better assessments" (p. 125) for social studies as well as considering adding accountability measures. If education has a role to play in fostering voting, social studies is the part of the curriculum that is most directly related to content knowledge of how voting fits into democracy. Narrowing of the curriculum had the direct consequences of loss of instructional time devoted to knowledge that supports voter participation.

Science standards. In 2012, science standards were being developed and promoted by Next Generation Science Standards (NGSS). Achieve was managing the promotion of the standards, which they expected to be adopted by every state (Achieve, 2012e; NGSS, 2013b). The National Science Teachers Association (NSTA) advocated

for accountability for mastery of science standards. “The purpose of this accountability ultimately must be to ensure high-level student achievement in science as evidenced by fair and multiple student assessments” (2013, para. 1).

Summary. The focus of instruction on content areas that are part of the current Common Core Standards, reading and math, in order to prepare students to pass rigorous tests, diverted attention from other subjects, such as social studies and science. Advocates for these untested content areas worked to ensure that instructional time would be committed to them. The examples of social studies and science demonstrate that in order to assign priority to a content area, supporters proposed that standards and accountability measures must be put in place, an apparent response to the narrowing of the curriculum that NCLB engendered. Another content area, civics, has also fallen victim to narrowing of the curriculum. The next section will describe the role education can play in acquisition of civic knowledge, as an attribute of an informed electorate, and the role, if any, that citizenship education has to play in fostering voting behavior.

Civic Knowledge

Studies of *civic knowledge* have been one way of exploring the indirect linkage between education practices and voter participation. There a fundamental differences in teaching citizenship, teaching civics, and empowering citizens to participate in elections. Teaching citizenship can be reduced to getting along with others, “to fit in with society and conform to societal norms” (Hope, 2012, p. 96). Civics curriculum is the study of how government works accompanied by “respectable fantasies about the universal good work of elected representatives both local and national” (Crick, 1999, p. 340). Researchers who study the acquisition of civic knowledge have recently added the word

active to their descriptions of what effective curriculum might look like. The following sections focus on citizenship, as conceptualized as a goal of *21st century skills,* and active civic knowledge

21st century skills and citizenship. The U.S. Department of Commerce was an early advocate (Stuart, Dahm, & United States. Dept. of, 1999) of 21st century skills. In 2002, the U.S. Department of Education provided matching funds of $1.5 million to create Partnership for 21st century skills. The previously described narrowing of the curriculum may have given urgency to advocacy for "creativity" (Center for 21st Century Skills, 2012b, para. 1).

Defining 21st century skills is somewhat problematic, because there is no clear ownership of the concept. Trilling and Fadel described three 21st century skills (2009): "learning and innovation skills, digital literacy skills [and] life and career skills" (2012, para. 5). Verizon Foundation's Thinkfinity website devoted to 21st century skills identified the "four Cs: critical thinking and problem solving, communication, collaboration, and creativity and innovation" (2012, para. 1).

In general, proponents of 21st century skills valued development of students' critical thinking and problem solving, communication, collaboration, creativity, innovation, and citizenship. However, this movement's goals did not include education for the political empowerment of the most disadvantaged economic classes, or anyone else. Rather, citizenship was seen as the ability to "value and demonstrate personal responsibility, character, cultural understanding, and ethical behavior [and the] demonstration of proper technology use, global awareness, and moral capacity in and outside of the classroom" (Center for 21st Century Skills, 2012, para. 8-9).

Some, but not all, of the funding for 21st century skills advocacy and implementation comes from corporate sponsors like AOL Time Warner, Apple, Cisco, Dell, and Microsoft (Assessment & Teaching of 21st Century Skills, 2012a; Partnership for 21st Century Skills, 2012b). Advocates used the language of preparation of workers for competition in global markets to frame the project: “all around the world . . . nations are competing with us that never competed before” (Center for 21st Century Skills, 2012a, para 1); “ATC21S aims to offer 21st-century curricula recommendations for education systems to support an improved workforce” (2012b, para 7); “Are They Ready for Work?” (Partnership for 21st Century Skills, 2012a, para. 11); and "prepare citizens with the 21st Century Skills they need to compete" (Partnership for 21st Century Skills, 2008, p. 1). Educating students to prepare them to win a competition for jobs that provide more money, prestige and power and the accompanying greater access to resources would seem, by definition, to be in contrast to collaboration with others and success of a community or a nation.

Table 2 excerpts the language of empowerment and citizenship taken from the websites of the key advocates for 21st century skills. Voter participation is not an attribute of skills required of citizens in the 21st century skills model, as currently conceptualized by these advocates for non-STEM education. The follow section discusses the development of active civic knowledge as an instructional goal.

Active civic knowledge. Some scholars have promoted a definition of active civic knowledge that refers more specifically to learning how to participate in the political decisions of a democracy (Hope, 2012). Recent scholarship in citizenship education incorporated the word *active* into the term *civic participation*, distinguishing between a

good citizen who passively follows the laws and feels patriotic and an active citizen who "will be able to discuss whether laws work well, if they are inequitable, and how they can be changed" (Ross, 2012, p. 7).

Another distinction was the difference between understanding how one's government works and being empowered to exercise political freedom (Crick, 1999). Voting is the most obvious form of active citizenship. Ross described three other attributes of active citizenship: "participation in social movements, . . . action for social change, . . . [and] enterprise citizenship, . . . an economic model of citizenship activity" (2012, p. 8). Chow (2012) developed a "general framework of civic competency . . . as a blended measure of civic knowledge, skills, attitudes, values, beliefs, behavioral intentions and behaviors" (p. 140) to evaluate curriculum and its effects on later behavior including voting, "the fundamental participatory action of active citizenship" (p. 143).

Table 2

Text of Selected Criteria for Three 21st Century Skills Advocacy Groups

	Center for 21st Century Skills (Education Connection)	Partnership for 21st Century Skills	Assessment & Teaching of 21st Century Skills (ATC21S)
Sponsors	State of Connecticut Regional Education Service Center (Education Connection, 2012)	AOL Time Warner Foundation; Apple Computer; Cisco Systems; Dell Computer Corporation; Microsoft Corporation; National Education Association; U.S. Department of Education	Partnership for 21st Century Skills; Cisco Systems; Intel; Microsoft; Achieve; WestEd; University of Melbourne; University of Oslo; University of Minnesota; Center for Research on Educational Testing, Japan; Scottish Qualifications Authority, UK
Empowerment	-	-	Empowering kids to succeed

Table 2 (continued)

	Center for 21st Century Skills (Education Connection)	Partnership for 21st Century Skills	Assessment & Teaching of 21st Century Skills (ATC21S)
Citizenship	Responsible citizenship, social responsibility, active members in global society	Life and career skills	Decision making, skills for living in the world, citizenship, life and career, personal and social responsibility
Definition of responsible citizenship	Value and demonstrate personal responsibility, character, cultural understanding, and ethical behavior. Demonstration of proper technology use, global awareness, and moral capacity in and outside of the classroom.	-	-
Sources	(Center for 21st Century Skills, 2012a, 2012b)	(Partnership for 21st Century Skills, 2012b)	(Assessment & Teaching of 21st Century Skills, 2012a, 2012b, 2012c)

Summary. As standardization of education has given rise to a focus on reading and math, advocates for less measurable attributes of a quality education, such as creativity, pushed for curriculum and standards for a variety of skills and attributes of citizenship. 21st century skills were framed as essential learning for workers; attributes of citizenship did not include empowerment for political participation. As the curriculum narrowed, various content areas were sacrificed to make time for reading and math. Another sacrifice was individualization of education; NCLB mandated goals for all children who would achieve benchmarks described as proficient and reading at grade level, regardless of individual differences in economic circumstances, mobility,

disability, or English learner status. The next section will present a comparison of standardized education as contrasted to differentiated education.

Standardization versus Differentiation

The binary. Binary opposition was first described as an element of structuralism (Saussure, Bally, Sechehaye, & Riedlinger, 1949). A term or concept can only be completely understood by knowing not only what it is but what it is not; a clearly articulated specification of the opposite of a concept is required in order to define the concept completely. One example of the hierarchical nature of the binary (Derrida, 1976) is the male/female binary. The constellation of attributes of human behavior is divided into two groups, one of which is attributed to the dominant group while the other is attributed to the subordinate group. This dichotomous sort of attributes was/is rationalized as natural, biological, or self-evident; the male/female binary allows for attributions of rational/emotional and instrumental/receptive.

The binary has been used to justify the otherising of the colonized by the conqueror (Said, 1978) with a binary of white/black, imperial/colonized, orthodox/exotic, superior/inferior, and winner/loser. The binary has been useful in explaining male hegemony (Connell, 1995) and how we "'do' gender" (West & Zimmerman, 1987). The binary enables the maintenance of power and privilege by the dominate group as both sides of the binary accept the attributes as normal and inevitable. "Privileged groups continue to dominate the public discourse by exerting powerful influence over the discourse of the public media" (E. S. Herman & Chomsky, 2002).

A binary for educational standardization. Educational policy and practice can been divided into two contrasting practices and theories, standardization and

differentiation (Noddings, 2010). The theory that underlies standardization is instructionism (Papert, 1993). Instructionism is a traditional vision of knowledge as a collection facts and procedures that teachers transmit to students. One assumption of instructionism is that "the way to determine the success of schooling is to test students to see how many of these facts and procedures they have acquired" (Sawyer, 2006, p. 1). The U.S. Department of Education (US DOE) advocated for standardization (U.S. DOE, 2010a, 2010b; U.S. DOE Office of Vocational and Adult Education, 2012) as a major theme in the latest round of education reform. Other powerful advocates for standardization, American corporations and business leaders, have:

> articulated a powerful and steady vision for the standards-based reform movement to policymakers, educators, parents, students and the public about the urgency of school reform. This school reform movement rests on high academic standards, rigorous assessments that measure achievement and real accountability for results at all levels of the education system. (Business Tools for Better Schools, 2012, para. 2)

While some promoted standardization, others argued for differentiation (Noddings, 2010; Smutny, 2003; Wood, 2002). "We do not need to standardize. We need to differentiate—to offer a greater variety of courses" (Noddings, 2010, para. 9). Teachers rarely teach in homogenous classrooms; usually their students have "significant differences in learning styles, skill and ability, and linguistic and cultural background. These differences make the 'one size fits all' principle inoperative" (Smutny, 2003, p. 7). With each passing year, general education teachers face the additional challenges of an increasing inclusion of children with disabilities and greater numbers of students for

whom English is a second language. “Without question, one of the primary concerns of classroom teachers throughout the nation is how to meet the ever increasing diverse learning needs of students in our classrooms today” (Wood, 2002, p. 155).

The theory that underlies differentiation is constructivism (Piaget & Gabain, 1932; Vygotskii & Cole, 1978). Constructivism is antithetical to instructionism (G. Johnson, 2009). Rather than seeing a student as a recipient of knowledge, in a constructivist description of the learning process a student constructs knowledge by interacting with the environment in developmental stages such as concrete and abstract operations (Piaget & Gabain, 1932). A student constructs meaning as a result of interacting with content that is within that individual’s zone of proximal development (Vygotskii & Cole, 1978). Cognitive or learning science (Sawyer, 2006) elaborates on these theories. The learning sciences incorporate “the importance of deeper understanding, . . . focusing on student learning in addition to teaching, . . . creating learning environments, . . . the importance of building on a learner’s prior knowledge, [and] . . . the importance of reflection” (p. 2). Sawyer contrasted instructionism with “learning knowledge deeply [based on] findings from cognitive science” (p. 4). He described the attributes of flexible and inventive knowledge workers who collaborate and adapt to changing circumstances “in complex social settings” (p. 5). “Authentic practices” (p. 4) are a pedagogical response to Sawyer’s desirable outcomes, in which differentiated instruction allows students to engage in inquiry rather than merely memorize facts.

Educational standardization can be subject to a critical theory lens that applies the concept of the binary, in which educational standardization is the dominant half of the

opposing pairs of terms and differentiation is the subordinate half. Table 3 presents a *Dichotomous Sort of Accountability Concepts*, one way of thinking about the contrast between standardized and differentiated educational practice and the policies that support these contrasting visions.

Summary

Educational standardization has been a process that matches the rise of corporatization of American life. Business values of efficiency and market driven strategies of competition, rewarding success and punishing failure, have slowly and incrementally taken over the guiding vision of education. Narrowing of the curriculum has been a natural consequence of the standards based movement, particularly as manifested in NCLB. Solutions to the problem of the narrowing of the curriculum, as promoted by educational leaders like Secretary of Education Duncan, focused on including social studies as a content area subject to mandatory testing and accountability, while science teachers advocated for adding science to the list of content areas for which teachers and schools must be held accountable. Even advocates of the development of creativity in school children (21st century skills) framed this as beneficial to workers in the service of the businesses who employ them when they graduate, college- and career-ready.

Some make the argument that goals for all children, manifested in expected mastery of explicit standards based on a child's chronological age, do not adequately address the wide variety of student strengths and weakness. Differentiation of instruction to meet the needs of individuals can be seen as an alternative to standardization.

Table 3

Dichotomous Sort of Accountability Concepts

Standardized	Differentiated
Commerce; business; industry; technological innovation; blueprint	Educated populace; enlightened participation; respect for the individual; personal agency
Cost-benefit; inputs/outputs; efficiency	Optimal outcomes for individuals
Produces workers; world markets	Individual responsibility, freedom, and benefits
Competition to succeed; winners and losers	Collaboration among peers
Accountability; blame, failure	Support; professional development
Sanctions, punishment; choice, privatization	Funding; opportunity to learn; equitable facilities
High standards; setting the bar high	Zone of proximal development (ZPD); Response to Intervention (RTI)
High expectations for all students	Optimal outcomes for each student
High school diploma based on passing proficiency exams (Algebra II, etc.)	Various levels of diploma with certifications for Algebra II and other gateway courses
Meritocracy / sorting of students by "ability" to prepare them for jobs in business and industry	Respect for the individual; play is the work of children; constructivism; active learning; higher order thinking skills, creativity, entrepreneurship
Large scale testing; accountability	Needs of the whole child; school climate
Summative assessments drive performance	Formative assessments inform instruction
Measuring for effective teachers (VAM)	Teacher learning communities
Testing; measurement	Active learning; SEL, developing human consciousness, social responsibility, life skills
Teacher dominated classroom	Student centered classroom
Science, Technology, Engineering, and Mathematics (STEM)	Foreign languages, vocational shops, history, political science, art, music, theater, sports, citizenship, philosophy, physical education, health education, family and consumer studies
B.F. Skinner, Adam Smith, *A Nation at Risk*	Vygotsky, Piaget, Dewey, Jefferson, Du Bois

Conclusion

Few would argue against the notion that U.S. public education should produce, as Jefferson envisioned, an informed electorate. Unfortunately, as standardized education policies and practices have increased, voter participation has remained low compared to other countries and has declined or at least fluctuated, while continuing to vary substantially between groups and among states. Of the many factors investigated for their relationship to voter participation, education stands out not only because it has been consistently related to improved outcomes, but also because offers a path for action. While we cannot easily redistribute the wealth and thus change a person's economic status, we can distribute more education. Unfortunately, the mechanism by which more education increases voter turnout is not easily understood and is confounded by other variables. Evidence does support the role of education as a moderator to challenges of institutional voter suppression, as well as poverty, mobility and other obstacles to voting.

The evidence assembled in this literature review does not provide any evidence that the standardization of public education is intended to support voter participation. Ross advocated for an education system that foments active citizenship; "the curriculum . . . must help the individual understand both their own identity and the nature of society, and how to actively engage with the complex relationship of rights and responsibilities that exist between the two" (p. 7). Hope argued for "experiential learning" (2012, p. 99) for students who were to be valued as citizens in the contemporary moment, rather than prepared from some abstract future citizenship. "Making democracy work requires that schools take this goal seriously: to educate and nurture engaged and informed democratic citizens" (Kahne & Westheimer, 2003, p. 36).

Is there a relationship between a state's commitment to standardization and to voter participation? Do states that embrace the new vision of educational reform also institutionalize obstacles to voting? If there is a relationship between state educational standardization and state voter turnout, it will provide a direction for critical scholars and others who theorize on the role public education can and should play in producing an informed electorate. A finding of a negative correlation informs policy makers about the unintended consequences of an emphasis on Common Core content at the expense of other content areas. If no relationship is found, the importance of empowering disadvantaged groups will not be diminished; such research helps direct the attention of scholars to other more fruitful avenues of investigation. This study asked four questions.

Research Questions

1. What is the relationship between a state's level of educational standardization and its voter turnout in the 2012 national election?
2. What is the relationship between a state's level of educational standardization and change in that state's voter turnout between 2000 and 2012?
3. What institutional factors affect educational standardization and voter turnout?
4. What cultural and demographic attributes provide context for understanding a state's level of educational standardization and voter turnout?

CHAPTER III

METHODS

This exploratory investigation examined the relationship between educational standardization and voter turnout for states. This exploratory research was framed by cultural theory and critical theory lenses. It relied also on the methodology of complementarity mixed-methods research design, which allowed for an exploration of both quantitative and qualitative data in order to generate knowledge and refine questions around educational standardization, voter turnout, and the proper role of education.

A cultural theory lens explained "policy regularities (patterns of policy activity resulting from a state political culture . . . [focusing] on belief systems and external societal variables as driving policy activity, particularly at state level" (Heck, 2004, p. 322). A cultural theory design utilized case study, was non-experimental, and policy decision was the conceptual unit of analysis. Using a cultural theory lens, regularities in state policy behavior and differences between states were explained by a set of basic concepts including value preferences, in this study the *Dichotomous Sort of Accountability Concepts*.

A critical theory lens can "examine how systemic features structure, disguise, suppress, and silence conflict for marginal groups" (Heck, 2004, p. 24). The *Dichotomous Sort of Accountability Concepts* drew directly on the critical theory concept of a hierarchical binary as a tool for reification of power and privilege (Connell, 1995; Derrida, 1976; E. S. Herman & Chomsky, 2002; Saussure et al., 1949; West & Zimmerman, 1987). A first iteration of the *Standardized Educational Index* (SEI) was

developed to measure state level of standardization as part of the quantitative component of the study.

In the qualitative component, elements of both cultural theory and critical theory lenses framed exploration of two exemplar states' institutional factors and cultural, geographic, and demographic attributes regarding the nature and formation of their educational standards and accountability Administrative Rules (ARs) and voter regulations (Heck, 2004). "Flexibility in examining a policy problem from alternative perspectives . . . opens up new possibilities for understanding problems in expansive ways that move us toward viable policy solutions" (p. xxii).

Research Design

Complementarity Design

A mixed-methods study is an approach to social inquiry involving "the planned use of two or more different kinds of data gathering and analysis techniques" (J. Greene, Kreider, & Mayer, 2005, p. 274). One model for understanding mixed-methods research, depicted in Figure 8, identifies seven purposes for mixing methods—triangulation, complementarity, expansion, iterative, embedded/nested, holistic, and transformative (J. Greene & Caracelli, 1997).

Component designs of triangulation and expansion types and integrated designs of iterative, embedded/nested, holistic, and transformative types look contemporaneously at both quantitative and qualitative aspects of a topic or subject. In contrast, the complementarity design is sequenced; it seeks to enhance or clarify an aspect of the study (J. Greene & Caracelli, 1997). "In a complementarity mixed-method study, qualitative and quantitative methods are used to measure overlapping but also different facets of a

phenomenon, yielding an enriched, elaborated understanding of that phenomena" (J. Greene, Caracelli, & Graham, 1989, p. 258). Complementarity is an appropriate design for this study, which starts with a quantitative analysis of observable facts and then follows up with an in-depth examination of the nature of the phenomena.

As previously noted in the first chapter, in this work the terms *standardization* or *standardized* mean uniformly administered to meet set standards. The SEI is a measure of the extent to which states' K-12 educational practices are uniformly administered to meet set standards. This is to be differentiated from the standardization of scores for statistical analysis, such as the generation of *z*-scores, which is indicated by the term *statistically standardized*.

Designs for mixed methods research	
Component designs: methodologically discrete, combination at level of interpretation only	
triangulation	seeking convergence on one aspect
complementarity	seeking enhancement or clarification of an aspect
expansion	considering different aspects (side-by-side)
Integrated Designs: integrate methods and elements of different paradigms	
iterative	interplay of different methodologies over time (multiple stages)
embedded/nested	one methodology set in "creative tension" within another contrasting method of inquiry
holistic	interdependent methodologies working simultaneously with complex data
transformative	valuing the dialog across different traditions; value-based and action oriented

Figure 8. Mixed-Methods Research Designs (J. Greene & Caracelli, 1997, p. 18)

Quantitative Design

This study was conducted in two stages. First, the quantitative component developed a tool for measuring state levels of educational standardization, the *Standardized Education Index* (SEI), modeled on Richard Florida's *Creativity Index* (2002). The SEI will be useful in a variety of contexts to help answer research questions involving comparisons between states involving standardization of K-12 public education. In this study, a 2012 measure of SEI and state voter turnout data were used to answer two questions:

1. What is the relationship between a state's level of educational standardization and its voter turnout in the 2012 national election?
2. What is the relationship between a state's level of educational standardization and change in that state's voter turnout between 2000 and 2012?

Qualitative Design

The second stage of the project was an in-depth analysis of two states. A "common purpose for combining qualitative and quantitative methods is to use the results from one method to elaborate, enhance, or illustrate the results from the other" (J. Greene et al., 1989, p. 266), sometimes called "peeling back the layers of an onion" (Creswell, 2008, p. 183).

In the qualitative component of this study, emergent cross-case analysis explored and described relevant data for two states selected on the basis of the quantitative component to suggest answers to the final research questions:

3. What institutional factors affect educational standardization and voter turnout?

4. What cultural and demographic attributes provide context for understanding a state's level of educational standardization and voter turnout?

The Steps

There were several steps in this study's methods. The quantitative component started with the collection of data that supported the SEI and the calculation of state SEI scores. Next was the collection of comparable data on state voter participation in national elections for 2000 and 2012. Statistical analysis determined any correlative relationship between the two variables.

An examination of the results of the relationship between the 2012 SEI and the 2012 VEP data led to the purposeful selection of two states for the quantitative component; Arkansas and New Hampshire were chosen as the two states for case study and a cross-case exploration was conducted and a description was written. Table 4 provides a step-by-step description of these steps. The following sections describe the quantitative and qualitative components and address validity issues.

Quantitative Component

The quantitative component of the study had two key variables, the SEI and voter turnout. The SEI was used to calculate a state's level of standardization compared with other states. Voter participation data relied on the United States Elections Project (USEP) data for 2000 and 2012 (M. McDonald, 2011a, 2012b). Correlation analysis determined any relationship between a states' SEI and its voter participation rate. The first correlation analyses tested for a relationship between state's SEI and its 2000 and 2012 voter

participation levels. The other correlation analysis tested for a relationship between a state's SEI and any increase or decrease in voter turnout between 2000 and 2012.

Table 4

Dissertation Methods Steps

Sequence	Item	Details
1	SEI	Collect SEI data, determine scores.
2	Voter participation	Collect voter participation data, prepare for analysis.
3	Data analysis	Using SPPS, run correlation tests for two research questions.
4	Interpretation	Examine the results for relationships and interpret.
5	Selection of cases	Choose two exemplar states for cross-case exploration.
6	Exploration	Collect equivalent data for each state regarding the two variables, synthesize, and report.

Data Collection: Standardized Education Index

Drawing on the Creativity Index developed by Richard Florida (2002), the SEI was developed as a tool for measuring state levels of educational standardization. The next sections describe the literature relevant to the creation of the SEI, the construct of standardized K-12 education, similarities and differences between Florida's Creativity Index and the SEI, and finally describe the SEI and its indicators.

Research basis for the SEI. An index is "a number derived from a formula, used to characterize a set of data" (The Free Dictionary, 2013, para. 7) or "a number (as a ratio) derived from a series of observations and used as an indicator or measure" (Merriam-Webster, 2013, para. 7). This study developed a tool for evaluating state levels of educational standardization, the SEI, modeled on Richard Florida's (2002) Creativity Index.

Knowledge workers are those who think for a living (Sawyer, 2006). Such employees include software engineers and architects; they are a hypothesized desirable economic outcome of a public education that goes beyond instructionism. The concept of a *Creative Class* is another approach in describing attributes of similarly desirable workers. Florida (2002) invented the creativity index and used it to compare the creativity of geographic regions as a variable that was useful in predicting economic outcomes.

Florida posited that members of the Creative Class achieve economic and social power in their "roles as purveyors of creativity" (p. ix). Florida developed contextual or environmental indicators that correlated with the presence of the creative class. He described a set of places which he termed "creative centers" (p. 218). His research showed that creative centers were magnets for the creative class and primed these regions for economic growth.

Florida divided workers into four categories, Creative Class, Super-Creative Core, Working Class, and Service Class. His Creativity Index was comprised of four indicators: the representation of the creative class in the workforce; innovation as measured by patents per capita, the ranking of cities as a high-tech centers, and diversity, as measured by the "Gay Index, . . . a measure which explores the location patterns of gay people" (p. x). Using his Creativity Index, Sawyer identified "the San Francisco Bay Area as the nation's undisputed leader in creativity" (p. 244). There has been some criticism of Florida's causality claims connecting the Creative Class with regional economic growth (Glaeser, 2005; Peck, 2005; A. Scott, 2006), but Glaeser saw his concern as "a small quibble" (2005, p. 596). Some support for Florida's creativity indicators has been found by other researchers (Clifton, 2008; Lorenzen & Vaarst Andersen, 2005). One study

found that several researchers had tested “Florida’s claims about the causalities between labor and capital in a European context . . . [and] found good correlations among the presence of a creative class, ethnic diversity, cultural services, and economic growth in a European context” (Lorenzen & Andersen, 2009, p. 368).

Most important to this dissertation, Florida developed a theoretical framework for matching a theoretical construct (the Creative Class) with a geographical location (a creative class region), using a measurement tool (the Creativity index), that draws on indicators (share of workforce, innovation level, high-tech industry ranking, and diversity measure). To justify the geographical location of a creative context, Florida devised a creativity indicator with four variables, a percentage of workers who were members of the creative class, rate of innovation, a measure of high-tech development, and the Gay Index of cities.

Defining a construct. The SEI is a measure of the extent to which a state’s policies and practices are organized and administered around clear, measurable standards. The SEI is intended to reflect a state’s development of both content and performance standards in compliance with the current emphasis on large-scale high-risk testing driven by an emphasis on efficiency and accountability. A key aspect of state standardization is collaboration and cooperation with other states in developing uniform and shared standards as expressed in the Common Core Standards. Variability of the SEI within the population of U.S. states and of voter turnout for states allowed for analysis of relationships between a state’s SEI and its voter turnout.

Comparison. While Florida’s creativity index identified four contextual or environmental indicators that correlated with the presence of what he termed the creative

class, the SEI identified nine indicators of standardized education to measure states' level of educational standardization. Florida described a set of places which he termed "creative centers" (2002, p. 218). His research showed that the geographic areas that qualified as creative centers were magnets for the creative class and primed these regions for economic growth. The SEI has been used here to investigate relationships between states' SEI scores and their levels of voter turnout.

The 2012 SEI. The SEI used in this study was based on nine indicators of educational standardization, summarized in Table 5. A state's SEI score was calculated using a counting system ranging from zero to nine, with zero assigned to a state with no indicators of a standardized educational context and nine being the strongest indicator of a standardized educational context for a state. Statistical standardization of the SEI scores (standardization of coefficients) was utilized to generate *z*-scores to represent each state's SEI score.

Indicators 1 through 8. A key source of data for SEI was Achieve (2012e), a non-profit educational policy advocacy group created in 1996 by a "a bipartisan group of governors and corporate leaders . . . dedicated to supporting standards-based education reform efforts across the states" (2012d, para. 1). Achieve was ranked by *Education Week* in 2006 "as one of the most influential education policy organizations in the nation" (para. 2). Achieve reported their analysis of states' efforts to standardize educational policy in *Closing the Expectations Gap 2011: Sixth Annual 50-State Progress Report* (2011). In December of 2012, a detailed online presentation of the report, *The States* (2012e), described how well aligned each state was to the Achieve goals of standardization of educational policy and practice regarding standards, high school

diploma, assessment, P-20 longitudinal data collection system, and accountability as well as membership in national standardization groups.

Table 5

SEI Indicator Descriptions and Sources

Indicator	Title	Description	Source
1	Standards	Align high school standards with the expectations of college and careers	(Achieve, 2012e)
2	High school diploma	Align highs school graduation requirements with college- and career-ready expectations	(Achieve, 2012e)
3	Assessment	Develop college- and career-ready assessment systems	(Achieve, 2012e)
4	P-20	Develop P-20 longitudinal data systems	(Achieve, 2012e)
5	Accountability	Develop accountability and reporting systems that promote college and career readiness	(Achieve, 2012e)
6	College- and career-ready goals	Member of Achieve's ADP Network	(Achieve, 2012e)
7	Standardized growth model across states	Member of PARCC	(Achieve, 2012e)
8	Leader in standardizing science	NGSS lead partner state	(Achieve, 2012e)
9	Common core standards	Adopted Common Core Standards for math and English language arts	(ASCD, 2012b; CCSSI, 2012)

Indicators 1-5. Of the indicators drawn from Achieve data sources, the first five indicators were drawn directly from Achieve's ratings for states College- and dareer-ready policies (Achieve, 2012f). as detailed in Figure 9, the Achieve website entry for the state of Tennessee (Achieve, 2012f). The full report for Tennessee can be found in Appendix B.

College and Career-Ready Policy	
Align high school standards with the expectations of college and careers	Yes
Align high school graduation requirements with college- and career-ready expectations	Yes
Develop college- and career-ready assessment systems	Yes
Develop P-20 longitudinal data systems	
Develop accountability and reporting systems that promote college and career readiness	

Figure 9. Detail of Achieve Policy Goals for Tennessee (Achieve, 2012f)

Indicators 6, 7 and 8. The next three indicators reported states' membership status regarding three standardization groups, all reported by Achieve as evidence of standardization. Indicator 6 was membership in ADP (Achieve, 2012e); indicator 7 was membership in the PARCC consortium (2012e); and indicator 8 reflected a state's status as a Next Generation Science Standards (NGSS) Lead Partner state (2013a).

Indicator 6 drew on a source related to Achieve, the American Diploma Project (ADP) (Achieve, 2012e). Achieve launched ADP in 2005 "to make college and career readiness a priority in the states" (Achieve, 2012b, para. 1); ADP was the direct result of Bill Gates' advocacy and funding in support of college- and career-readiness (Hess, 2005). "Through the ADP Network governors, state education officials, postsecondary leaders and business executives work together to improve postsecondary preparation by aligning high school standards, graduation requirements and assessment and accountability systems with the demands of college and careers" (Achieve, 2012b, para. 2). State membership in ADP was a strong indication of adoption of college- and career-

ready goals, in alignment with a key goal of the standards movement as promoted by Achieve.

Indicator 7 drew on Achieve website data (Achieve, 2012e) on states' membership in the PARCC consortium. In 2012, membership in PARCC reflected a state's affiliation with other states sharing the goal of aligning educational standards, assessments, and policies, a standardized growth model across states. The theory of action section of the consortium's Race to the Top application (2010) provides evidence of the standardization reform that underlies PARCC's operating principles.

Two key consortiums of states emerged in the Race to the Top grant application process. PARCC was led by the Florida DOE (PARCC, 2010) and Achieve (2012a), and Smarter Balanced Assessment Consortium (SBAC) (2012), was led by the Washington State DOE (SBAC, 2010) and WestEd (2011). Race to the Top applications required documentation of a theory of action. Instructions for this federal grant money specified the inclusion of "a theory of action that describes in detail the causal relationships between specific actions or strategies in the eligible applicant's proposed project and its desired outcomes for the proposed project, including improvements in student achievement and college- and career-readiness" (Willhoft, 2010, p. 19).

Drawing the binary standardized/ differentiated presented in the *Dichotomous Sort of Accountability Concepts* (see Table 3), the theories of action presented by the PARCC and SBAC consortiums reveal divergent rationales, with PARCC supporting a standardization framework and SBAC prioritizing differentiation of instruction to respond to the varying strengths and weakness of individual students, as well as less regimentation of expectations for teacher performance. The PARRC application offered

an assessment driven system. Key concepts included: students "are on a trajectory for postsecondary success; . . . where gaps may exist and how they can be remediated; . . . enter the workforce; . . . proposed assessments are one lever for improvement, and . . . the assessments' success is tied to the strength and rigor of classroom curriculum" (2011, pp. 34-35). In contrast, the theory of action in the SBAC application featured: "assessments are structured to continuously improve teaching and learning; . . . teachers involved in development and scoring of assessments; . . . assessments produce evidence of student performance; [and] multiple measures" (2010, pp. 32-33). Building on the language embedded in the PARRC theory of action and that of SBAC, a dichotomous sort of concepts is presented in Table 6. For supporting text from the PARCC and SBAC theory of action sections of their Race to the Top applications, see Appendix C.

Table 6

Sample Language from PARCC and SBAC Race to the Top Applications

PARCC	SBAC
Assessments are a lever to improve the education system.	Assessments are structured to continuously improve teaching and learning.
Assessments success is tied to the strength and rigor of classroom curriculum.	Teachers should be involved in the creation of assessments.
Students are on a trajectory for success or failure; gaps exist and should be remediated.	Assessments provide evidence of student performance.

Table 7 presents an interpretation of the theories of action, corresponding to the PARCC and SBAC Race to the Top applications, which helps contextualize the use of PARCC membership as an indicator of a state's level of standardized education by comparing it to SBAC's underlying values. The SBAC theory of action was orientated less towards all students achieving standardized goals and more towards differentiation of

instruction, relying less on scores on high-stakes large scale tests as the measure of a successful student, teacher, and educational process and more on goals of teacher collaboration to produce success.

Indicator 8 reflected a state's status as a Next Generation Science Standards (NGSS) Lead Partner state (2013a). In December 2012, Achieve identified "lead state partners [taking responsibility to] provide leadership to . . . other states as they consider adoption of the NGSS, and address common issues involved in adoption and implementation of the [NGSS] standards" (Achieve, 2012c, para. 1). NGSS leadership status was evidence of a state's promotion of educational standardization; the list of tasks to which lead partner states agreed included sending a representative to NGSS meetings to plan adoption and implementation of state science standards and publicizing the work, including promoting a timeline for adoption of the standards (Achieve, 2012c). (See Appendix D for the complete list of state responsibilities.)

Table 7

Comparison of the Theories of Action of PARCC and SBAC

Standardized (PARCC)	Differentiated (SBAC)
High expectations for all students	Optimal outcomes for each student
Summative assessments drive performance	Formative assessments inform instruction
Competition to succeed	Collaboration among peers
Measuring for effective teachers (VAM)	Teacher learning communities
Accountability, failure, sanctions	Support, opportunity to learn

Indicator 9. A state's adoption of the Common Core Standards was a strong indication of attempts to standardize education. The website of the Common Core State Standards Initiative (CCSSI) (2013a) states:

> The standards clearly communicate what is expected of students at each grade level. This will allow our teachers to be better equipped to know exactly what they need to help students learn and establish individualized benchmarks for them. The Common Core State Standards focus on core conceptual understandings and procedures starting in the early grades, thus enabling teachers to take the time needed to teach core concepts and procedures well—and to give students the opportunity to master them. With students, parents and teachers all on the same page and working together for shared goals, we can ensure that students make progress each year and graduate from school prepared to succeed in college and in a modern workforce. (para. 1-2)

Another advocate for the adoption of the Common Core Standards was ASCD (formerly known as the Association for Supervision and Curriculum Development), a membership organization of 150,000 superintendents, supervisors, principals, teachers, professors of education, and school board members from 145 countries (2012a). Indicator 9 reported a state's adoption of the Common Core Standards, drawing on data provided on the CCSSI website on the states that had adopted the Common Core Standards in December of 2012 (CCSSI, 2012). This information is detailed in Appendix E. the next section describes the data collection for the other variable in the study, state voter participation.

Data Collection: Voter Turnout

Choosing the source for data on voter participation at the state level for the 2000 and 2012 general elections was a complex process. An examination of the literature revealed that there were two kinds of data sources for U.S. voter participation levels used in peer-reviewed studies. The first was actual vote counts and data based on those counts. The second was based on surveys, or self-reports. Actual vote counts are more reliable than self-reports of voting behavior. The most obvious choice for data on actual vote counts was The U.S. Census Bureau (USCB) but their report of voter turnout by state for the 2012 election was not available in December of 2012 while data was being collected for this study.

An investigation into an alternative reliable source for comparable data for 2000 and 2012 started with phone calls to USCB, moved to the Clerk of the U.S. House of Representatives (Clerk of the House), and then led through a labyrinth of governmental agencies. Each individual contacted was interviewed to get leads on reliable data for the 2012 election. The most useful conversation with a government official was an interview with Underhill (2012), a Senior Policy Specialist at the National Conference of State Legislatures (NCSL), Elections and Campaigns Division (NCSL, 2013). She recommended two experts in the country who generate reliable data on voter participation levels for the 2012 (and other) elections, McDonald and Gans. The following sections describe the kinds of data sources used in peer-reviewed studies involving voter turnout, results of the investigation of a reliable source of voter turnout data for the 2000 and 2012 presidential elections, and the decision process utilized to select a data source for this study.

Data sources in peer-reviewed studies. Relevant reports of research discussed or referenced in this work were examined for the sources of voter participation data. Studies before 1997, studies that did not cover U.S. national elections, and studies that were at the most local levels (lower than state level) were screened out. Additionally, a search of all University of Oregon (UO) Library databases for the term "voter turnout" provided some insight into how other researchers determine voter turnout for the purposes of quantitative statistical analysis. Of 120 records located, some germane studies were identified. Next the UO Library databases were searched for the term "voter participation." 120 items were located, of which five relevant sources were not redundant and have been included in the following analysis of sources of voter turnout in recent relevant studies published in peer-reviewed journals. Most of the studies relied on self-report survey data; altogether, one study was located that used actual vote counts and one that used VEP data based on the actual counts. In the next sections, peer-review studies are examined for their data sources; first, official sources are examined, then, data based on actual vote counts, next survey sources, and finally some online and ambiguous sources are discussed.

U.S. Census Bureau. USCB (2012a) provided official reports of voter turnout, drawing on official reports from the Clerk of the House. One example is *Table 397. Participation in Elections for President and U.S. Representatives* (para. 1), which reported the raw data of participation in presidential elections from 1932 to 2010. USCB was a reliable source of voter participation data. Exact data on election participation up through 2010 was available for each state on the USCB website. In order for this to be study contemporary and relevant, it was desirable to use data from the 2012 election, but

that information had not been made available on the USCB website by late December of 2012. After a day of phone calls to various governmental agencies, it became clear that no U.S. agency, including the USCB, would make available data on the 2012 election results for months. Predicted publication dates ranged from spring to fall of 2013.

Clerk of the U.S. House of Representatives. The Clerk of the House has provided the official records of voter turnout in federal elections since 1920 (2013). A phone call to the Clerk of the House in late December of 2012 elicited the information that producing official records of voter turnout depends on states submitting legally sanctioned documents, a process which takes much longer than the accounts of voter turnout reported by states to the public at the time of an election. The predicted release date of official U.S. government reports for the 2012 presidential election was spring of 2013 or later, too late to be used as the data collection for this study. Clerk of the House voter turnout data was used in one study, (Plane & Gershtenson, 2004). This study relied on survey data as well and is reported again below.

United States Election Project. Underhill recommended McDonald (2011a, 2012b) as an expert whose work supplied reliable data on voter participation levels for the 2012 and other elections (Underhill, personal communication, December 31, 2012). USEP voter turnout relied on federal and state official reports of voter turnout. McDonald's data, reported on the USEP website, differentiated between VAP and VEP. Two studies utilized this work (M. McDonald & Popkin, 2001; Tolbert & Smith, 2005).

Gans. Underhill also identified one of the authors of *Voter Turnout in the United States 1788-2009* (Gans & Mulling, 2011), as a nationally recognized expert on voter turnout. The book, which is available in electronic form online, was based on and

reported the work of the Center for the Study of the American Electorate. Tables in the book provided VEP data for presidential elections using calculations similar to McDonald's USEP formulas. A phone conversation was conducted with Gans on December 31, 2012. He predicted that his work on the 2012 election would be made available to the public in a few weeks, not in time for the data collection phase of this study.

U.S. Census Bureau's Current Population Survey. One popular source of voter participation rates has been survey data presented in the U.S. Census Current Population Survey (CPS). "The CPS is a monthly survey of about 50,000 households conducted by the Bureau of the Census for the Bureau of Labor Statistics. The CPS is the primary source of information on the labor force characteristics of the U.S. population" (U.S. Department of Commerce, 2013, para. 1). Well respected because of its large sample size and detailed demographic information, it reports survey results about, "citizenship status, registration and voting" (N. H. Wolfinger & Wolfinger, 2008, p. 1516). Some quantitative studies published in peer-reviewed journals depended on CPS voter participation data (Blakely et al., 2001; Bueker, 2005; Flavin, 2012; R. A. Jackson, 2003; Logan et al., 2012; M. McDonald, 2008; Tenn, 2005, 2007; Vonnahme, 2012; N. H. Wolfinger & Wolfinger, 2008; Xu, 2005)

American National Election Studies. The American National Election Studies (ANES), often referred to as NES, or in older research as the Michigan Studies, used surveys to gather data on voter turnout and other forms of political participation. Besides CPS, it was "the other common source for analyses of electoral participation, completed pre- and post-election interviews" (N. H. Wolfinger & Wolfinger, 2008, p. 1516). The

NES Time Series Studies collects before and after survey data for presidential years. Numerous studies, as reported in peer reviewed journals, relied on ANES, NES, or the Michigan studies for data on voter participation (Adams, Dow, & Iii, 2006; Blais & Rubenson, 2012; Burden, 2009; A. L. Campbell, 2002; Fullerton & Borch, 2008; Fullerton & Stern, 2010; Goldstein & Ridout, 2002; Green & Shachar, 2000; K. Greene & Nikolaev, 1999; Killian, Schoen, & Aaron, 2008; Plane & Gershtenson, 2004; Squire et al., 1987; Timpone, 1998; Tolbert & McNeal, 2003; N. H. Wolfinger & Wolfinger, 2008),

National Center for Education Statistics. The National Center for Education Statistics (NCES) (IES, 2013b) collected survey data on a nationally representative sample of students, starting when they were in eighth grade, which was then reported in the National Education Longitudinal Survey, 1988-2000 (NELS). Among other things, NELS collected data on voter participation of respondents in the 1992 and 1996 presidential elections. NELS was the data source in peer-reviewed studies featuring quantitative analysis of voting behavior (Frisco et al., 2004; Pacheco & Plutzer, 2007; Sandell & Plutzer, 2005). One part of the NELS data collection was made available as the High School & Beyond data set (IES, 2013a), which was used in one relevant study (Dee, 2004). The Baccalaureate and Beyond Study (ANES, 2013) was another data collection by NCES; it was used in one study of voter participation (Hillygus, 2005).

National Black Election Study Series. The Program for Research on Black Americans at the Institute for Social Research, University of Michigan started collecting survey data in 1984 in The National Black Election Study series (NBES), relying on the Ford Foundation, the Rockefeller Foundation, and the Carnegie Corporation for funding.

The survey design of pre-and post- presidential election interviews allowed for monitoring of changes in Black political views and actions. (J. S. Jackson, Gurin, & Hatchett, 2013). NBES survey data was used for two relevant studies (Chong & Rogers, 2005; Wilson, 2012) reported in peer-reviewed journals.

The National Annenberg Election Survey. The National Annenberg Election Survey (NAES) (University of Pennsylvania, 2013) examined political attitudes about candidates. utilizing internet and phone surveys. NAES was the source of voter participation data in one study (Flavin, 2012) reported in a peer reviewed journal.

Roper Social and Political Trends. *Roper Social and Political Trends Data, 1973-1994* (Roper Center, 2013) "includes selected items from 207 public opinion surveys conducted as part of the Roper Reports series by the Roper Organization or its successor organization RoperASW between 1973 and 1994. More than 400,000 unique respondents are included in this cumulative file" (para. 3). This survey data source was used in one quantitative study (Platt, 2008), as reported in a peer-reviewed journal.

Researcher surveys. Some studies into voter participation relied on surveys developed by the researchers themselves. This research on voter turnout was based on surveys by internet, phone or in-person interviews that utilized questionnaires created (or assembled from other sources) and conducted by the researchers themselves (Claassen, 2008; Fowler & Dawes, 2008; Mann, 2005; J. Parry, Barth, Kropf, & Jones, 2008; Schur, Shields, Kruse, & Schriner, 2002).

Online data sources. One peer-reviewed quantitative analysis of voter turnout of American youth (Pacheco, 2008) relied on two websites. The first was sponsored by Harvard University, The Record of American Democracy (ROAD) (G. King &

Palmquist, 1999). The other, Dave Leip's Atlas of U.S. Presidential Elections (2013b), was the work of an electrical design engineer (Leip, 2013a).

Ambiguity. Some reports of quantitative research in peer-reviewed journals did not clearly state the sources of voter turnout data. One study (Burden, 2000) used the terms "official estimates [and] official voter turnout" (p. 389) without describing the source of that data. Another study (Green & Shachar, 2000) mentioned concerns about the "ongoing debate about whether to use report or actual vote" (pp. 565-566), and mentioned using ANES data for 1972-76, which is survey-based self-reported data. The authors then reported: "It turns out, however, that the choice of one measure over the other has little effect on the estimates we obtain, a finding that squares with some other studies that find relatively small differences between analyses of validated and reported vote" (p. 566) but no mention was made of the source of the *actual* or *validated* voter turnout used in the study.

Challenges to survey data. NES overestimated the official voter turnout for presidential elections; in 1952 it was 11% over; in 1996 it was 24% over (Burden, 2000). "It is common knowledge that the NES estimates are substantially higher than official government estimates of voter turnout reported by the media just after each election" (p. 390). None-the-less, at the time of writing, Burden reported that the NES "remains the best source of American political survey data" (p. 389). Burden suggested that the most common explanation is that the data collected from surveys like the NES relies on self-reports of voting behavior. Survey data that relies on self-reports of voting behavior is inherently less reliable than actual government reports of voter turn-out.

Conclusion. This study relied on USEP report of voter participation in 2000 (M. McDonald, 2011a) and 2012 (2012b). In addition to being available at the time of data collection, McDonald's VEP data sets were more representative of voter participation than the U.S. Census VAP data. This study drew on the most reliable source of official voter participation rates that would allow for a comparison between states based on the 2000 and 2012 presidential elections, USEP. Following this report of data collection methodology for two variables is a presentation of the data analysis of the quantitative component of the study.

Data Analysis

The two variables, SEI and voter turnout, were prepared for analysis. State SEI scores were converted to *z*-scores. USEP voter turnout data were transformed with a variance stabilizing transformation, arcsine transformation. Three correlation analyses were run. The next sections will provide details on arcsine transformation and correlation analysis.

Variance stabilizing transformation. The percentages that represented the voter turnout for states were not equal interval data. Each data point represented a group with different means and different variances. As a preparation for doing correlation analysis, the data was converted to allow comparison data through an arcsine transformation, which is commonly used to normalize distributions for proportional data such as percentages (Sheskin, 2004). The arcsine transformation "is commonly used for proportions, which range from 0 to 1 . . . [and] consists of taking the arcsine of the square root of a number. The result is given in radians, not degrees, and can range from $-\pi/2$ to $\pi/2$. (J. McDonald, 2009, para. 12). The data was transformed into radians and then to

degrees. This allowed for a correlation analysis that more accurately represented the attributes of the data. Arcsine transformation stabilizes variance and normalizes proportional data (Howell, 2013).

Correlation analyses. Using SPSS, correlation analyses were conducted to reveal any relevant relationships between a state's SEI score and (a) the state's voter participation rate for the national 2000 election, (b) the state's voter participation rate for the national 2012 election, and (c) the difference between the state's voter turnout for the national 2000 and 2012 elections. Graphic displays were prepared to represent the findings.

Exploration of Alternative Explanations

Discovery of similar trend lines for the correlations of SEI with the 2000 and 2012 elections combined with the finding of a weak correlation significantly different from zero for the relationship of the SEI to the 2000 election spawned a deeper exploration of quantitative data. In order to investigate alternative explanations, correlations analyses were run between SEI and USEP VEP and VAP for the 2000, 2004, 2008, and 2012 elections. The data was drawn for the same source, USEP (M. McDonald, 2011a, 2011b, 2012a, 2012b). Graphic displays were prepared to represent the findings.

Qualitative Component

Cross-case analysis can enhance the generalizability of a study, and more importantly, it can "deepen understanding and explanation" (Miles & Huberman, 1994, p. 173). Two states were selected as exemplars to study the institutional factors affect educational standardization and voter turnout as well as the the cultural and demographic

attributes that provide context for understanding a state's level of educational standardization and voter turnout.

Selection of Cases

Two states were selected for cross-case analysis (Miles & Huberman, 1994) to identify and evaluate potential causes for differences between states in voter turnout related to levels of educational standardization. An a priori purposeful sampling design called for the identification of two states, one with a high level of educational standardization and low voter turnout, (HL) and the other with the a low level of standardization and high voter turnout (LH). States were sorted into a dichotomized two-by-two grid or four-cell design based on the relationship of each state's score to the mean for each variable. States with positive SEI *z*-scores were placed in the top half of the grid while those with negative SEI *z*-scores were placed in the bottom half. A state with a 2012 voter participation level that was above the mean was placed on the right side of the grid; a state with voter participation levels below the mean was placed on the left side of the grid. The four cells were: (a) High Standardization and Low Voter Participation (HL), (b) High Standardization and High Voter Participation (HH), (c) Low Standardization and Low Voter Participation (LL), and (d) Low Standardization and High Voter Participation (LH). One state each was selected from the HL and LH cells as the most representative example of the highest or lowest values for each variable. See Figure 10 for a depiction of high-low (HL) and low-high (LH) states in relation to the grid.

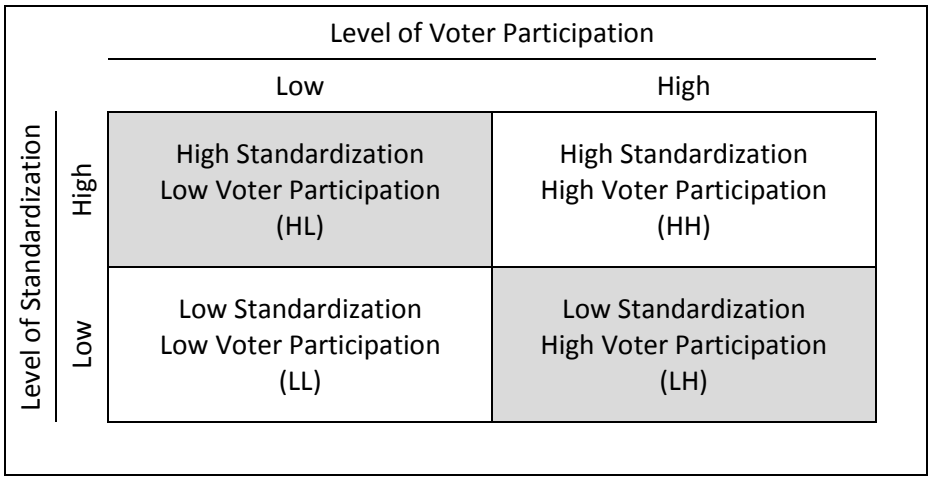


Figure 10. Purposeful Sampling Four Cell Grid

Results (reported in Chapter IV) revealed that the HL quadrant, Georgia was alone as the state with the highest *z*-score (2.03), but with a voter turnout near the mean (58.4%) it was not an exemplar of HL status. Hawaii was also located in the HL quadrant and was the state with the lowest voter turnout of all the states (44.2%), but with a relatively low *z*-score (0.72) was not chosen as an exemplar. Of the three states sharing the next highest z-score (1.37) below Georgia, Arkansas had the lowest voter turnout (50.5%) and was chosen as the exemplar state from the HL quadrant. Two states in the LH quadrant were among the four states with the highest voter turnout and had the highest voter turnout in the LH quadrant, Wisconsin (72.5%) and New Hampshire (70.1%). Wisconsin's SEI *z*-score (-0.59) was near to the mean (-0.03) while New Hampshire was in a group with two other states with the lowest SEI *z*-score (-1.90). New Hampshire was chosen for the exemplar state for the LH quadrant. Table 8 displays the *z*-scores and voter turnout percentages for the states considered as exemplars. A complete report on the data is found in Chapter IV.

Table 8

2012 SEI z-scores and Voter Turnout Percentages for Selected States

State	SEI *z*-score	Voter turnout (%)
	High SEI/low turnout	
Georgia	2.03	58.4
Arkansas	1.37	50.5
Hawaii	0.72	44.2
	Low SEI/high turnout	
Wisconsin	-0.59	72.5
New Hampshire	-1.90	70.1
	Mean	
	-0.03	60.0

Data Collection

"In multiple case designs the cross-case analysis can only take place when all the individual cases have been completed. . . . The findings from each case can be used as the raw data for the cross-case analysis" (Pickard, 2007, p. 92). Examining the data supporting the SEI and voter turnout permitted an examination of superficial characteristics. Emergent and generative research examined the details of the variables and then explored the elements that support an understanding of the exemplar states' SEI scores and voter participation levels.

"Case study research aims to present rich, descriptive narratives at a micro level, to provide detailed descriptions (Pickard, 2007, p. 92). A key focus of the exploration was the collection of state data relating to the two variables in the form of state administrative rules and voting regulations. Project Vote Smart, also referred to as VoteSmart, (2013) provided "unbiased political information" (Stross, 2000, para. 1) and

was a rich source of data for a comparison of state voting regulations. “For reliable, meat-and-potatoes political information, research experts nearly all recommend Project Vote Smart” (New York Times, 1999, para. 5). The New York Times used the Project Vote Smart website data for a variety of purposes, for example in support of election reporting (T. Kaplan, 2012) and for an interactive map on their website depicting by U.S Congressional district *How the N.R.A. Rates Lawmakers* (2012). According to a one nonprofit nonpartisan organization devoted to governmental transparency, Sunlight Foundation (2013), “one hundred and fifty-four organizations, Clear Channel, LA Times, Gannet News Service, Dish Network among others are using [Project Vote Smart] APIs to enrich their own reporting” (S. Miller, 2008, para. 3). The Federal Voting Assistance Program lists Project Vote Smart on its website *Links* (2013) page in support state voter registration. Project Vote Smart is a reliable and well respected source for current data on voting, including voter registration requirements of interest to this study.

Additional elements investigated were:

- Geographic region/culture region
- Population density/distribution
- Distribution of race
- Average level of education/distribution of levels of education
- Average income/distribution of income
- Other economic factors including employment distribution
- Distribution of social characteristics
- Distribution of religious affiliation
- Distribution of political affiliation

Cross-Case Analysis

The case study investigation was both generative and emergent, letting the qualitative exploration emerge as a result of the quantitative analysis. Comparison tables clarified similarities and differences between the two states. A narrative description captured the key features of the exemplar states, described by Creswell (1994) as a "realist tale, a direct, matter-of-fact portrait" (p. 159). Conclusions were drawn as warranted.

Validity and Reliability

The defensibility of "the research study, its parts, the conclusions drawn, and the applications based on it" (Onwuegbuzie & Johnson, 2006, p. 48) depends, in part, on "good theories" (p. 49). The value that drives this work is that K-12 public education could and should produce an informed electorate (voters). Evidence revealed some support, if disputed, of a decline in voter turnout in the U.S. and strong support that voter turnout is lower in the U.S. than in many nations of the world as well as a wide range of voter participation among the states and for other criteria.

Many studies have investigated potential causes for variation in voter participation and disenfranchisement. This study hypothesized that the same forces that affected a state's voter participation affected its embrace of the standardization of education, as measured by the SEI. It asked, in other words, if the two variables have a positive or negative correlation, or whether they were instead unrelated. This study first tested for a correlation between states' SEI score and voter turnout rates and second investigated the elements that were associated with both variables within two exemplar states. Validity issues are addressed for this mixed-methods research project, its

quantitative component including the reliability of the SEI, and the qualitative component, focusing on construct validity, internal validity, external validity, and conclusion validity (Onwuegbuzie & Johnson, 2006; Trochim, 2001; Yin, 2009).

The primary threat to the validity of this study can be traced back to the issue presented in Chapter I that quality education depends upon one's conception of schooling (Eisner, 1978). If one rejects the notion that K-12 public education should prepare citizens to participate actively in democracy by voting, then the study will be of little use. For researchers and scholars who accept the premise that a quality education will engender voter participation, a primary claim to validity will be met. This challenge to validity goes to the subjective nature of the research question itself. Asking the question "Does a K-12 public education have something to do with low and variable voting rates in the U.S.?" reveals a bias of the researcher who asks it because it is predicated on the assumption that public education should empower voters.

The overall validity of the study is bolstered by a clear logic chain (Kane, 2001), as presented in Chapter I. To wit:

1. Public education should have a positive influence on participation in democracy.
2. Voting is an indicator of participation in a democracy.
3. Voter participation in the U.S. is lower than in many other countries. There has been a purported decline in voter participation in the U.S. There is great variability of voter turnout among states.
4. An increase in standardization of education and resulting narrowing of the curriculum to focus on tested content areas has occurred.

5. The content areas of civics, U.S. history, and other knowledge that would be fundamental to engendering voting behavior are not part of the standards based movement reform process and time committed to instruction in these content areas has declined.

Mixed-Methods Research

Mixed-methods research "draw[s] from the strengths and minimize[s] the weaknesses of both" (R. B. Johnson & Onwuegbuzie, 2004, pp. 14-15) quantitative and qualitative paradigms. Onwuegbuzie and Johnson (2006) argued that new language is needed to discuss validity issues in mixed-methods research, retaining the use of *validity* for discussing the defensibility of quantitative research, using the term *trustworthiness* for qualitative research, and using *legitimation* for mixed-methods research. The distinctions are fine-gauge; the purpose of describing threats to validity is to establish the dependability of the results. This study is intended to meet the standard of not only legitimacy and trustworthiness, but also of validity.

Messick described consequential validity as the "evaluation of the intended and unintended social consequences" (1988, p. 39) of the work; any determination of the validity of a test must incorporate the consequences of its use. The use of mixed-methodology in this study allowed for a criterion-based examination of the variables followed by an exploratory examination of two cases that allowed for the development of inferences about the relationship of the variables. It is not expected that wide ranging generalizations can be drawn from this work; rather greater understanding of the relationship between the SEI and voter turnout can sort out potential areas for further investigation. Overall, the consequences of this work should be to allow researchers and

scholars to deepen their understanding of the relationship educational standardization and democracy, framed as fundamental public good.

Both components of this study, quantitative and qualitative, utilized empirical observations to address the research questions. Safeguards built into the inquiries were intended to "minimize confirmation bias and other sources of invalidity" (R. B. Johnson & Onwuegbuzie, 2004, p. 15). Mixed research "can produce more complete knowledge necessary to inform theory and practice" (p. 21). The use of both quantitative and qualitative methodologies adds needed depth to this investigation of the relationship of state SEI scores to voting patterns in which no causal relationship is inferred between the two variables.

The next sections describe several aspects of validity relating to the quantitative and qualitative components of the study, addressed separately. Construct, internal, external and conclusion validity are discussed, followed by a brief comment about overall validity.

Quantitative Component

Construct validity. There are two constructs in this work. One is voter turnout. The other is the K-12 educational standardization.

Voter participation. Voter participation, simply defined as voting in an election, is a variable that has been studied empirically since at least the 1980s (Achen, 1992). The construct of voter participation has been well utilized. Or as Bird said, voting is the "machinery of democracy" (2012, para. 1).

SEI. The construct of the SEI is a theoretical construct of a state's level of educational standardization, a new concept introduced in this work. The SEI is a measure

of the extent to which a state's policies and practices are organized and administered around clear, measurable standards. An SEI score reflects a state's development of both content and performance standards in compliance with the current emphasis on large-scale high-risk testing driven by an emphasis on efficiency and accountability.

The construct of a state's level of educational standardization has been operationalized into the SEI by drawing on one of the most successful and respected advocates for educational standardization reform Achieve. A key aspect of state standardization is collaboration and cooperation with other states in developing uniform and shared standards as expressed in the Common Core Standards.

Additionally, the attributes of the SEI have been vetted by experts in the form of a university college of education dissertation committee. Additional strength for construct validity is provided by a clear and logical chain of argumentation framing the notion that public K-12 education should produce an informed electorate (Kane, 1992). One challenge to validity is the recent invention of the SEI; devised for this dissertation it has not been highly scrutinized and future iterations may result in response to critics who locate weaknesses.

Internal validity. Internal validity was supported in four ways. Data sources, sampling error, weighting, and reliability will be discussed.

Data sources. For eight of its nine elements, the 2012 SEI drew on data collected and disseminated by a well-known and respected advocate for standardization, Achieve (2012a). The data for the ninth element was based on the Common Core State Standards Initiative (CCSSI, 2013b) report of state adoption of the Common Core Standards. Internal validity has been maximized by the use of Achieve and other reliable sources of

state education data in support of standardization and by meticulous work. Achieve quantified in true/false values a state's status in accomplishing Achieve's goals of educational standardization.

Sampling. Sampling issues were not a challenge to validity of the voting variable of the study. Sampling is the selection of a subset of the population of interest that allows the researcher to infer or estimate about the population. In this study, the population of interest was all the U.S. States and the District of Columbia (DC). A sample was not used; rather data was collected for the entire population. Issues of sampling error were not relevant.

The sampling of the indicators of the SEI may have been more problematic. The SEI was an initial attempt to measure a state's level of standardization of public K-12 education as compared to other states and evaluation by experts in the field of indexes would improve its utility.

Weighting. A final challenge to internal validity was the weighting of the attributes of the SEI. The SEI, as used in this study, weighted all the indicators equally, following Florida's design in the Creativity Index (Florida, 2002). This practical solution to the weighting issue depended on a simple counting strategy; the more evidence there was of standardization, the higher the value of the score was. This un-weighted analysis could have distorted the results to make the composite score inflated or diminished in relation to its *true* value. It was not possible to determine this *a priori*. After the data was analyzed, a more sophisticated system could be suggested that would give more or less weight to each of the criteria in relation to its explanatory power and might yield more useful scores in further research on this subject.

Reliability of the SEI. The reliability of the SEI rating given to each state was re-evaluated by a second evaluator who found a 100% match for 100% of the data. The SEI was a reliable measure of the construct state educational standardization, as measured by the selected attributes.

External validity. An examination of the external validity of the study is directed toward the claims that underpin the work and the usefulness of the findings. The SEI, drawing as it does on the work of one the strongest proponent of educational standardization, Achieve, goes to the source, in framing the construct and for much of the data. The SEI generalizes across all states and DC in terms of the construct of educational standardization, as proposed by Achieve and others. Additionally, a census of all states and DC is more safely generalizable than a sample of the population. The SEI scores can be used as reliable measures of a state's level of standardization as compared to other states, placed as it is in the framework of the most prominent advocates of the construct.

Relationships found between states' SEI and voter turnout are likewise defensible, to the extent that significant correlations were found for some of tests and all of them were in the same direction. One challenge to validity is that some of the correlative relationships were not significantly different from zero, but this work has not claimed more than the analysis has revealed, a tendency in the direction of a relationship between high SEI and low voter turnout.

Conclusion validity. This study does not suggest a causal relationship between the variables; it draws no causal inference. Conclusions were not drawn from the quantitative component about the potential shared cause(s) of any discovered covariance; rather exemplar states were selected and investigated in the qualitative phase of the

project, featuring emergent and generative research. The conclusions drawn from the analysis of the data depended on the logic chain outlined in Chapter I, on the defensibility of the SEI, and on the results of the statistical analysis.

Qualitative Component

The qualitative component of this study was intended to "describe, in rich detail, phenomena as they are situated and embedded in local contexts; . . . identifi[ng] contextual and setting factors as they relate to the phenomenon of interest; . . . [and] demonstrate[ing] vividly a phenomenon to the readers" (R. B. Johnson & Onwuegbuzie, 2004, p. 20). Based on the results of the correlation data analysis, two exemplar states were selected for cross-case analysis in order to explore and describe the particulars of each state. One state was selected from each of these categories: Arkansas from high SEI-low voter turnout and New Hampshire from low SEI-high voter turnout, as outlined previously in this chapter. The goal of analysis of this data was to paint a picture of each of the exemplar states to help understand the elements that would contribute to a relationship between educational standardization and voter turnout. The exploration and description of each state's relevant attributes elaborated on *why* the state had a high SEI with low voter turnout or low SEI with high voter turnout by explaining *how* they were expressed in laws and administrative rules, and *what* the demographic attributes were in greater detail (Miles & Huberman, 1994).

Construct and conclusion validity for the qualitative component are addressed in the next sections. Additionally, Creswell (1994) pointed to several key issues in qualitative validity: internal validity, "the accuracy of the information and whether it

matches reality" (p. 159), external validity, the "generalizability of findings from the study" (p. 159), and reliability, the possibility of replication of the study.

Construct validity. The construct being explored in the qualitative component of this study was the notion that there may be elements of a state's regulations, culture, demographics, or other, as yet unidentified, characteristics that would drive a correlation between a state's SEI and its level of voter participation. The logic chain and discussion elsewhere in this document make a strong claim that education should be related to voter turnout, and if it is not that is a cause for investigation.

This emerging construct was generated by the investigation of the elements for each of the two exemplar states. The potential for researcher bias was a challenge to construct validity, as it was imbedded in the methodology. Reliability was supported by an analysis of an independent auditor who verified the scores of the SIE. The tactics described in the next section will address or mitigate this threat.

Internal validity. The *a priori* selection process distributed the states across the range of the two variables, allowing for the identification of states with the highest and lowest SEI as correlated with the highest and lowest voter turnout. The two states chosen were exemplars in their categories in support of an investigation of underlying features of states with high SEI and low voter turnout, in contrast with states with low SEI and high voter turnout.

An in-depth description of two states may have produced evidence that was "idiosyncratic" (Miles & Huberman, 1994, p. 172). Researcher bias has been described as occurring "when the researcher has personal biases or *a priori* assumptions that . . . she is unable to bracket" (Onwuegbuzie & Leech, 2007, p. 236). Internal validity was

maximized by the use of well-established procedures of case study methodology. The qualitative component of this study identified elements of a state's governmental decisions (laws and administrative rules) and demographics that were comparable between the two exemplar states. An "audit trail" (p. 240) documented the reliability of the sources and increased validity. Due to the emergent and generative nature of the study, additional facets of each state's culture/attributes were located but were always comparable, with all elements reported in detailed tables. Such data was not particularly vulnerable to researcher bias in that the data collected focused on demographic characteristics and the states' laws and administrative rules related to K-12 educational standardization and voting regulations. It will up to the reader to judge the impartiality of the conclusions that were drawn on the basis of the qualitative evidence.

External validity. On one hand, "one aim of studying multiple cases is to increase generalizability; . . . the aim is to see processes and outcomes . . . to understand how they are qualified by local conditions, and thus to develop more sophisticated descriptions, and more powerful explanations" (Miles & Huberman, 1994, p. 172), "to deepen understanding and explanation" (p. 173). On the other hand, a key weakness of qualitative research of this type is that "knowledge produced may not generalize to . . . other settings. [Additionally], the results are more easily influenced by the researcher's personal biases and idiosyncrasies" (R. B. Johnson & Onwuegbuzie, 2004, p. 20). As described in the previous section, an *a priori* selection plan allowed for a defensible selection of exemplar states. Careful and equivalent data collections have allowed for an emergent study of potential relationships between SEI level and voter participation, but this kind of work can only go so far. Generalizations about the relationship between the

two variables have been worded cautiously, more as speculation than generalizable results, in order to remain defensible.

Conclusion validity. Challenges to conclusion validity were addressed by discussing rival explanations (Kane, 1992). The strongest rival explanation would be that details offered to explain a tentative relationship between high SEI and low voter turnout, and visa versa, are artifacts of the individual states chosen of the case studies. This study has made no strong claim that the explorative nature of the qualitative component of the study, and this is defensible.

Summary

The legitimacy of this study is both enhanced and challenged by its mixed-methods. The quantitative component benefited from consultation with educational leadership scholars, but the SEI was a first attempt at quantifying a state's level of educational standardization and might benefit from further review by experts. A clear logic chain supported the development of the study from a concrete examination of verifiable facts, the indicators of the SEU, actual voter turnout, and quantitative analysis, then moving to an emergent and generative examination and comparison of two exemplar state's regulations, administrative rules, and demographics. The very emergent and generative aspects that increase the value of the qualitative component also introduce the threat of researcher bias. Rigor in collection of comparative elements helped to mitigate this threat to the conclusions drawn in a discussion of the role of public education in producing an empowered electorate. A clear and realistic report of the analyses allowed for the defensibility of conclusions that do not claim more than has been proven.

CHAPTER IV

RESULTS

This results section reports the results of exploratory research, beginning with a quantitative data analysis with an exploration of alternative explanations. It then describes the results of a qualitative case study of two exemplar states: an investigation and analysis of institutional elements of educational ARs for standards and accountability and voter regulations, followed by an investigation and analysis of cultural/geographic and demographic data.

Quantitative Analysis

Two questions were asked in the quantitative analysis part of the study. Question 1 was: What is the relationship between a state's level of educational standardization and its voter turnout in the 2012 national election? Question 2 was: What is the relationship between a state's level of educational standardization and change in that state's voter turnout between 2000 and 2012? The null hypothesis to be evaluated for both questions was H_0: $p < 0$.

Description of Variables

SEI. There were two versions of the data expressing a state's level of educational standardization, *SEI Score* and *SEIzscore*. These quantitative measured variables represented a states' SEI score. SEI Score was an ordinal variable, scores on a scale of 0 to 9 with a higher value indicating more educational standardization for a state. Statistical standardization of the SEI Score values (standardization of coefficients) was utilized to generate *z*-scores to represent each state's SEI score as the variable SEIzscore. SEIzscore was a continuous variable.

Voter turnout. The variables for voter turnout were each a continuous quantitative measure of voter participation by state drawn from United States Elections Project (USEP) data (M. McDonald, 2011a, 2011b, 2012a, 2012b). A higher percentage meant that more people voted in that election. A variable was created for Voter Age Population (VAP) and Voter Eligible Population (VEP) for each year of the study. The variable Difference was the calculated difference between the voter turnout percentages of VEP for 2000 and 2012. A higher percentage meant that there was a larger difference in voter participation between the two years. Appendix F reports the raw state voter turnout percentage data for 2000 and 2012.

Analysis and Results: Standardization of Education

The shape of the frequency distribution of the z-scores of state SEI scores approximated a normal distribution, with a mean of 0.00, a standard deviation of 1.00, and range of -1.90 to 2.03. There were no outliers. Table 9 provides supporting detail. Figures 11 and 12 depict the histogram and box plot, respectively.

Table 9

Descriptive Statistics for the Standardized Education Index z-scores

Variable	*M*	*SD*	*n*
SEIzscore	0.00	1.00	51

Analysis and Results: Voter Participation

The percentages that represented the voter turnout for states were not equal interval data. Each data point represented a group with different means and different variances. Arcsine transformation stabilizes variance and normalizes proportional data.

As a preparation for doing correlation analysis, the data was converted through an arcsine transformation to radians and then to degrees to allow for appropriate comparison of data points. This allowed for a correlation analysis that more accurately represented the attributes of the data.

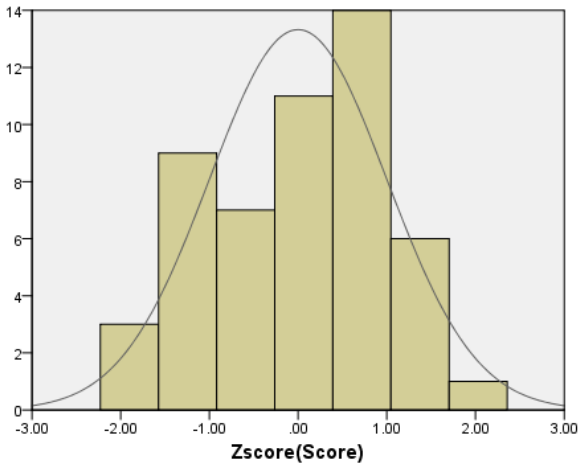


Figure 11. Histogram for SEI *z*-score

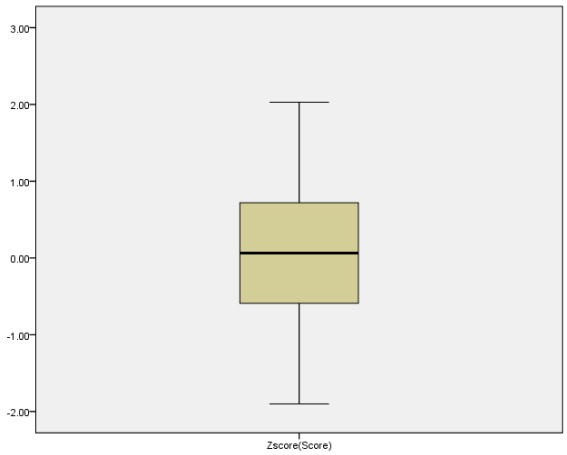


Figure 12. Boxplot for SEI *z*-score

The shape of the frequency distribution of the voter participation variables VEP2000, VEP2012, and Difference each approximated a normal distribution, with means of the percentage data of 55.68, 59.97, and 4.29, standard deviations of 6.52, 6.47, and 4.48, and ranges of 44.2 to 69.5, 44.2 to 75.7, and − 9.2 to 13.9, respectively. For the three variables transformed to degrees, the means were 48.29, 50.80, and 2.51, the standard deviations were 3.79, 3.82, and 2.83, and the ranges were 41.7 to 56.5, 41.7 to 60.5, and -5.5 to 8.1, respectively. (See Table 10.) The outliers were expected variations in the data and of interest to the study. For the three variables, Figures 13, 14, and 15 depict the histograms and Figure 16 the boxplots.

Table 10

Descriptive Statistics for Voter Participation

	Percentages		*Degrees*		
Variable	*M*	*SD*	*M*	*SD*	*n*
VEP2000	55.68	6.52	48.29	3.79	51
VEP2012	59.97	6.47	50.80	3.82	51
Difference	4.29	4.84	2.51	2.83	51

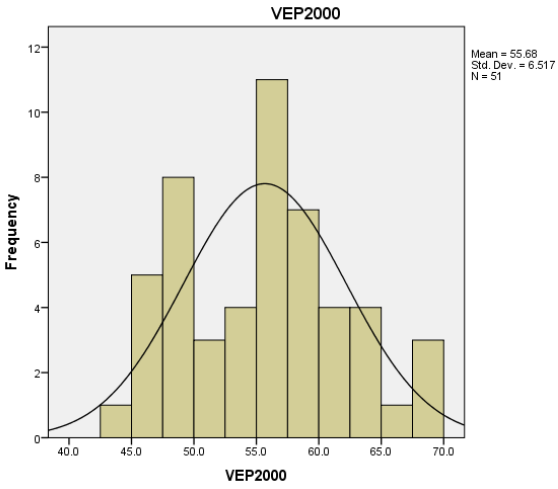


Figure 13. VEP 2000 Histogram

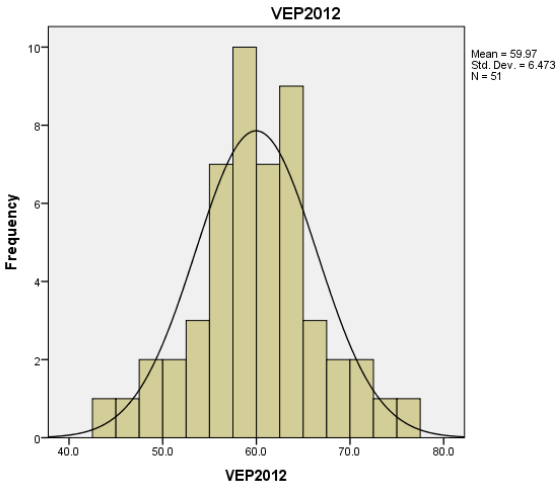


Figure 14. VEP 2012 Histogram

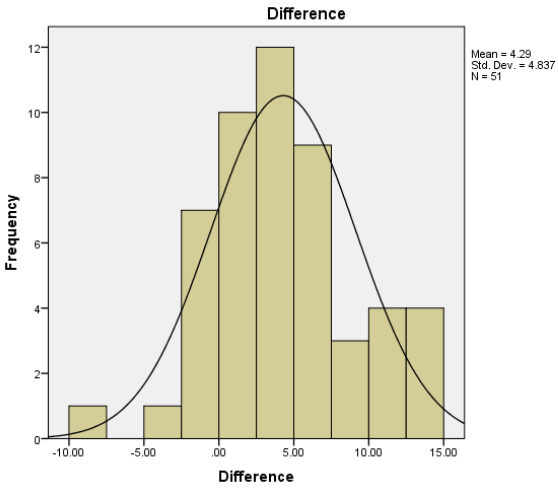


Figure 15. Difference Histogram

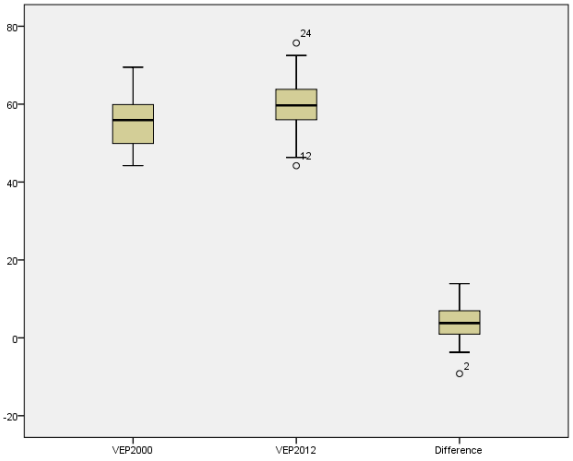


Figure 16. Boxplots for Difference

Analysis and Results: Correlation

The results of the correlation analysis are reported in Table 11. Figures 17, 18, 19 present the scatterplots and trend lines for the correlation analysis of SEI *z*-scores to the 2000 and 2012 VEP data and the difference between the two, respectively, as converted to degrees through the arcsine transformation. A weak negative correlation found between SEI level and voter turnout in 2000 was significantly different than zero, $r(49) = -.32$, $p = .02$. About 11% of the variability in state voter turnout rate was explained by the level of standardization of education. A weak negative correlation found between SEI level and voter turnout in 2012 was not significantly different from zero, $r(49) = -.17$, $p = .22$. About 3% of the variability in state voter turnout rate was explained by the level of standardization of education. A weak positive correlation between SEI and the difference between 2000 and 2012 voter turnout rates was not significantly different from zero, $r(49) = .20$, $p = .16$). About 4% of the variability in state voter turnout rate was explained by the level of standardization of education.

Table 11

Correlations Between State SEI z-scores and Voter Turnout

Variable	*R*
VEP 2000	-.32*
VEP 2012	-.17
Difference	.20

Note. *p < .05

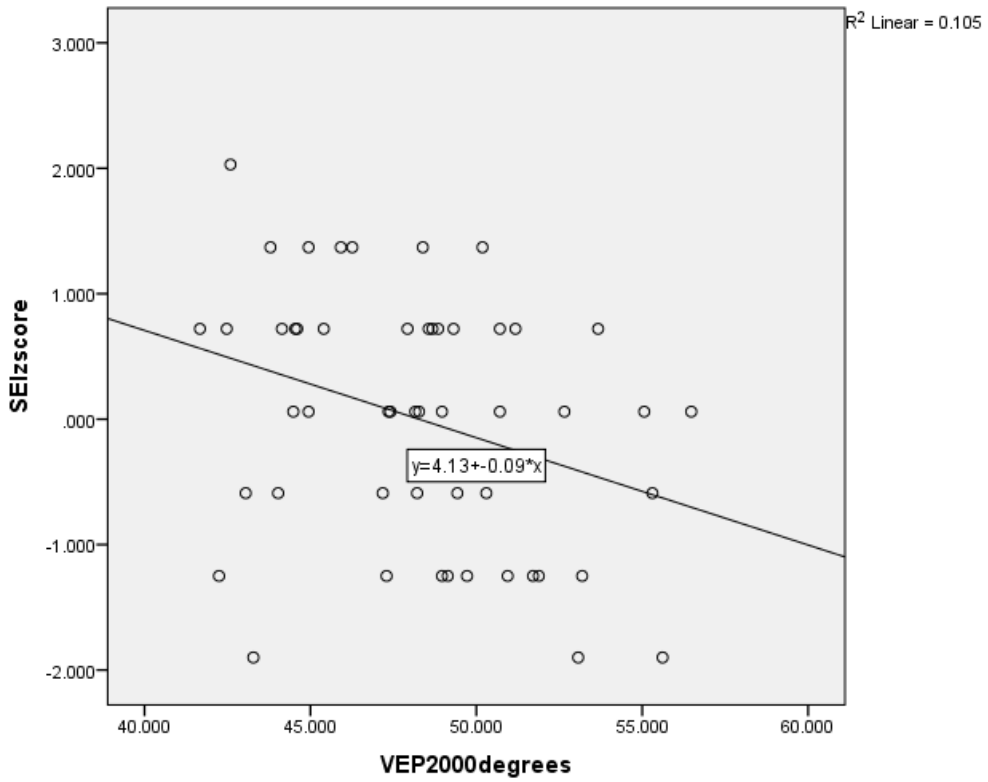


Figure 17. Relationship of SEI *z*-score to 2000 Election

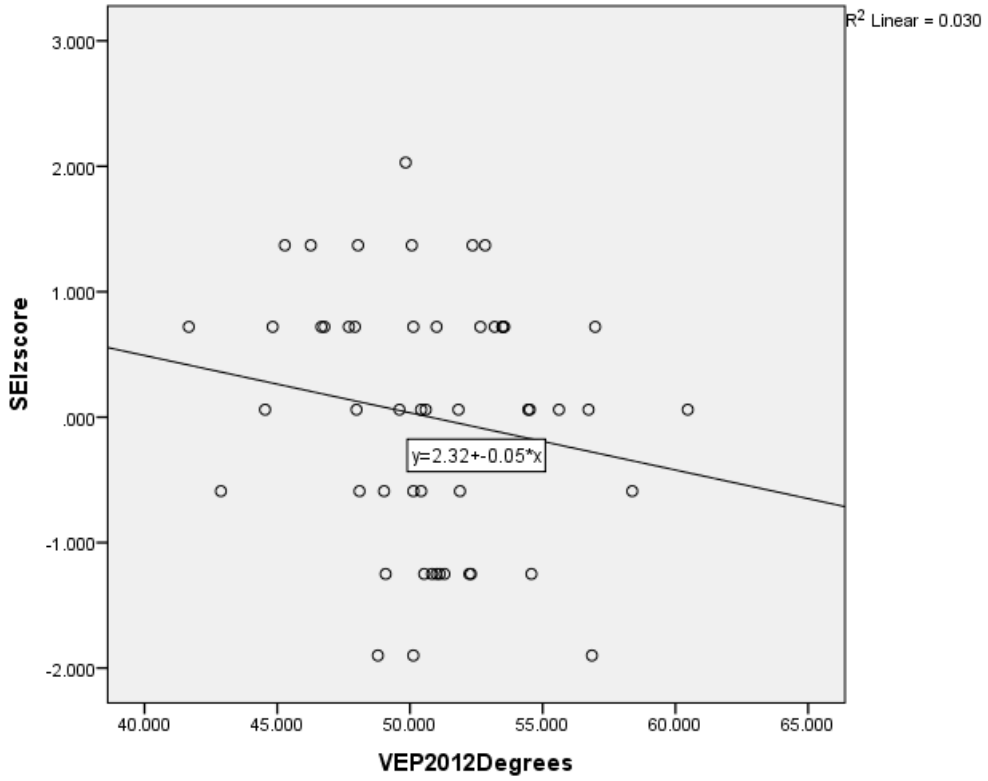


Figure 18. Relationship of SEI *z*-score to 2012 Election

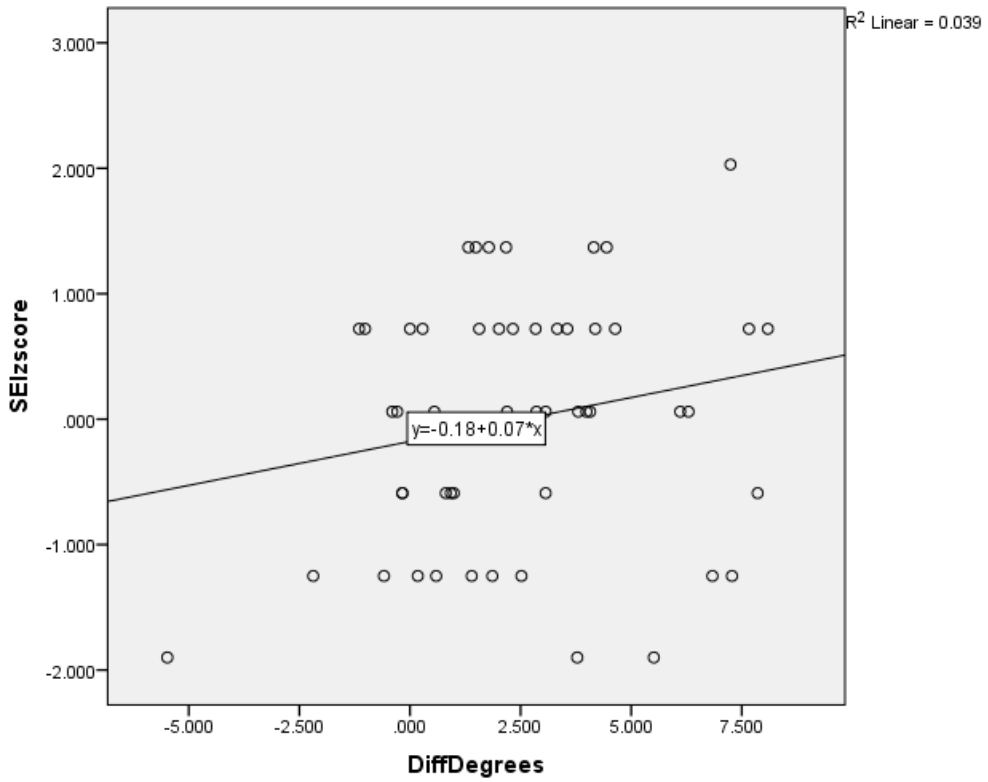


Figure 19. Relationship of SEI *z*-score to Difference

Selection of Exemplar States for Case Study

A scatter plot was generated depicting the relationship of the SEI to the 2012 election. The data points were sorted into four quadrants using the means of the variables as the dividing lines. Figure 20 presents the data points with states representing the most extreme cases labeled in the high SEI / low voter turnout (HL) and low SEI / high voter turnout (LH) quadrants. Appendix G provides a complete list of states' SEI raw scores and *z*-scores sorted from largest to smallest and a graphic display. In the LH quadrant, New Hampshire was a clear choice as the state that most exemplified the attributes of low SEI and high voter turnout. While Wisconsin had a higher voter turnout, its level of standardization was close to the mean which made it a less attractive choice for an exemplar of LH. In the HL quadrant, Arkansas was the best example of both high SEI

and low voter turnout. While Georgia had the highest level of SEI of any state, its voter turnout was close to the mean. Hawaii, on the other hand, had the lowest voter turnout, but its SEI was close to the mean. Both states were rejected in favor of Arkansas as the exemplar state for HL, which while not the highest SEI nor the lowest in voter turnout, was not close to the mean on either scale and represented the best choice.

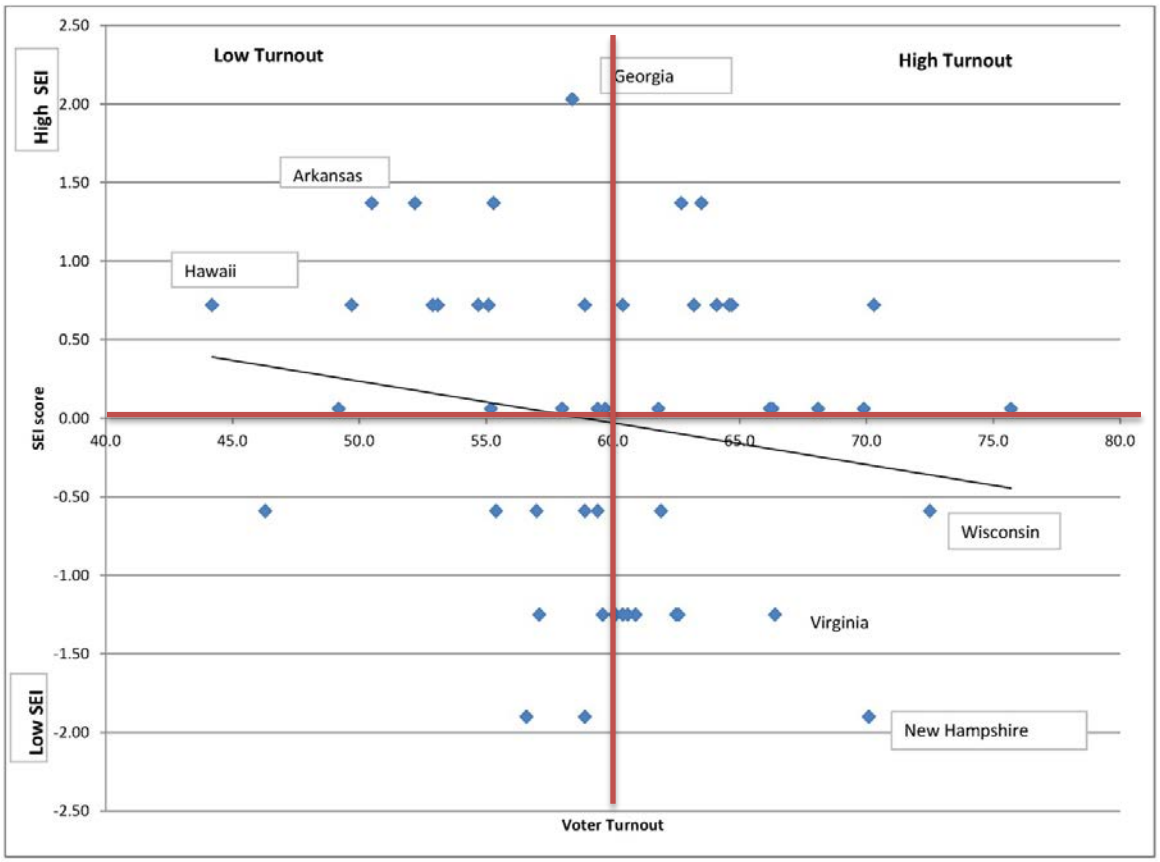


*Figure 20***.** 2x2 Grid of SEI and 2012 Voter Turnout Scatterplot

Further Exploration of VEP and VAP Data

Two features of the results were suggestive. First, the trend lines in the scatter plots for the SEI with 2000 and 2012 voter turnout were both negative. Second, the negative correlation for the SEI and VEP for 2000 was significantly different from zero. These results spawned a deeper exploration of the quantitative data. In order to investigate alternative explanations, correlation analyses were conducted between SEI

and USEP VEP and VAP for the 2000, 2004, 2008, and 20012 elections. The variables were converted through arcsine transformation to degrees and analyzed for correlations with the SEI variable using SPSS. The means and standard deviations are presented in Table 12; the correlation statistics are reported in Table 13 Figures 21 and 22 present graphic displays representing the findings..

Weak negative correlations were found between SEI level and VEP 2000 and VAP 2000, 2004, and 2008. The correlations were significantly different from zero, $r(49) = -.32$, $p = .020$, $r(49) = -.37$, $p = .007$, $r(49) = -.29$, $p = .038$, and $r(49) = -.28$, $p = .049$, respectively. 11%, 14%, 9% and 6% of the variability was explained, respectively. The correlations for the other four analyses were not significantly different from zero. The resulting correlations revealed trend lines repeating those in the original analyses for VEP 2000 and VEP 2012, creating the appearance that as SEI level increased, voter participation decreased. Case studies of Arkansas and New Hampshire explored two exemplars representing contrasting features, high SEI and low voter turnout compared with low SEI and high voter turnout, respectively.

Qualitative Analysis

Two questions were asked in the qualitative analysis part of the study. Question 3 was: What institutional factors affect educational standardization and voter turnout? Question 4 was: What cultural and demographic attributes provide context for understanding a state's level of educational standardization and voter turnout? The next sections will report the study of two exemplar states, Arkansas and New Hampshire, for institutional factors of educational administrative rules and voting laws, followed by cultural and demographic attributes

Table 12

Descriptive Statistics for Voter Participation

Variable	*M*	*SD*	*n*
VEP 2000	48.29	3.79	51
VAP 2000	46.38	4.01	51
VEP 2004	52.02	3.79	51
VAP 2004	49.63	4.19	51
VEP 2008	52.70	3.48	51
VAP 2008	50.16	3.78	51
VEP 2012	50.80	3.82	51
VAP 2012	48.37	4.02	51

Table 13

Correlations Between State SEI z-scores and Voter Turnout

Variable	*R*
VEP 2000	-0.32*
VAP 2000	-0.37**
VEP 2004	-0.24
VAP 2004	-0.29*
VEP 2008	-0.20
VAP 2008	-0.28*
VEP 2012	-0.17
VAP 2012	-0.24

* $p < .05$.

** $p < .01$.

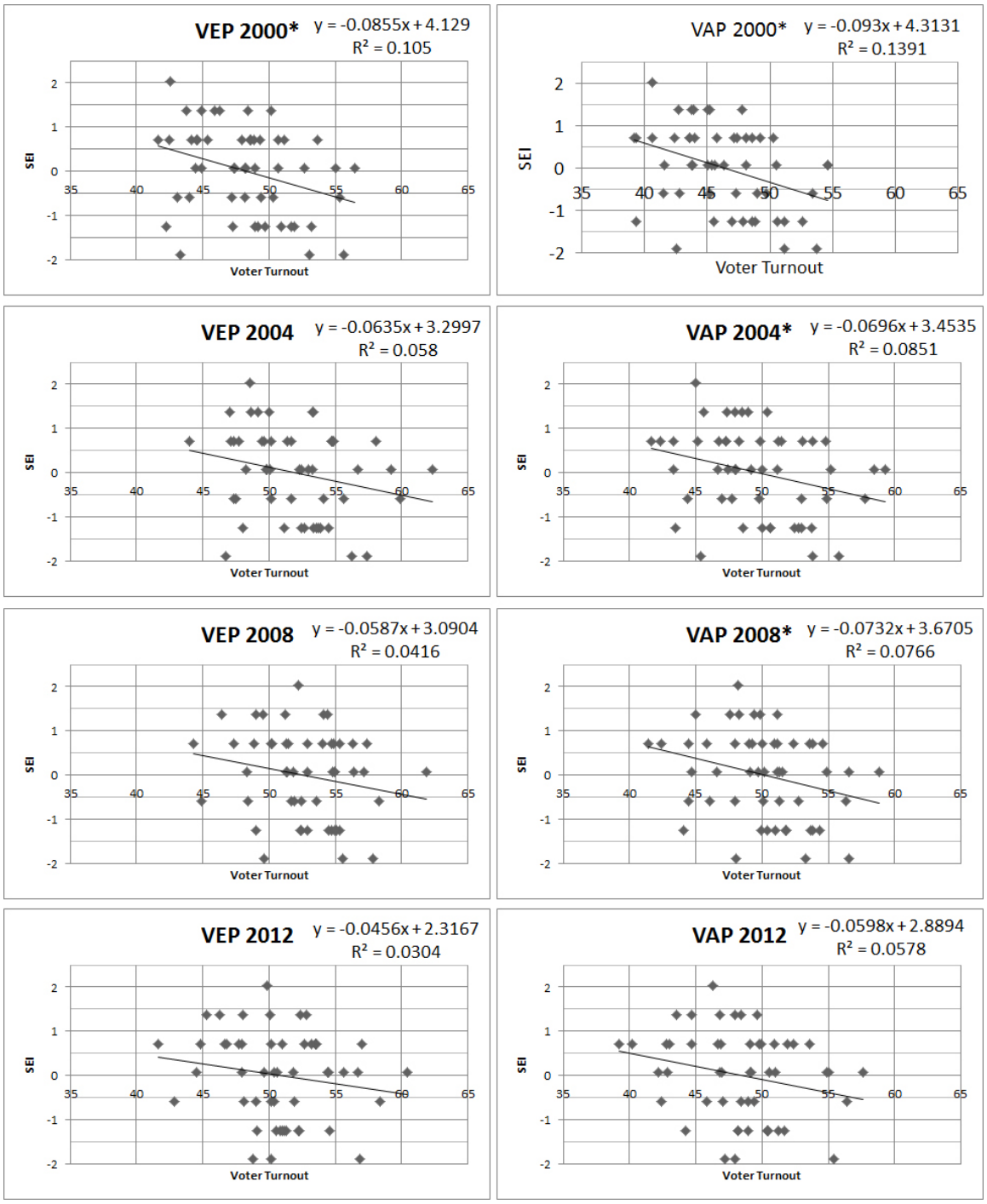


Figure 21. Individual Correlations for SEI Score with VEP and VAP 2000-2012

* Correlation was significant, $p < .05$.

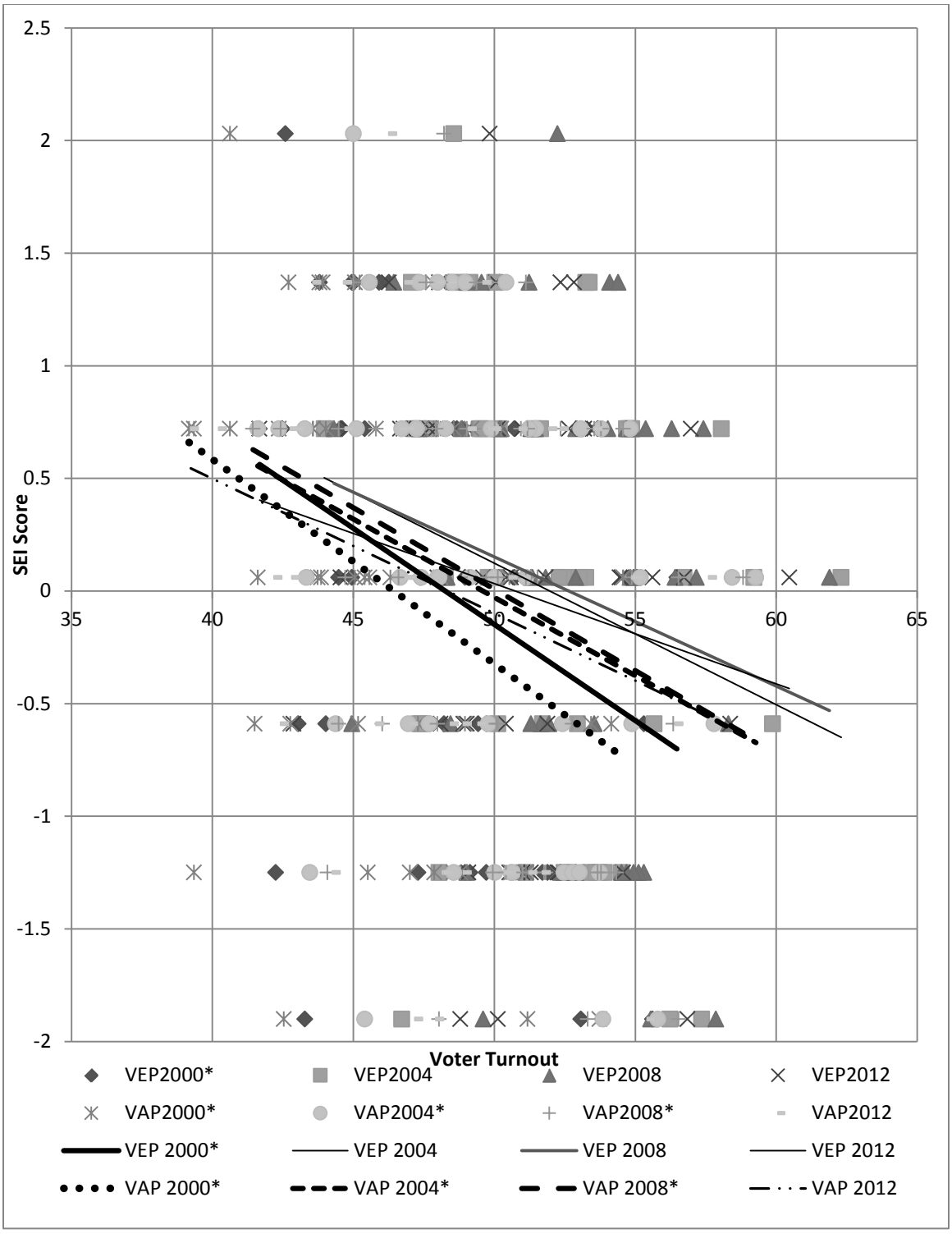


Figure 22. Combined Regression Lines for SEI with VEP and VAP 2000-2012

* Correlation was significant, $p < .05$.

Bold lines represent correlations significantly different from zero.

Solid lines are VEP data; dashed lines are VAP Data

Study of Institutional Factors for Two States

Arkansas was chosen as an exemplar of states with high SEI and low voter turnout. New Hampshire (NH) was chosen as an exemplar of states with low SEI and high voter turnout. In order to explore for and generate a potential explanation of a negative correlation between SEI score and voter turnout, the next section will compare and contrast these states' Administrative Rules (ARs) for K-12 educational standards and accountability, including a detailed comparison of the results with the criteria of the *Dichotomous Sort of Accountability Concepts* presented in Chapter II. The following section will compare and contrast the exemplar state's voting laws.

K-12 educational standards and accountability administrative rules. In order to accurately describe the most current educational standards and accountability regulations in New Hampshire, the data collection that is described here as *New Hampshire ARs* was expanded to include official information provided by the New Hampshire Department of Education (DOE) on their website. While there was some common ground in the educational administrative rules for Arkansas and New Hampshire, there were also sharp contrasts. This report focuses on observed differences that shed light on how two exemplar states framed and implemented educational standards and accountability in areas of orientation, goals, school improvement, alternative plans, opportunity, funding, content areas, rigor, benchmarks, performance targets, minimum competencies, uniform grading, high school exit exams, rewards, failure, competition, differentiation, professional development, teacher ethics, transparency, on-site monitoring, and takeover of public schools.

Orientation. In comparing Arkansas with New Hampshire, two passages summarized the difference in their orientation towards education. While Arkansas expected that "academic content standards are rigorous and equip students to compete in the global workforce" (Arkansas DOE, 2013b, para 4), New Hampshire specified that "a well-educated populace is essential for the maintenance of democracy" (NH DOE, 1993, para. 1) and sought to “provide all students with the opportunity to acquire the knowledge and skills necessary to prepare them for successful participation in the . . . political systems of a free government” (NH DOE, 2007a, para. 1). Arkansas ARs did not mention the value of education in a democracy and New Hampshire ARs did not mention role of education in preparing students for competition in the global workforce.

Arkansas generally framed educational goals around “equal opportunity for all students” (Arkansas DOE, 2007a, para. 5) to meet required performance levels using a “single comprehensive testing, assessment and accountability program” (Arkansas DOE, 2013b, para. 2). New Hampshire generally framed educational goals around the notion of the adequacy of public education (NH DOE, 2007b) to “provide all students to opportunity to acquire” (NH DOE, 2007d, para. 1) not only content area skills and knowledge but also life skills.

Goals. Arkansas structured educational reform around the goal of providing “equal opportunity for all students, including identifiable subgroups, to meet the expected performance levels established by the Board on all State assessments” (Arkansas DOE, 2007a, para. 5). It specified that the plan:

> identifies a challenging set of goals and sets forth actions that will be taken to achieve the goals; . . . specifies the responsibilities of the school

> district and its schools . . . includes periodic benchmarks, measurements processes, and evaluation protocols; and is based on an analysis of data produced by the Arkansas Comprehensive Testing Program and other reliable measures of student learning to determine classroom, school, and school district academic performance. (para. 5)

New Hampshire specified that "a well-educated populace is essential for the maintenance of democracy" (NH DOE, 1993, para. 1). It declared that

> it is the policy of the state of New Hampshire that public elementary and secondary education shall provide all students with the opportunity to acquire the knowledge and skills necessary to prepare them for successful participation in the social, economic, scientific, technological, and political systems of a free government, now and in the years to come; an education that is consistent with the curriculum and student proficiency standards specified in state school approval rules and New Hampshire curriculum frameworks . . . [and that] school districts then have flexibility in implementing diverse educational approaches tailored to meet student needs. (NH DOE, 2007a, paras. 1-2)

School improvement plan. Both Arkansas and New Hampshire had ARs related to school improvement plans, but there was a difference in focus. Arkansas Comprehensive School Improvement Plan (ACSIP) utilized a deficit model to close the achievement gap (U.S. DOE, 2001) with "a plan developed by a local school team based on an analysis of student performance data and other relevant data that provides a plan of action to address deficiencies in student performance and any academic achievement

gap" (Arkansas DOE, 2007a, para. 3). In contrast, the New Hampshire Education and Improvement Assessment Program (NHEIAP) called attention to the validity of assessments, particularly content validity saying that a measure of accountability is effective "when the assessment exercises or tasks are valid and appropriate representations of the curriculum standards" (NH DOE, 1993, para. 2) and intended specifically "not to establish a statewide curriculum" (para. 6).

Arkansas and New Hampshire both present two versions of their school improvement system in compliance with NCLB. ACSIP in Arkansas and *PART II Performance-Based School Accountability System* (PBAS) (NH DOE, 2012a) in New Hampshire were based on student performance, that is academic achievement and growth in reading/English language arts, mathematics, science and writing as informed by standardized test scores (Arkansas DOE, 2013b; NH DOE, 2012a).

Alternative school improvement plan. In addition, both states offered an alternative plans. Arkansas developed Arkansas Comprehensive Testing, Assessment and Accountability Program (ACTAAP) in response to an ESEA waiver (Arkansas DOE, 2013b). The alternative plan followed closely along the lines of the original plan, aiming to:

> develop a single comprehensive testing, assessment and accountability program which utilizes the most current and effective testing, evaluation, and assessment research information designed to achieve the following purposes: set clear academic standards that are periodically reviewed and revised; establish professional development standards for all administrators, teachers and instructional support personnel; establish

> expected achievement levels; report on student achievement and other indicators; provide evaluation data; recognize academic success and failure; apply awards and sanctions; and comply with current federal and state law and State Board rules and regulations. (Arkansas DOE, 2013b, para. 2)

New Hampshire's alternate system, *PART I Input-based Accountability System* (IBAS) (NH DOE, 2012a) required schools to "complete an on-line survey to identify how each school meets the self-assessment requirements" (p. 2). In addition to 10 subject areas, school year and graduation credits comprised school *adequacy standards*.

Opportunity. Both Arkansas and New Hampshire addressed goals for school accountability in terms of opportunity. Arkansas was "focused on student achievement . . . to provide equal opportunity for all students" (Arkansas DOE, 2007a, para. 5). The purpose of ACSIP was to provide equal opportunity for all students, including identifiable subgroups, to meet the expected performance rate levels established by the Board on all State assessments. (Arkansas DOE, 2013b, para. 8). New Hampshire framed education in terms of "opportunity for an adequate education" (NH DOE, 2009a, para. 1).

Funding. In Arkansas ARs that mentioned educational funding established protocols for supplementary funding, for specific issues or programs, for example to:

> the Small, Rural School Achievement (SRSA) and Rural and Low-Income School (RLIS) programs; . . . schools with a poverty percentage of 40 percent or more; . . . schools identified for improvement, corrective action or restructuring; . . . schools that meet the definitions of 'priority schools' and 'focus schools'; . . . [and] to reward a Title I school that significantly

> closed the achievement gap between subgroups in the school or has exceeded AYP for two or more consecutive years. (Arkansas DOE, 2013b, para. 13)

The New Hampshire rule that provided special funds for local education improvement and assessment plans, with a "priority for the use of any state funds shall be given to lower-performing non-Title I schools" (NH DOE, 2003b, para. 3) was found to be unconstitutional. More recently a New Hampshire rule stated a commitment to address variation in educational challenges in individual schools: "schools with greater educational challenges will benefit from varying resources" (2007c, para. 1). The other mention of educational funding in New Hampshire ARs was for funding focused on the "cost of an adequate education" (NH DOE, 2012b, para. 1). The state required that the "definition of the opportunity for an adequate education . . . . [be used to] determine the resources necessary to provide essential programs, considering educational needs" (para. 1).

Content areas. Arkansas' accreditation of public schools defined a *core academic course* as "a course taught in any of the following subject areas defined by NCLB: English, Reading or Language Arts, Mathematics, Science, Foreign Language, Social Studies, Arts (Arkansas DOE, 2009, para. 3). The New Hampshire's input-based system required each school to "demonstrate that they provide an opportunity for an adequate education by meeting twelve of the existing school approval standards" (NH DOE, 2013). "Ten of the twelve are curriculum and instruction standards: English language arts and reading; mathematics; science; social studies; arts; world language; health education; physical education; information and communication technologies; and technology

education" (NH DOE, 2012a, p. 2). Table 14 compares the two states content areas required in accountability.

Table 14

Comparison of Two States for Required Content Areas

Arkansas core academic courses	New Hampshire adequacy standards
English, reading or language Arts	English/language arts and reading
mathematics	mathematics
science	science
social studies	social studies
arts	arts education
foreign language	world language
-	health education
-	physical education
-	technology education
-	information and communication technologies

Rigor. Arkansas identified rigor as an attribute of education policy, prioritizing content standards and curriculum frameworks that are rigorous, specific, sequenced, clear, focused, and measurable [while ensuring] that low-level general education tracts offered by districts are eliminated (Arkansas DOE, 2005, para. 5). Arkansas ARs sought to "ensure that Arkansas academic content standards are rigorous [and to maintain] a rigorous professional development system consistent with the comprehensive school improvement plan" (2013b, para 4). New Hampshire did not use the term rigor in its ARs.

Benchmarks. Arkansas incorporated benchmarks (Arkansas DOE, 2007a, 2011) (2013b) into their standards and accountability ARs. New Hampshire did not.

Performance targets. NCLB required that states describe student achievement using the terms *advanced*, *proficient* and *basic*. ("No Child Left Behind Act of 2001," 2002). Arkansas required that "by the year 2013-2014 all students are expected to perform at the proficient level or above" (Arkansas DOE, 2013b, para. 7) while New Hampshire required that "On or before the 2013-2014 school year, schools shall ensure that all pupils are performing at the basic level or above on the statewide assessment" (NH DOE, 2003c, para. 1)

Minimum competency. Arkansas implemented "End-of-Course tests for designated grades and content areas, and the high school literacy test." (Arkansas DOE, 2007a, para. 3). The Arkansas Comprehensive Assessment Program updated these requirements to "provide end-of-course examinations for designated grades and content areas, and the high school literacy assessment. (2013b, para. 3). These exams, required for Algebra I, Geometry, Biology, and an eleventh grade literacy assessment, were defined as:

> a criterion-referenced assessment taken upon the successful completion of a course of study to determine whether a student demonstrates, according to a requisite scale score established by rule of the Board, attainment of necessary knowledge and skills. End-of- Course exams include both general end-of-course assessments and high-stakes end-of-course assessments. . . . Failure to meet the requisite scale score requires that the student shall not receive academic credit for the course. (para. 3)

New Hampshire rules state that the Statewide Education Improvement and Assessment Program "is not a minimum competency testing program" (NH DOE, 2003a, para. 2).

Uniform grading scales. Arkansas established "uniform grading scales to be used by all public secondary schools in the state for regular courses, Advanced Placement courses, International Baccalaureate courses, approved weighted honors courses and approved weighted concurrent credit college courses" (Arkansas DOE, 2013c, para. 2) with an option for public elementary schools to participate in the system. New Hampshire had no similar system.

High school exit exams. Arkansas denied a high school diploma to any student who did not "meet the requisite scale score on an end-of-course assessment and [did] not satisfy the remedial requirements . . . for general end-of-course assessments" (Arkansas DOE, 2012c, para. 6). New Hampshire did not have exit exam requirements, instead they had a minimum number of credits required to earn a high school diploma (NH DOE, 2007b, 2011).

Rewards. Arkansas encouraged teacher and school success with financial and other types of awards. The Rewarding Excellence in Achievement Program (REAP) (Arkansas DOE, 2007b) increased pay for "forty percent to sixty percent (40% - 60%) of the teacher's total compensation . . . [for] achievement gains of students in each teacher's class on student scores under the statewide assessment program (para. 7). Schools were awarded "financial or other recognition of a public school structured to recognize schools that demonstrate and maintain high performance" (Arkansas DOE, 2013b, para 9). Arkansas also established "procedures to provide incentives for teacher recruitment and retention in high priority districts" (Arkansas DOE, 2012a, para. 2), including a signing

bonus of $5000 at the end of the first year, $4000 at the end of the second and third years, and $3000 a year at the end of the fourth and any subsequent years (para. 4). New Hampshire had no comparable system.

Failure. Arkansas identified the goals of recognizing failure of schools and consequential application of sanctions and failure of students to meet a mandated test score with the consequences of not receiving course credit and requirement that students re-take the test (Arkansas DOE, 2013b). New Hampshire identified failure in the context that if school that had been unable to "demonstrate that it provides the opportunity for an adequate education" (NH DOE, 2009b, para. 3) for a third consecutive year an assessment would determine how education funds were being spent. The school might be required to redirect "adequacy funds . . . to address those areas that are contributing to the failure of the school to provide the opportunity for an adequate education" (para. 3).

Competition. Arkansas utilized competition in some ARs; framing a key goal for standards they will "equip students to compete in the global workforce" (Arkansas DOE, 2013b, para 4). Competition was the method by which teachers were to be selected to participate in in the REAP plan for rewarding successful teachers; "participants shall be selected through a competitive process" (Arkansas DOE, 2007b, para. 7). New Hampshire's ARs did not provide evidence of the use of competition as a policy methodology or framing device.

Differentiation. Arkansas provided for differentiation of instruction for students who had been held back. Its Alternative Education Intervention Program was "a special instructional program for students who have been retained for two consecutive years. The program shall include research-based learning opportunities and instructional strategies"

(Arkansas DOE, 2013b, para. 3). Arkansas also provided for individualized early intervention, "short-term, intensive, focused, individualized instruction" (para. 3) in reading, writing, and math for students in kindergarten and first grade, "to maintain a student's ability to function proficiently at grade level" (para. 3).

New Hampshire directed local school districts to "devise and implement measures which focus on the continuing growth of individual students (NH DOE, 1993, para. 5) and established a "framework for the delivery of educational services at the local level. School districts then have flexibility in implementing diverse educational approaches tailored to meet student needs" (NH DOE, 2007a, para. 2).

Professional development. Arkansas required continuous professional development activities that were research and standards based to ensure that "all students demonstrate proficiency in the state academic standards" (Arkansas DOE, 2007a, para. 3; 2012b, para. 2). New Hampshire required that professional development be "aligned with school improvement goals. (NH DOE, 2009b, para. 3).

Teacher ethics. Arkansas developed a detailed set of procedures to "define standards of ethical conduct and to outline procedures for receiving complaints, authorizing and conducting investigations, and recommending enforcement of the Code of Ethics" (Arkansas DOE, 2013a, para. 3). Ethical violations included failing to keep standardized test materials secure with a potential fine of $100 (para. 9). New Hampshire's rules around teacher ethics dated from 1949; "no teacher shall advocate communism as a political doctrine or any other doctrine which includes the overthrow by force of the government" (NH DOE, para. 1).

Transparency. Arkansas made no provision for the release of test materials to parents. New Hampshire gave to parents and guardians "the right to inspect and review the pupil's assessment booklet, answer or response sheets, surveys, instructions or directions to the pupil . . . after the assessment results are released by the department" (NH DOE, 1999, para. 1).

On-site monitoring. Arkansas established an involved system for monitoring all schools with on–site inspections as part of ASCIP (Arkansas DOE, 2007a). New Hampshire had limited on-site inspections covering 10% of the schools that utilized IBAS (NH DOE, 2011).

Takeover of public schools. For schools or districts identified as not meeting identified goals, options included: annexation, consolidation, or reconstitution (Arkansas DOE, 2013b, para. 10). Reconstitution was defined as a reorganization intervention of "a public school district, including without limitation the suspension, reassignment, replacement, or removal of a current superintendent or the suspension, removal, or replacement of some or all of the current school board members, or both" (para. 3).

New Hampshire declared "Nothing in this chapter shall be construed to permit either the department of education or the state board of education to take control of the daily operations of any local public school" (NH DOE, 2003d, para. 1).

Summary. The educational attributes identified differentiate the two cases, starting with a key goal identified for each state. Arkansas sought to prepare students to compete in the global workforce while New Hampshire valued preparing students to participate in democracy. Arkansas identified and punished failure while rewarding success; New Hampshire sought to offer educational opportunity. Arkansas funded

special projects to remediate deficiencies and the achievement gap, whereas New Hampshire intended to identify the parameters of an adequate education and fund it. Arkansas' alternative accountably plan was very similar to its main plan, while New Hampshire devised an alternative plan with an emphasis less on standardized testing and more on what schools were doing to offer an adequate education. While Arkansas codified an expectation for high standards, selecting proficient as the requirement, New Hampshire chose a lower standard of basic as the expectation. Arkansas had a complex system of benchmarks, grading standards, and testing for minimum competency for passing classes and graduating focused on STEM content, while New Hampshire had a larger scope of educational content with less demand for testing, and rigor. For example, New Hampshire did not have exit exams screening out graduates, rather all students who passed the required course hours were permitted to graduate. Table 15 summarizes areas of difference between Arkansas and New Hampshire educational ARs.

Table 15

Comparison of Educational ARs for K-12 Standards and Accountability

Element	Arkansas	New Hampshire
Orientation	compete in the global workforce	maintenance of democracy
Goals	challenging goals, benchmarks, measurement processes, evaluation protocols; state level control	opportunity to acquire skills needed for participation in a free society; local control
Improvement plan	addresses deficiencies; achievement gap	content validity
Alternative plan	similar to first plan	used school self-reports
Opportunity for	student achievement	an adequate education

Table 15 (continued)

Element	Arkansas	New Hampshire
Funding	supplementary programs in support of targeted needs received funding support	differential funding based on school need; the cost of an adequate education determined and funded
Content areas	NCLB mandated curriculum and three more subjects	additional subject areas
Rigor	in standards, curriculum, and professional development	-
Benchmarks	benchmarks are part of the ARs	no benchmarks in ARs
Performance targets	proficient or higher	basic
Minimum competency	Algebra I, Geometry, Biology, English II, high school literacy test	not a minimum competency program
Uniform grading	Uniform grading scales required for secondary	-
High school diploma	course exit exams required	course credit required
Rewards	financial awards for teachers and schools	-
Failure	identification of, with consequences	reallocation of funding
Competition	used as a policy methodology	-
Differentiation	for students who have been retained twice	at local level to meet needs of diverse student population
Professional development	ensures that students achieve proficiency on standards	is aligned with school improvement goals
Transparency	-	Parents and guardians have access to test materials
On-site monitoring	all schools	10% of IBAS schools
School take-over	annexation, consolidation, or reconstitution	not permitted

Relating Study Results to the *Dichotomous Sort of Accountability Concepts*.

The attributes herein described have a lot in common with the *Dichotomous Sort of Accountability Concepts* (Table 3) presented earlier, listing the characteristics of standardized education compared to those of differentiated education. Arkansas fits the descriptor *standardized*; New Hampshire fits the descriptor *differentiated*.

The description of standardized education presented in the *Dichotomous Sort of Accountability Concepts* matched the language of Arkansas' administrative rules. Concepts of commerce, business, industry, produces workers, and world markets matched language of "academic content standards are rigorous and equip students to compete in the global workforce" (Arkansas DOE, 2013b, para. 4). Competition to succeed, winners, and losers matched language of "compete in the global workforce" (para 4), "recognize academic success and failure; apply awards and sanctions" (para. 2), "incentives for teacher recruitment and retention in high priority districts" (2012a, para. 2), and "participants shall be selected through a competitive process" (2007b, para. 7). Accountability, blame, and failure matched the language of "failure of students to meet a mandated test score with the consequences of not receiving course credit and requirements that students re-take the test" (2013b, para. 3). High standards, setting the bar high, and high expectations for all students matched the language of "a challenging set of goals" (2007a, para. 5) and "proficient level or above" (2013b, para. 7). High school diploma based on passing proficiency exams (Algebra II, etc.) matched the language of "End-of-Course testing was required for Algebra I, Geometry and Biology, as was an eleventh grade literacy assessment" (para. 3) and "meet the requisite scale score on an end-of-course assessment and [did] not satisfy the remedial requirements . . .

for general end-of-course assessments" (2012c, para. 6). Large scale testing; accountability, testing, and measurement matched the language of "equal opportunity for all students" (2007a, para. 5) to meet required performance levels using a "single comprehensive testing, assessment and accountability program" (2013b, para. 2), "equal opportunity for all students, including identifiable subgroups, to meet the expected performance levels established by the Board on all State assessments" (2007a, para. 5), and "benchmarks, measurements processes, and evaluation protocols; and is based on an analysis of data produced by the Arkansas Comprehensive Testing Program and other reliable measures of student learning to determine classroom, school, and school district academic performance" (para. 5).

While some elements of standardized education matched New Hampshire's administrative rules, the description of differentiated education presented in the *Dichotomous Sort of Accountability Concepts* matched the language of New Hampshire's administrative rules in ways that Arkansas' administrative rules did not. Educated populace, enlightened participation, respect for the individual, and personal agency matched the language of "all students with the opportunity to acquire the knowledge and skills necessary to prepare them for successful participation in the . . . political systems of a free government" (NH DOE, 2007a, para. 1) and "a well-educated populace is essential for the maintenance of democracy" (1993, para. 1). Optimal outcomes for individuals matched the language of "school districts then have flexibility in implementing diverse educational approaches tailored to meet student needs" (para. 2), "basic level or above on the statewide assessment" (2003c, para. 1), "devise and implement measures which focus on the continuing growth of individual students" (1993, para. 5), and "tailored to meet

student needs" (2007a, para. 2). Funding, opportunity to learn, and equitable facilities matched the language of defining educational funding based on determining "the resources necessary to provide essential programs, considering educational needs" (2012b, para. 1). Optimal outcomes for each student matched the language of adequacy of public education (2007b), "provide all students to opportunity to acquire" (2007d, para. 1) not only content area skills and knowledge but also life skills (2007d). Graduation without exit exams, described in the *Dichotomous Sort of Accountability Concepts* as various levels of diploma with certifications for Algebra II and other gateway courses, matched the language "is not a minimum competency testing program" (2003a, para. 2) and a minimum number of credits required to earn a high school diploma (2007b, 2011).

Science, technology, engineering, and mathematics (STEM) matched the language of both Arkansas (Arkansas DOE, 2009, para. 3) and New Hampshire (NH DOE, 2012a, p. 2), but additional content areas mandated in Arkansas were limited to social studies, arts, and foreign language (Arkansas DOE, 2009, para. 3) while in New Hampshire, health education, physical education, technology education, and information and communications technologies were added to social studies, arts education and world language as required content areas

The qualitative analysis of the administrative rules for standards and accountability of the two exemplar states revealed characteristics of standardization and differentiation that matched the *Dichotomous Sort of Accountability Concepts*. While New Hampshire shared in common with Arkansas some attributes of standardized education, Arkansas had many elements of educational standardization that New

Hampshire did not. New Hampshire had several elements of educational differentiation that Arkansas did not. Figure 23 summarizes the support in Arkansas and New Hampshire ARs of the elements of the *Dichotomous Sort of Accountability Concepts*. Elements that were not relevant were omitted. Elements that were supported by language in Arkansas ARs are colored darker blue, for New Hampshire darker orange. Lighter blue marks the element on of the standardized elements; while both states supported this element with ARs, Arkansas did so to a much greater extent. Similarly, lighter orange marks one of the differentiated elements; both states supported this element as well, but New Hampshire did so to a much larger extent.

Voting laws. Drawing on Project Vote Smart (2013) as a reliable source of voting regulations (FVAP, 2013; T. Kaplan, 2012; S. Miller, 2008; New York Times, 1999; New York Times, 2012; Stross, 2000; Sunlight Foundation, 2013), this section will describe differences in voter regulations between Arkansas and New Hampshire. Key differences included registration deadline, voter registration form, registration identification (ID) requirements, citizenship, residency requirement, mental competency, felony conviction, absentee ballot, early voting, party affiliation, and voter ID requirements. The state which provided more access to voting is noted for each item.

Registration deadline. In Arkansas, individuals were required to register to vote 30 days before an election. In New Hampshire individuals were permitted to register to vote on Election Day. New Hampshire's same day registration allowed greater access to voting.

Voter registration form. Arkansas provided printable voter registration forms online in both English and Spanish and provided forms in a variety of locations including

the library and by mail. New Hampshire did not provide voter registration forms online; applications were available only from the county clerk. Registration by mail was handled through the absentee ballot system described below. Arkansas' more widely distributed voter registration forms allowed greater access to voting.

Standardized	Differentiated
Commerce; business; industry; technological innovation; blueprint	Educated populace; enlightened participation; respect for the individual; personal agency
Cost-benefit; inputs/outputs; efficiency	Optimal outcomes for individuals
Produces workers; world markets	Individual responsibility, freedom, and benefits
Competition to succeed; winners and losers	Collaboration among peers
Accountability; blame, failure	Support; professional development
Sanctions, punishment; choice, privatization	Funding; opportunity to learn; equitable facilities
High standards; setting the bar high	Zone of proximal development (ZPD); Response to Intervention (RTI)
High expectations for all students	Optimal outcomes for each student
High school diploma based on passing proficiency exams (Algebra II, etc.)	Various levels of diploma with certifications for Algebra II and other gateway courses
Large scale testing; accountability	Needs of the whole child; school climate
Science, Technology, Engineering, and Mathematics (STEM)	Foreign languages, vocational shops, history, political science, art, music, theater, sports, citizenship, philosophy, physical education, health education, family and consumer studies

Unique to Arkansas	Unique to New Hampshire
Arkansas had more than New Hampshire	New Hampshire had more than Arkansas

Figure 23. Comparison of Support for Standardization/Differentiation Found in ARs

Registration ID requirements. In Arkansas, in order to register to vote, an individual was required to supply a driver's license, a social security number, a current valid photo ID or a document showing the name and address of the voter including a copy of a current utility bill, a bank statement or a paycheck. In order to register to vote in New Hampshire, these and additional types of identification were permitted, including completion of a qualified voter affidavit and verification of the person's identity by another registered voter who was known to the elections clerk or supervisor. New Hampshire's additional avenues for providing identification at time of registering to vote allowed greater access to voting.

Citizenship. Arkansas made no special provision for proof of citizenship. New Hampshire required new registrants to prove citizenship using a birth certificate, U.S. Passport, naturalization papers, a qualified voter affidavit, or any other reasonable document. Arkansas' lack of requirement for proof of citizens allowed greater access to voting.

Residency requirement. Arkansas required individuals to be residents of the state at least 30 days prior to the election. New Hampshire had no minimum residency time required before voting. New Hampshire's lack of residency requirement allowed greater access to voting.

Mental competency. Arkansas did not permit individuals who were currently judged to be mentally incompetent to vote. New Hampshire had no voter restrictions based on a person's mental competency. New Hampshire's lack of restriction to voters with impaired mental health status allowed greater access to voting.

Felony conviction. Arkansas did not permit convicted felons to vote until their sentences had been discharged or pardoned. New Hampshire permitted convicted felons to vote at such time as the execution of the sentence was suspended, whether that individual was on probation or on parole. There was some overlap of these rules. Because New Hampshire permitted convicted felons to vote immediately on their release from prison, whether their sentences had been discharged or not, New Hampshire had greater access to voting for convicted felons.

Absentee ballot. Arkansas required that absentee ballot applications be received seven days prior to an election. New Hampshire provided for absentee ballot to be downloaded from its website and had no special timeline requirements for submission of the ballot. New Hampshire's ease of availability of absentee ballots and more flexible timeline allowed greater access to voting.

Early voting. Arkansas provided opportunities for early voting, for periods ranging from seven to fifteen days prior to the election, with expanded hours of availability in high interest elections. New Hampshire had no early voting. Arkansas' early voting allowed greater access to voting.

Party affiliation. Arkansas had open primaries, meaning that a person did not need to be registered in a particular party to participate in that party's primary elections. New Hampshire permitted only undeclared voters, those with no declared or previously demonstrated affiliation with a particular political party, to unrestricted access to vote in any party's primary election. Arkansas' open primaries are less restrictive and allowed greater access to voting.

Voter ID requirements. In order to vote in Arkansas, a resident was required to state her or his name, address and birthdate to an election official. Required identification could take the form of a current valid photo ID or a document showing the name and address of the voter including a copy of a current utility bill, a bank statement or a paycheck. In some cases, the person was permitted to vote with a note made on the Precinct Voter Registration List, but if the person had registered to vote after 1/1/03 by mail, the voter received a provisional ballot. In order to vote in New Hampshire, a registered voter was not required to show identification at the polling place. New Hampshire's lack of voter ID requirements provided greater access to voting.

Summary. Table 16 summarizes the attributes of the case study states for voter regulation. A simple count of attributes shows that Arkansas residents had less access to voting (4 items) than did New Hampshire residents (7 items). Some of the differences between Arkansas and New Hampshire in access to registration and voting were matters of small degree and might individually effect only a small number of voters, but the overall effect was cumulative and created a climate or culture of encouragement to vote in New Hampshire. The most important element of New Hampshire's institutionalized access to voting was probably Election Day registration at the polling place. Lack of a voter ID requirement at the polling place also probably contributed to higher voter turnout in in New Hampshire as compared to Arkansas.

Study of Cultural and Demographic Attributes of Two States

Arkansas was chosen as an exemplar of states with high SEI and low voter turnout. New Hampshire was chosen as an exemplar of states with low SEI and high voter turnout. The next sections will compare and contrast these states' cultural attributes

and demographic information in order to explore for and generate a potential explanation of a negative correlation between the exemplar states' SEI scores and voter turnout levels.

Table 16

Comparison of Voter Regulations Marked for State with Greater Access

Item	Arkansas	New Hampshire
Registration deadline	0	1
Voter registration form	1	0
Registration ID requirements	0	1
Citizenship	1	0
Residency requirement	0	1
Mental competency	0	1
Felony conviction	0	1
Absentee ballot	0	1
Early voting	1	0
Party affiliation	1	0
Voter ID requirements	0	1
Total	4	7

Culture. In order to make claims about the cultural attributes of the two exemplar states, Arkansas and New Hampshire were defined as members of regions with documented cultural traits. This section places Arkansas in the Southeast region and New Hampshire in the New England states and then describes cultural attributes of those regions. Some details about the cultural claims of the individual states is also presented.

Geographic region. The regions of the U.S. are not defined the same by all governmental agencies. While there is no disagreement about New Hampshire's inclusion as a New England state, the southern states are divided up into more or fewer groups by various agencies. This study relies on the U.S. Embassy's division of the U.S. into six regions, New England, The Mid-Atlantic, The South, The Midwest, The Southwest , and The West (U.S. Diplomatic Mission to Germany, 2008) Arkansas was identified as a member of *The South*, and New Hampshire as a member of *New England*. The map in Figure 24 presents a U.S. map of regions.

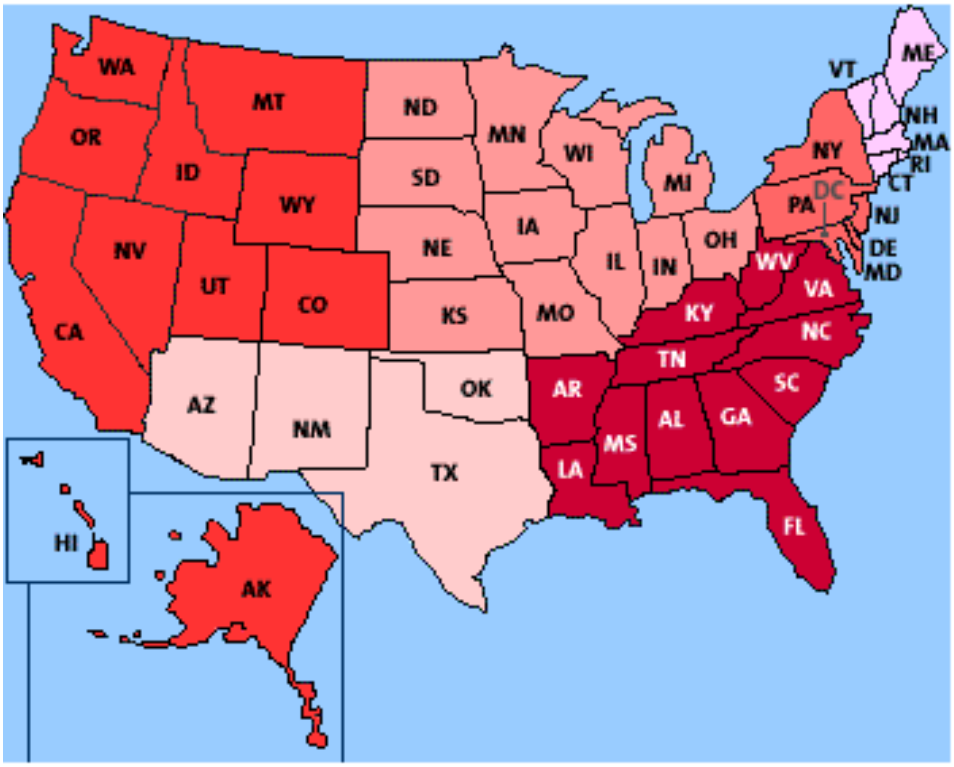


Figure 24. U.S. Divided into Regions (U.S. Diplomatic Mission to Germany, 2008)

Cultural heritage. Some common knowledge cultural attributes of The South include its history of agriculture, slavery, losing the civil war, warm weather, and southern hospitality. New England is known for a its history Protestant settlements, early manufacturing, colonial activism leading to revolution, Ivy League schools, and the use

of town meetings to make governance decisions (U.S. Diplomatic Mission to Germany, 2008).

The State of Arkansas website devoted to Arkansas history and culture noted Arkansas bauxite mining for use in aluminum as a critical contribution to the U.S. effort to win World War II (The Department of Arkansas Heritage, 2013b). The page devoted to the *Culture of Arkansas* (The Department of Arkansas Heritage, 2013a) focused on the Arts and genealogy.

The State of New Hampshire devoted webpages to heritage, history, and culture, boasting of a "the driving progress of industrial mills in Manchester [and] an overwhelming spirit of community involvement and political participation" (Hampshire, 2013, para. 2). University of New Hampshire's Center for New England Culture claimed that "in no American place is the persistence of regional identity stronger than in New England, and many have argued that core American values and characteristics originated and still flourish in its six states" (2013, para. 4). New Hampshire took pride in its Revolutionary War Heroes and historic places.

Summary. Arkansas and New Hampshire have different historical cultural backgrounds. While both states are in the eastern half of the country, they draw on different cultural traditions. Arkansas is embedded in The South, with a background of agriculture and history that includes slavery and the civil war. Modern cultural attributes emphasize new growth of industry, value of the arts, and an important role in World War II. New Hampshire is part of New England, with cultural attributes that draw on a history that goes back to Puritan settlements, the earliest manufacturing sites in the colonies, and

an important role in the Revolutionary War. Current articulations of culture emphasize community involvement in the political process.

Demographics. Demographic data for Arkansas and New Hampshire revealed some differences between the two states. This section reports data for population and density, race, education levels, economics, social attributes, religion and political affiliation.

Population and density. Using the U.S. Census website tool State and County QuickFacts (U.S. Census Bureau, 2013d), comparative demographic information was collected. Using 2012 estimates, the overall U.S. population was 313,914,040. With a population of 2,949,131, Arkansas residents constituted about one percent (0.94%) of the U.S. population. With a population of 1,320,718, New Hampshire residents constituted less than half a percent (0.42%) of the U.S. population. Arkansas was about twice as populated as New Hampshire.

Population density data from the U.S. Census Bureau (2010b) revealed a substantial difference between Arkansas and New Hampshire. Population density in Arkansas is about one third of what it is in New Hampshire. As displayed in Figure 25, by that measure Arkansas is more rural than New Hampshire.

Additional data compiled by the U.S. Census Bureau (2010a) provided a more nuanced understanding of the population density of the two case study states. Compared to Arkansas, a greater percentage of the New Hampshire population was urban and three times as much of the total land in the state was urban, although Arkansas' population density in urban areas was greater than was found in New Hampshire. Table 17 supplies the details.

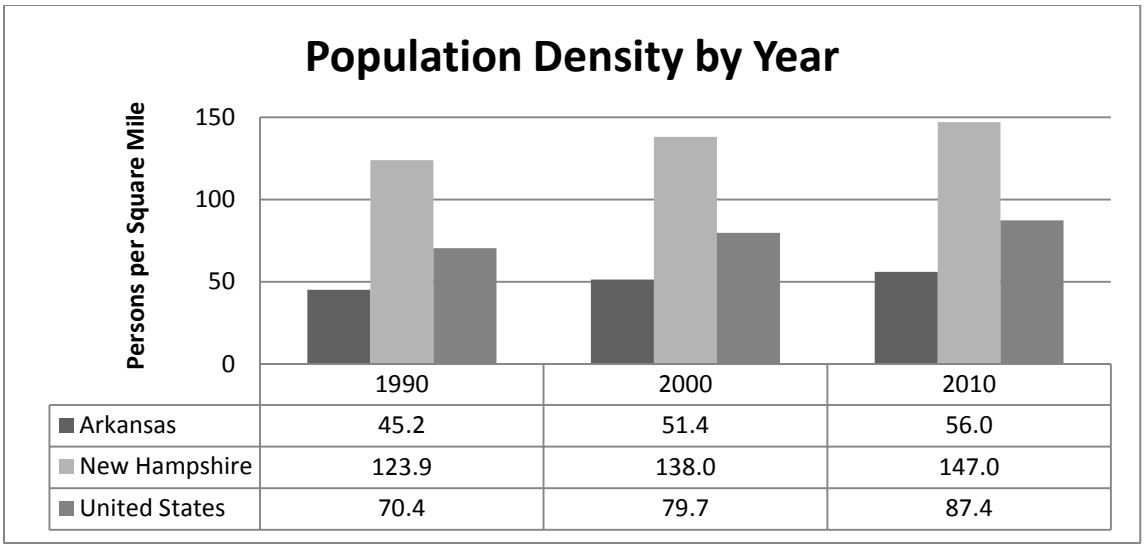


Figure 25. Population Density

Table 17

Urban Population Density (U.S. Census Bureau, 2010a)

State	Percentage of the total population of the state represented by the urban population	Percentage of the land area of the state represented by the land area of the urban areas	Population density of the urban areas
Arkansas	56%	2%	1493
New Hampshire	60%	7%	1233

The composition of rural population densities for the case study states was somewhat the mirror of the demographics for urban population densities. For New Hampshire, as compared to Arkansas, a smaller proportion of the population lived in rural areas, less land was rural, and the population density of rural areas was greater. Table 18 reports the data.

Race. In 2011 (U.S. Census Bureau, 2013e, 2013f), the distribution of race in Arkansas was fairly close to the national averages, predominately White (80%) with

approximately 16% Black residents and 7% Hispanic/Latino residents. New Hampshire was far more homogenous than both Arkansas and the national average; 95% of the residents were White. Most of the non-White residents were divided between Asian (2%) and Hispanic/Latino (3%) races. Table 19 provides supporting details.

Table 18

Rural Population Density (U.S. Census Bureau, 2010a)

State	Percentage of the total population of the state represented by the rural population	Percentage of the land area of the state represented by the land area of the rural areas	Population density of the rural areas
Arkansas	44%	98%	25
New Hampshire	40%	93%	63

Table 19

Racial Composition as a Percent (U.S. Census Bureau, 2013e, 2013f)

Criteria	Arkansas	New Hampshire	U.S.
White persons, percent	80.1	94.6	78.1
Black persons, percent	15.6	1.3	13.1
American Indian and Alaska Native persons	0.9	0.3	1.2
Asian persons, percent	1.3	2.3	5.0
Native Hawaiian and Other Pacific Islander persons	0.2	<0.5	0.2
Persons reporting two or more races, percent	1.8	1.5	2.3
Persons of Hispanic or Latino Origin, percent	6.6	2.9	16.7
White persons not Hispanic, percent	74.2	92.2	63.4

Education levels. In 2007-2011 (U.S. Census Bureau, 2013e, 2013f), high school graduation rates were lower for Arkansas (83%) than they were for New Hampshire (91%). Similarly, fewer residents in Arkansas (20%) had at least a Bachelor's degree, as compared to New Hampshire (33%). Table 20 provides details.

Table 20

Education Levels for Persons 25 and Older (U.S. Census Bureau, 2013e, 2013f)

Criteria	Arkansas	New Hampshire	U.S.
High school graduate or higher	82.7	91.2	85.4
Bachelor's degree or higher	19.6	33.1	28.2

Economics. According to U.S. Census data for 2007-2011 (2013e, 2013f), the poverty rate was over twice as high in Arkansas (18%) as it was in New Hampshire (8%). Residents of Arkansas (68%) were less likely to own their own homes than residents of New Hampshire (73%). The median value of owner-occupied homes for the same time period was less than half as much in Arkansas ($105,100) and it was in New Hampshire ($250,000). Income levels followed the same pattern, with the per capita income for Arkansas at $21,833 compared to $32,357 for New Hampshire; New Hampshire per capita income represented a 48% increase over Arkansas income. Median household income for 2007-2001 was $40,149 in Arkansas and 64,664 in New Hampshire. New Hampshire median household income represented at 61% increase over Arkansas. Table 21 provides details of economic comparison data.

Table 21

Economic Demographics as a Percent (U.S. Census Bureau, 2011c, 2013f)

Criteria	Arkansas	New Hampshire	U.S.
Persons below poverty level	18.40%	8.00%	14.30%
Homeownership rate	67.50%	72.50%	66.10%
Median value of owner-occupied housing units	$105,100	$250,000	$186,200
Per capita money income in the past 12 months	$21,833	$32,357	$27,915
Median household income	$40,149	$64,664	$52,762

Employment status is a strong indicator of the economic situation in a state. The U.S. Census Bureau report of *Selected Economic Characteristics 2007-2011 American Community Survey 5-Year Estimates* (2011a, 2011b, 2011c) provided data on employment; for residents age sixteen and older, Arkansas had fewer employed people (55%) than New Hampshire (65%). One reason for this difference is that compared to New Hampshire, Arkansas had more individuals who were not in the labor force, such as students, homemakers, and retired workers. Figure 26 presents details.

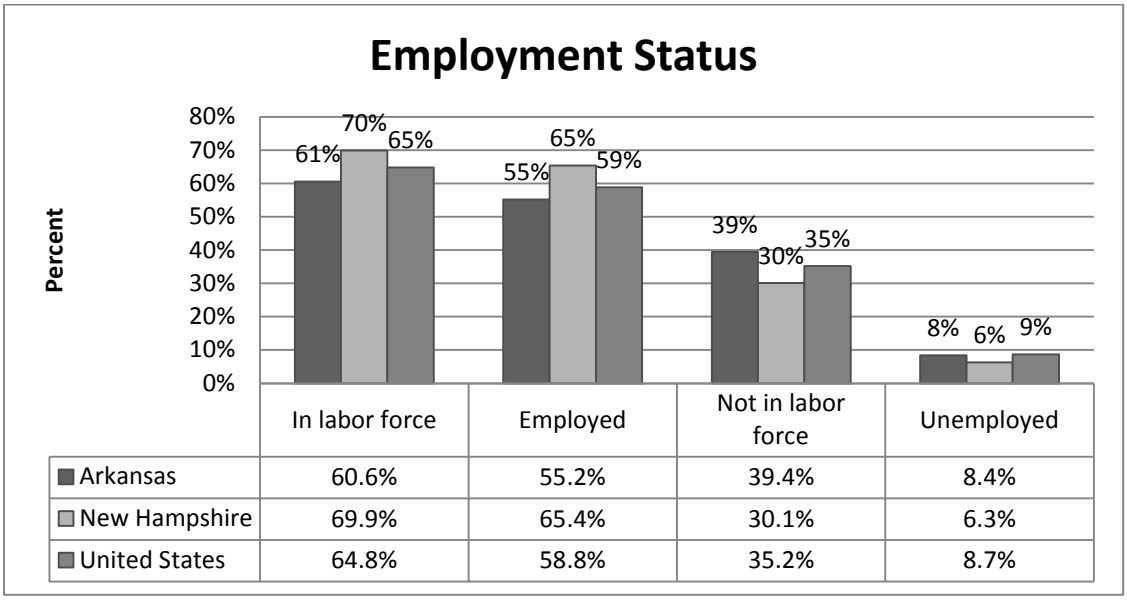


Figure 26. Employment (U.S. Census Bureau, 2011a, 2011b, 2011c)

The U.S. Census Bureau's report on *Selected Housing Characteristics 2007-2011 American Community Survey 5-Year Estimates* (U.S. Census Bureau, 2011d, 2011e, 2011f) provided data on average rent costs. Figures 27 and 28 reveal another way of viewing the relative poverty of Arkansas as compared to New Hampshire. The Arkansas average rent data approximated an almost perfectly symmetrical normal distribution curve centered on the median rent of $637 a month. New Hampshire rent data was skewed to the left, or negatively skewed, as the bulk of the values, including the median rent of $946 lie to the right of the mean.

Another attribute of relative economic power and the opportunity it affords is car ownership. Arkansas households were more likely to have no access to a vehicle (6.5%) compared to New Hampshire households (5.0%) and less likely to have access to more than one vehicle (59.6% vs. 65.1%). Overall lower incomes in Arkansas, as compared to New Hampshire, manifested in less access to vehicles and a resulting reduced access to opportunities such as voting. Figure 29 provides details.

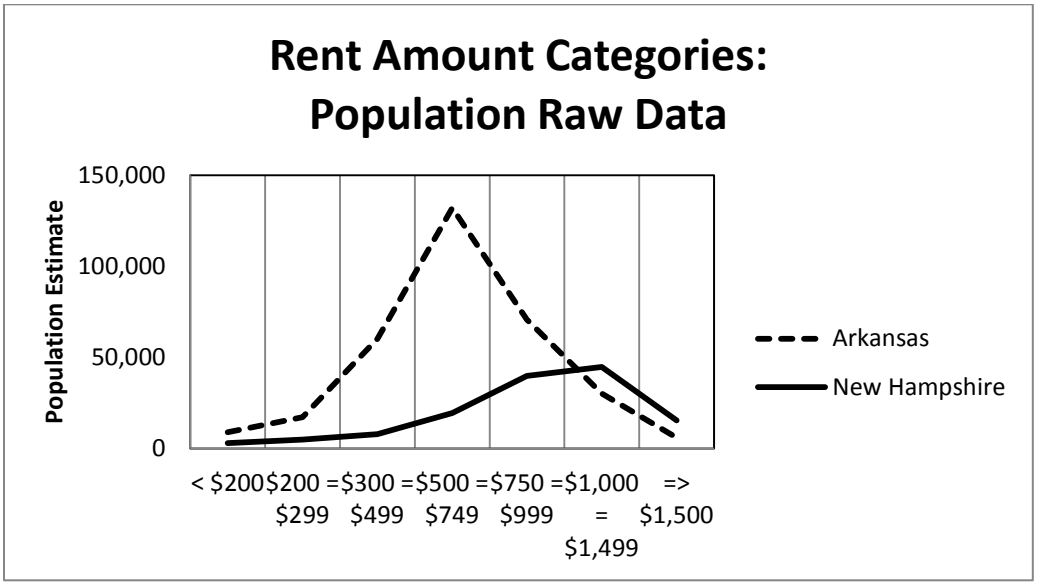


Figure 27. Average Rents as Population Estimates (U.S. Census Bureau, 2011d, 2011e, 2011f)

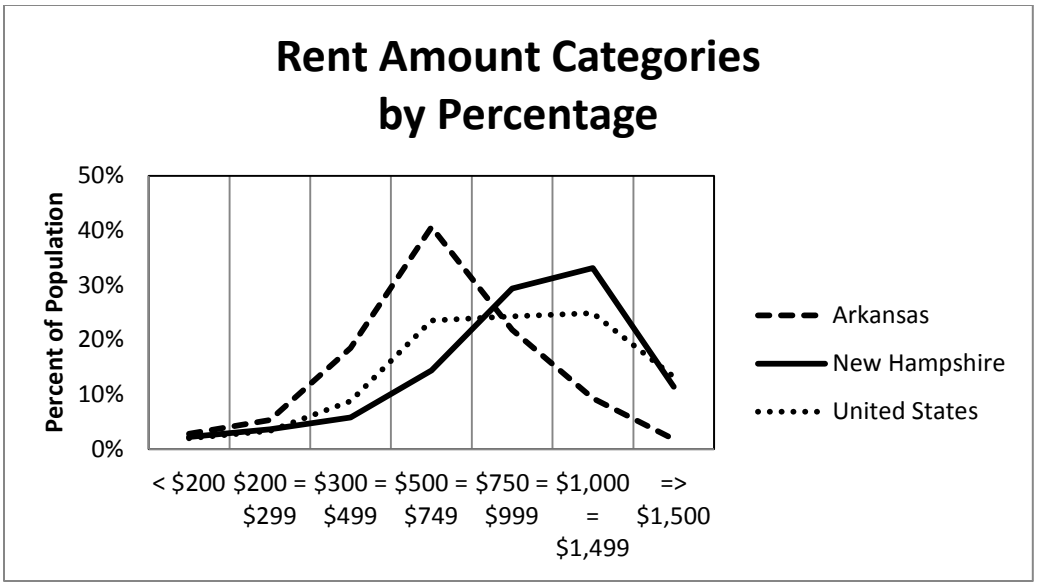
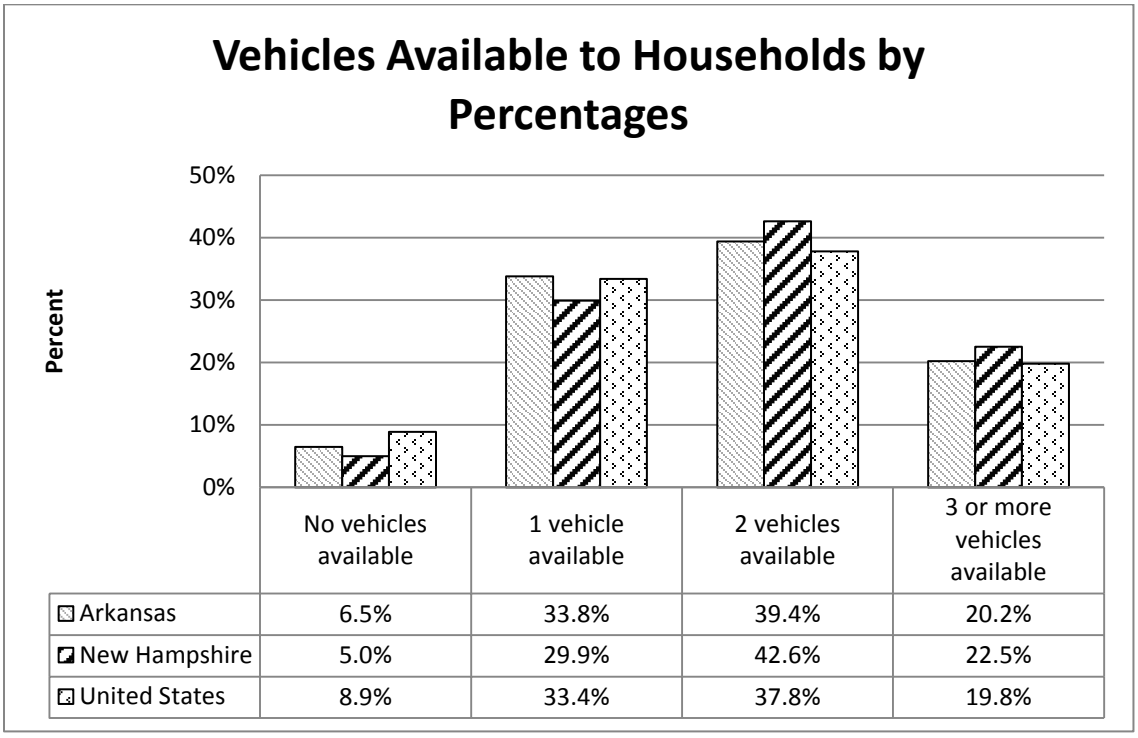


Figure 28. Average Rents as Percentages (U.S. Census Bureau, 2011d, 2011e, 2011f)

A final aspect of economic factors can be interpreted as opportunity to vote: a measure of mobility, how recently a resident moved into their current house. Figure 30 demonstrates that Arkansas residents (42.6%) were more likely than New Hampshire residents (35.2%) to have moved into their current residence in the most recent category for which data was collected, 2005 or later. In other words, people in Arkansas had moved more recently than people in New Hampshire. Conversely, Arkansas residents were less likely than New Hampshire residents to fall in the categories for having stayed in the same residence for longer periods of time. (U.S. Census Bureau, 2011d, 2011e, 2011f).

According to the U.S. Census Bureau report *Selected Economic Characteristics 2007-2011 American Community Survey 5-Year Estimates* (U.S. Census Bureau, 2011a, 2011b, 2011c), for some industries, there was little difference between Arkansas and New Hampshire: public administration; educational services, and health care and social assistance; information; arts, entertainment, and recreation and accommodation and food

services; wholesale trade, construction, and retail trade. Figure 31 presents comparative data for the five industries with the greatest difference in employment between Arkansas and New Hampshire. Arkansas employed more people than New Hampshire with differences of 1.6% to 2.6% in the industries: manufacturing; transportation and warehousing, and utilities; and agriculture, forestry, fishing and hunting, and mining. Arkansas employed fewer people than New Hampshire in the industries of finance and insurance, and real estate and rental and leasing (1.5% difference) and professional, scientific, and management, and administrative and waste management services (3.2% difference).



	No vehicles available	1 vehicle available	2 vehicles available	3 or more vehicles available
Arkansas	6.5%	33.8%	39.4%	20.2%
New Hampshire	5.0%	29.9%	42.6%	22.5%
United States	8.9%	33.4%	37.8%	19.8%

Figure 29. Access to Vehicles as Percentages of Households (U.S. Census Bureau, 2011d, 2011e, 2011f)

Social attributes. The U.S. Census also published social characteristics differentiated by state for 2007-2011 in *American Community Survey 5-Year* (2013a, 2013b, 2013c). Small differences in social characteristics between Arkansas and New

Hampshire suggest the influence of greater poverty on family stability and perhaps even happiness. Arkansas had more single mothers (13.4%) than New Hampshire (9.3%), more individuals who lived alone (27.3% vs. 24.9%), and more seniors (10.2% vs. 8.9%). Arkansas had a smaller percentage than New Hampshire of men who never married (28.8% vs. 30.4%), and a greater percentage who were separated (2.0% vs. 1.1%), widowed (2.9% vs. 2.4%), or divorced (11.8% vs. 10.3%) and women who never married (22.7% vs. 25.0%), and a greater percentage who were separated (2.8% vs. 1.3%), widowed (11.1% vs. 8.6%), or divorced (13.2% vs. 12.7%). Table 22 provides the details.

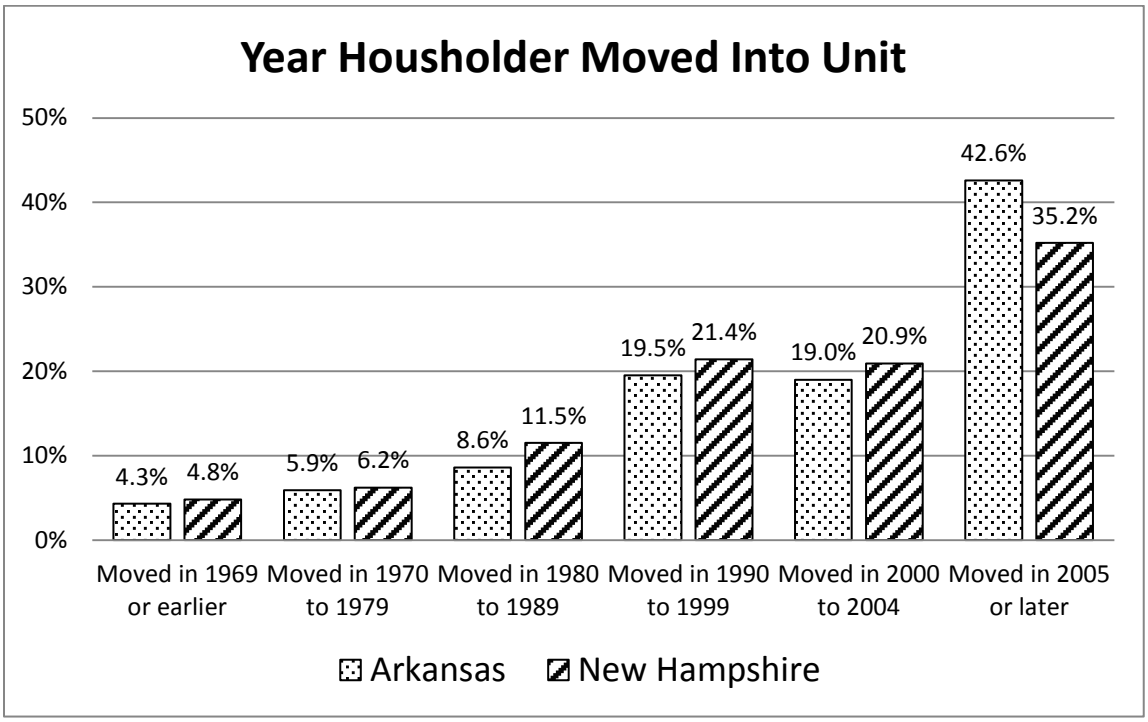
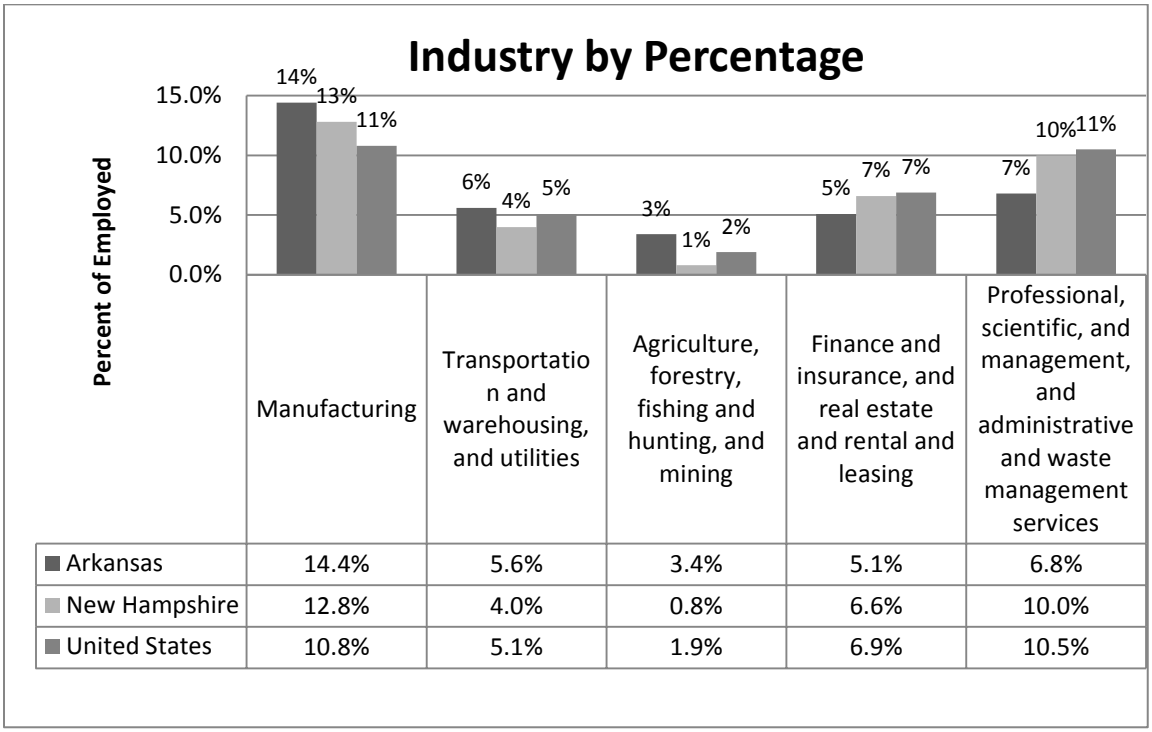


Figure 30. Mobility as Percentages of Households (U.S. Census Bureau, 2011d, 2011e, 2011f)

Religion. The Pew Forum on Religion & Public Life published *U.S. Religious Landscape Survey Religious Affiliation: Diverse and Dynamic* (2008), a survey of a representative sample of 35,556 adults in the 50 U.S. states and D.C. Due to small sample sizes in smaller states, some states were combined, including New Hampshire and

Vermont. The data was also presented online (Pew Research Center, 2013). When asked how important religion was in their lives, Arkansas (n = 681) residents were third in the nation, with 74% of respondents saying religion was very important in their lives. New Hampshire (combined with Vermont, n = 320) was last, with 36% of respondents saying religion was very important in their lives. The national average was 56%. For those who were religious, residents of Arkansas were far more likely to be members of Evangelical Protestant churches (53%) than residents of New Hampshire (11%). Residents of New Hampshire were far more likely to be non-evangelical Protestant (23%) or Catholic (29%) than residents of Arkansas (16% and 5%, respectively).



	Manufacturing	Transportation and warehousing, and utilities	Agriculture, forestry, fishing and hunting, and mining	Finance and insurance, and real estate and rental and leasing	Professional, scientific, and management, and administrative and waste management services
Arkansas	14.4%	5.6%	3.4%	5.1%	6.8%
New Hampshire	12.8%	4.0%	0.8%	6.6%	10.0%
United States	10.8%	5.1%	1.9%	6.9%	10.5%

Figure 31. Employment in Selected Job Categories

Political affiliation. Arkansas and New Hampshire did not present a clear pattern of political affiliation. The political party of Representatives and Senators elected to the U.S. Congress between 2005 and 2011 revealed fluctuations in voter party preference

(U.S. Census Bureau, 2011g). Arkansas favored Democrats in 2005, 2007, and 2009, but favored Republicans in the 2011 House races and split support between the two parties in the Senate races. New Hampshire elected Republicans to Congress in 2005, Democratic Representatives in 2007, 2009, and 2011 and Republican Senators in 2007, with split support between Democrats and Republicans for Senate elections in 2009 and 2011. Figure 32 provides details.

Recent elections of governors revealed that both states elected Democratic governors by a wide margin. In Arkansas votes for the Democratic were about one third more than for the Republican. In New Hampshire, the Democrat received one and half times as many votes as the Republican. Figure 33 provides details.

Gallup (Saad, 2012) reported party affiliation of voters. This data revealed an almost equal split between the voter registration party affiliation in both Arkansas and New Hampshire. Figure 34 shows a graphic of this information.

One view of the political persuasions of the voters in Arkansas and New Hampshire is that they were divided, as evidenced by the registration data. Another view is that variation in the party affiliation of statewide elected officials demonstrated that voters in both states were independent such that voters elected based on the person more than on the party.

Table 22

Selected Social Characteristics in the U.S. (U.S. Census Bureau, 2013a, 2013b, 2013c)

Criteria	Arkansas		New Hampshire		U.S.	
	Estimate	%	Estimate	%	Estimate	%
	Households by type					
Total households	1,121,386	100.0	514,869	100.0	114,761,359	100.0
Female householder, no husband present, family	149,710	13.4	47,932	9.3	14,606,354	12.7
Householder living alone	305,904	27.3	128,449	24.9	31,326,617	27.3
65 years and over	114,056	10.2	45,992	8.9	10,852,066	9.5
	Marital Status					
Males 15 years and over	1,120,066	100.0	528,822	100.0	119,550,497	100.0
Never married	322,285	28.8	160,538	30.4	41,414,163	34.6
Now married, except separated	610,644	54.5	295,320	55.8	61,813,577	51.7
Separated	22,582	2.0	5,713	1.1	2,163,466	1.8
Widowed	32,622	2.9	12,578	2.4	3,013,295	2.5
Divorced	131,933	11.8	54,673	10.3	11,145,996	9.3
Females 15 years and over	1,187,574	100.0	552,041	100.0	126,044,280	100.0
Never married	270,026	22.7	138,263	25.0	35,707,687	28.3
Now married, except separated	595,271	50.1	288,547	52.3	60,433,856	47.9
Separated	33,268	2.8	7,273	1.3	3,144,890	2.5
Widowed	132,264	11.1	47,671	8.6	11,896,896	9.4
Divorced	156,745	13.2	70,287	12.7	14,860,951	11.8

Table 23

Religious Affiliation in Percentages (Pew Research Center, 2013, pp. 96-98)

Attribute	Arkansas	New Hampshire	U.S.
Members of Evangelical Protestant Churches	53.0	11.0	26.0
Members of Mainline Protestant Churches	16.0	23.0	18.0
Members of Historically Black Protestant Churches	10.0	<0.5	7.0
Catholic	5.0	29.0	24.0
Mormon	<0.5	1.0	2.0
Jehovah's Witness	1.0	<0.5	1.0
Orthodox	<0.5	<0.5	1.0
Other Christian	1.0	<0.5	<0.5
Jewish	<0.5	1.0	2.0
Muslim	<0.5	<0.5	1.0
Buddhist	<0.5	1.0	1.0
Hindu	<0.5	<0.5	<0.5
Other world religions	<0.5	<0.5	<0.5
Other faiths	<0.5	7.0	1.0
Unaffiliated	13.0	26.0	16.0
Don't know / refused	<0.5	<0.5	1.0

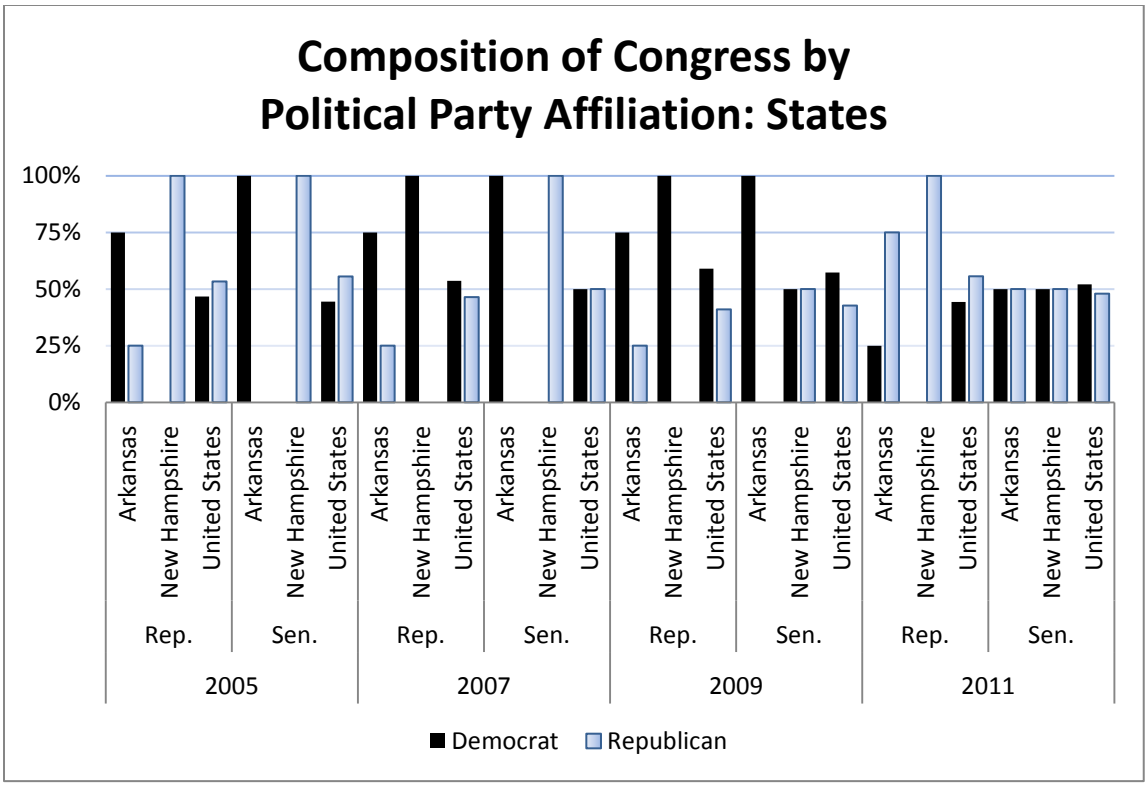


Figure 32. Composition of Congress by Political Party Affiliation (U.S. Census Bureau, 2011g)

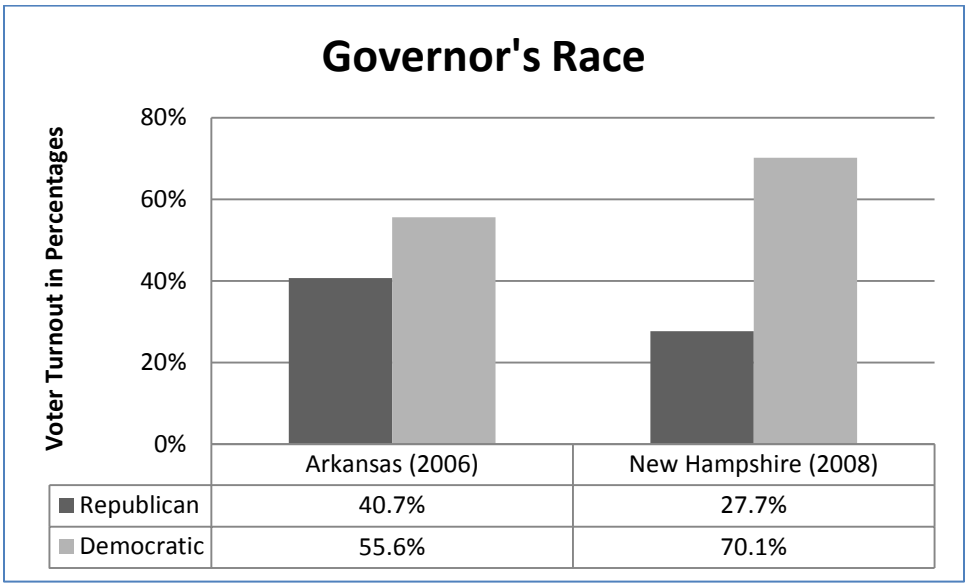


Figure 33. Voter Participation by Party for Governor's Race (U.S. Census Bureau, 2010b)

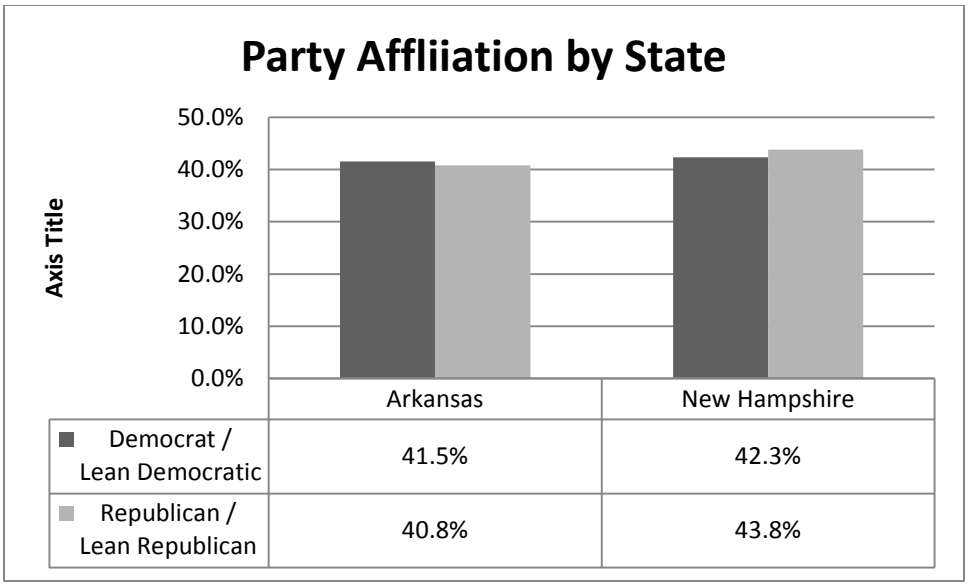


Figure 34. Party Affiliation (Saad, 2012)

Summary

This results chapter has reported on quantitative analysis, exploration of alternative explanations, and qualitative analysis. A detailed summary follows.

Quantitative Analysis

The first component of the study measured the relationship of two quantitative variables, the SEI and voter turnout, to answer two research questions: (a) What is the relationship between a state's level of educational standardization and its voter turnout in the 2012 national election? and (b) What is the relationship between a state's level of educational standardization and change in that state's voter turnout between 2000 and 2012?

The SEI was a measure of each state's level of educational standardization, drawing on data collected and published by two of the most important advocates for standardization, Achieve and Common Core State Standards Initiative. The voter turnout rate was drawn from USEP's report of state VEP data for two national general elections.

The percentage statistic for VEP was calculated in a manner similar to the VEP percentage; for both the numerator was the actual number of voters and the denominator was the total of possible voters. In VAP, the denominator was all state residents age 18 or older. In the VEP percentage, the denominator was reduced by the number of residents who were ineligible to vote, such as non-citizens and felons, and increased by the number of residents who were eligible to vote but out of the state, such as military personnel.

A weak negative correlation found between SEI level and voter turnout in 2012 was not significantly different from zero, $r(49) = -.17$, $p = .22$. About 3% of the variability in 2012 state voter turnout rate was explained by the level of standardization of education. A weak positive correlation between SEI and the difference between 2000 and 2012 voter turnout rates was not significantly different from zero, $r(49) = .20$, $p = .16$. About 4% of the variability in the difference in state voter turnout rate between 2000 and 2012 was explained by the level of standardization of education. The statistical analysis did not provide evidence that the level of standardization of education in state was related to its voter turnout percentage.

Exploration of Alternative Explanations

In order to better explain the relationship between the SEI and voter turnout, additional correlation analyses were conducted. Analysis of correlation between SEI and VEP and VAP for 2000, 2004, 2008, and 2012 provided evidence that all the trend lines were in the same negative direction, although for half of them, SEI with VAP 2012, and VEP 2004, 2008, and 2012, the negative correlation was not significantly different from zero. For the other four correlations, SEI with VEP and VAP 2000, and VAP 2004 and 2008, weak negative correlations were found that were significantly different from zero;

11%, 14%, 9% and 6% of the variability was explained, respectively.

Of interest to the study was the fact that none of the relationships were in a positive direction. In other words, there was no evidence that for states, the standardization of K-12 public education, as measured by the 2012 SEI, was positively related to voter turnout, as measured by voter participation in presidential general elections between 2000 and 2012.

Qualitative Analysis

The second component of the study investigated the circumstances of two exemplar states to answer the final two research questions: (a) What institutional factors affect educational standardization and voter turnout? and (b) What cultural and demographic attributes provide context for understanding a state's level of educational standardization and voter turnout? Arkansas was selected as the best choice of an exemplar of high SEI and low voter turnout; New Hampshire was selected as the best choice of an exemplar of low SEI and high voter turnout. The data collection of state ARs for educational standardization and accountability revealed differences in the framing and mandates of education policy between the two states. Data collected on laws regulating voter registration and voting illustrated differences in institutional barriers and accessibility. Cultural and demographic attributes sharpened the contrast between a high SEI / low voter turnout state and a low SEI / high voter turnout state.

Standardized education. ARs for Arkansas articulated a clear pattern of support for standardized education. New Hampshire's ARs presented a somewhat different picture; while there was some evidence of standardization, there was also strong support for differentiation of education. The descriptions of standardized and differentiated

education presented in the *Dichotomous Sort of Accountability Concepts* matched the language of Arkansas' and New Hampshire's administrative rules as follows. Unique attributes of standardization were located in the Arkansas' ARS: commerce, business, industry, produces workers, world markets, competition to succeed, winners, and losers, accountability, blame, failure, high standards, setting the bar high, high expectations for all students, high school diploma based on passing proficiency exams (Algebra II, etc.), large scale testing, accountability, testing, and measurement. Attributes of differentiation were located in New Hampshire's ARs in ways that Arkansas' administrative rules did not: educated populace, enlightened participation, respect for the individual, personal agency, optimal outcomes for individuals, funding, opportunity to learn, equitable facilities, optimal outcomes for each student, graduation without exit exams (described in the *Dichotomous Sort of Accountability Concepts* as various levels of diploma with certifications for Algebra II and other gateway courses). Mandated curriculum was another area of difference between Arkansas and New Hampshire. While both states mandated STEM courses and three additional content areas, New Hampshire required other additional content areas that Arkansas did not mandate.

Perhaps the most pointed language that contrasted the exemplar states' support of standardization and differentiation was expressed in mission statements. Arkansas prioritized the goal that "academic content standards are rigorous and equip students to compete in the global workforce" (Arkansas DOE, 2013b, para. 4). New Hampshire expected to provide "all students with the opportunity to acquire the knowledge and skills necessary to prepare them for successful participation in the . . . political systems of a free government" (NH DOE, 2007a, para. 1) and stated that "a well-educated populace

is essential for the maintenance of democracy" (1993, para. 1).

Voter turnout. Regulations that affected voter participation were also different in the two case study states. It is possible that the number of voter regulations hindered or improved access to voting and contributed to Arkansas' low voter participation rates (50% in 2012), as compared to New Hampshire's (70% in 2012). For four of the elements of voter regulations, Arkansas provided greater access: voter registration form, citizenship, early voting, and party affiliation. For seven of the elements of voter regulations, New Hampshire provided greater access: registration deadline, registration ID requirements, residency requirement, mental competency, felony conviction, absentee ballot, and voter ID requirements. It is likely that one particular element of access was the most important in the difference in voter participation, the requirement in Arkansas that individuals must be residents of the state for and complete their voter registration at least 30 days prior to an election, whereas in New Hampshire, residents had no similar residency requirements and were permitted to register to vote at the polling place on the day of the election.

Culture. The cultural attributes of Arkansas and New Hampshire differed in one key aspect that may have been relative to voter participation. Arkansas, as a part of The South, is heir to historical legacy of losing the Civil War and having emancipation forced upon it. These aspects of Arkansas' history would not seem to particularly foster civic participation in democracy. In contrast, New Hampshire, both as a state and as a part of New England, is heir to a historical legacy of political involvement, from the first European settlers who took action to obtain religions freedom, to the liberatory actions of revolutionaries in our War of Independence, and living on today in local community

participation in political decisions. It is more difficult to hypothesize a connection between the states' cultural attributes and different levels of educational standardization.

Demographics. Demographic information provided a final area of contrast between Arkansas and New Hampshire. Perhaps most compelling was the evidence of Arkansas' greater poverty, lower incomes, fewer high tech or management jobs, and lower levels of educational attainment, as compared to New Hampshire. All of these elements are known predictors of weaker political engagement and lower voter participation. Differences in urban/rural population densities, with Arkansas being more rural than New Hampshire, and religiosity, with Arkansas being more religious in general and more fundamentalist in particular, as compared to New Hampshire, may have contributed to a world view of the Arkansas population that more easily embraced both the standards based movement in education and more demanding requirements of potential voters.

CHAPTER V

DISCUSSION

This discussion of the relationship between the standardized of public education and voter turnout begins with a short review of the problem, the literature review and the study results. The rest of this section will discuss implications, contra-arguments, limitations, and recommendations, followed by a conclusion.

Framing the Research

Voter participation was lower in the U.S. than in many other countries and decline in voter turnout was a well-publicized problem. Voter participation continued to fluctuate and vary between years and for types of elections, by educational level and age of voters, and among states. An investigation of research related to the causes of voting behavior found many and diverse studies which supplied one essential fact: evidence supported a positive relationship between education and voting (Barber, 1969; Burden, 2009; A. Campbell, 1960; Converse & Campbell, 1972; Dee, 2004; Freedman et al., 2004; M. Johnson, 2001; Lassen, 2005; Leighley & Nagler, 1992; Milbrath & Goel, 1965; Nie et al., 1996; Powell, 1986; Rosenstone & Hansen, 1993; Sondheimer & Green, 2010; Stein et al., 2005; U.S. Census Bureau, 1991; Verba et al., 1995; R. E. Wolfinger & Rosenstone, 1980). Relative education was a more powerful explanatory variable than absolute education (Tenn, 2005), explaining the paradox of Brody's puzzle. In other words, better educated members of any particular group were more likely to vote than their less well educated peers (Logan et al., 2012; Xu, 2005), but an increase in years of education for any particular cohort did not correlate with increased voter participation for that cohort. Education had a moderating effect on potential reduced participation by those

who faced obstacles to voting (Gallego, 2010; Milbrath & Goel, 1965; Milligan et al., 2004; Squire et al., 1987), whether the challenges were centered on the individual, such as poverty or mobility, or institutional, such as challenging voter registration and voter ID rules or other impediments to voting that were not distributed equally across states. Well documented problems with voter turnout in the U.S. occurred at the same time that standardization of K-12 public education was increasing, incrementally and inexorably.

A historical understanding of educational standardization revealed a seemingly inevitable transformation of policies from foundational aspirations of an informed electorate essential in a democracy to a market forces model of efficiency and productivity, a reshaping of educational purpose from producing personal empowerment to producing employees ready to compete for jobs in the global workforce. A narrowing of the curriculum was documented as educational emphasis moved towards student outcomes represented by scores on large-scale high-stakes tests in common core content areas of reading and math (Dillion, 2006; Gunzenhauser, 2003; K. V. King & Zucker, 2005, p. 5; Mathis, 2003; Pedulla et al., 2003; Robelen, 2011; Vogler, 2003; von Zastrow & Janc, 2004). There was a decline in instructional minutes devoted to the content areas most related to voter participation, civics and social studies (Kahne & Westheimer, 2003)(Duncan, 2011). Attempts to add creativity and citizenship back into the curriculum through 21st century skills did not focus on empowerment of voters. Standardization filled the educational space, leaving little room for the development of differentiation of instruction, as defined in the *Dichotomous Sort of Accountability Concepts*.

The Study

The convergence of two phenomena, first low, declining, and variable voter participation and second, increased standardization of education, was the focus of exploratory research that developed a tool for measuring the level of state educational standardization, the SEI. The nature of the relationship between the two variables was explored using quantitative and qualitative methods using cultural and critical theory lenses.

The study used a complementarity mixed-methods design with sequential quantitative and qualitative components. The quantitative component developed a tool for measuring states' levels of educational standardization, the Standardized Education Index (SEI). Data for voter age population (VAP) and voter eligible population (VEP) in state presidential elections between 2000 and 2012 were used as measures of voter turnout. A weak correlation was found between the SEI and voter turnout for VEP in 2000 and VAP in 2000, 2004, and 2008, with between 6% and 14% of variability explained. While no evidence of a positive relationship between higher levels of SEI and higher voter turnout was found, no counter argument could be established either.

The qualitative component utilized case studies of exemplars of states with high SEI/low voter turnout and high SEI/low voter turnout, which were Arkansas and New Hampshire respectively. Investigated elements were: educational Administrative Rules, voting regulations, and cultural/geographic and demographic attributes. Data was compiled and compared. A binary sort, a *Dichotomous Sort of Accountability Concepts*, framed the critical analysis of educational standards data. Arkansas was found to be a location of standardized education and restrictive voting regulations. New Hampshire

was a location of more differentiated education supporting civic engagement with easier access to voting.

Implications

This study provided some evidence that states with high SEI are more likely to have low voter turnout than states with low SEI. This study provided no evidence to support a positive relationship between SEI and improved voter turnout for states, but it also made no claim that increased standardization decreased voter turnout. Qualitative exploration identified suggested attributes of states with low educational standardization and high voter turnout (LH), as contrasted with attributes of states with high educational standardization and low voter turnout (HL): a historical emphasis on voter participation in democracy, goals of education for political engagement, higher SES, more residents employed in professional jobs, more urban, less agricultural, less religiosity in general and more Protestants and Catholics as compared to Fundamentalists. There may be a cultural driver that produced the LH result for states.

The concept of the SEI is useful in looking at the long range effect of standardization of education on voter participation. The SEI is a measure of the relative level of standardization as compared between and among states, statistically standardized as a *z*-score. In the future, if data supporting some of the indicators are no longer available, or if new indicators become relevant, these realities can be incorporated into a new iteration of the SEI and comparisons of correlation analyses will still be relevant as a way of looking at the longitudinal effect of SEI on voter turnout.

This study questions whether standardization of K-12 public education is the solution to perceived problems with education, asking the question: Does standardization

cause more harm than any good it might do, by perpetuating or engendering low voter participation. This study's results are a baseline for further investigation of the relationship of educational standardization to voter participation. If standards based reform has a positive effect on voter participation, then future correlation analysis will produce a moderate to strong positive relationship. If the relationship remains negative, then it will provide evidence that standards reform does not engender an informed electorate. After addressing alternative explanations in the next section, recommendations will include improving the SEI, exploring states for attributes, the development of active civic knowledge and the importance of addressing larger social issues.

Alternative Explanations

The key problem addressed by this study is the lack of improvement of voter participation for members of various groups. One plausible justification for standardized education as a solution to this problem is that better educated individuals are more likely to vote than their less well educated peers, and that educational reform is increasing education for all groups, particularly marginalized groups. This seemingly plausible alternative explanation does not resolve the key concern of the study, which is that if voter participation is a basic requirement of a democracy, the U.S. has not produced a nation of voters using recent policies and practices. Educational standardization has increased incrementally since the early twentieth century, and become the dominant policy theme with NCLB, but voter participation has continued to fluctuate and remained far below that of other countries.

Another alternative explanation of the study results of a weak negative correlation between the SEI and voter turnout for some presidential elections between 2000 and 2012

is that the relationship is spurious. The students affected by the most stringent implementation of standards based reform, NCLB, were not old enough to vote in 2012, when the data for the study was collected. This alternative explanation undermines the possibility of a causal relationship between the two variables, but this exploratory research does not attempt to claim causality; rather, it helps inform the framing the issue of the relationship of educational standardization and voter turnout. This study generated a base line; further research in the future would be needed to identify a causal relationship.

Limitations

The generalizability of the study is limited by a lack of causality imputed from correlation analysis and the lack of statistical significance for some of the correlations. Another limitation of the study is researcher bias in formulating questions predicated on the notion that K-12 public education should foster voting behavior. For those who see no merit to that values claim, the study may be of limited use. Addition limitations discussed next include: confounding variables, SEI, temporal concepts, educational level, and unaddressed alternative explanations.

Confounding Variables

This study has explored data in support of level of educational standardization and voter turnout, but voter participation is confounded by socio-economic status. Poverty is a strong predictor of reduced civic participation. A more complete discussion of outcomes of educational level or voter participation level would explain the relationship of poverty, and other potentially confounding variables, to voter participation.

SEI

The SEI was a first attempt to quantify the standardization of public education. One limitation of the study is that the weighting of the SEI assumed that each indicator was as important as any other in determining a score representing a state's level of educational standardization. Some might argue that some indicators were more or less important than others. Problems with the SEI are not limited to the potential inadequate weighing of the indicators. It may be that there is not much difference between PARCC and SBAC in practice. Due to mandates of the US DOE, membership in SBAC may not be a good indicator of differentiation of education, as contrasted to standardization. The indicators used to calculate the SEI represent a sampling of available data on educational standardization. The indicators may not be a valid sample. The SEI would benefit from evaluation by experts in the field of indexes to improve both its validity and its utility.

Temporal Concepts

The findings of this study are limited by several aspects of the temporal relationship of the variables. First, the SEI is based on 2012 data. Comparing states' levels of educational standardization in 2012 with voter turnout in prior years (2000, 2004, and 2008) is problematic. Next, this examination of voting pattern did take into account age of voter. Older voters went to school during periods of less standardization, but older people tend to vote at a higher percentage. The relationship between these factors is unknown. Additionally, the most dramatic narrowing of the curriculum began in 2002 with the introduction of the harsh sanctions and testing mandates of NCLB, but the students who have had the most opportunity to be affected by standards based reform were not yet eligible to vote in 2012, the time of the study. Finally, increased voter

participation by the youngest voters in the 2008 and 2012 elections was a phenomenon that was not incorporated into the investigation. This exploratory research did not resolve questions around these issues.

Educational Level

The research did not disaggregate voting patterns by education level. Thus, while overall voting has remained stagnant, the research could not parse out whether voting by the well-educated increased with a concomitant decrease in the least educated or whether both group's voting percentages remained the same.

Alternative Explanations

Relative educational level is a well-known correlate to voting when comparing individual voter participation among peers in a cohort; it may be that Arkansas and New Hampshire function as peers in a cohort of the states of the U.S. If so, the population of Arkansas is generally less well educated than the population of New Hampshire and this could be the source of the difference in voter turnout between two peers.

Arkansas residents had less access to voting than did residents of New Hampshire. Arkansas residents were also less well educated than residents of New Hampshire. It may be that states like Arkansas, lower levels of education further inhibit voter participation, because the moderating effect of higher levels of education is less available.

Summary

Limitations to this exploratory research have included confounding variables, the preliminary nature of the SEI, temporal concepts, educational level, and alternative explanations. Many of these unaddressed issues would be resolved with further study.

One of the recommendations in the following section is longitudinal study of the relationship of state SEI scores to voter turnout.

Recommendations

The recommendations of this study fall into two categories. First will be recommendations for improvement of the SEI and its use to develop more answers to the question: is standardization of education creating the unintended consequence of reducing voter participation? Second, recommendations will be made for increasing direct instruction in social studies and civics to improve chances of voter participation and addressing larger social problems with higher level policy recommendations.

The SEI

Standards based reform is justified as a public good because it is focused on improving educational outcomes for members of marginalized groups, in other words, no child will be left behind. This study raises the question: in attempting to accomplish that goal, are other important outcomes (i.e. voter participation) being sacrificed?

The 2012 SEI was developed for this dissertation. It appears to be unique and could serve as a valuable tool, but it is preliminary in nature. Another recommendation is that the SEI be evaluated by experts to guild further development, in order to improve the SEI's validity and utility.

It cannot be said with certainty that the negative correlation between the SEI and voter turnout is compelling evidence of the relationship because of the temporal incongruence of the two variables. The SEI measured the standardization of K-12 public education in the year 2012 for citizens who were not yet old enough to vote while the voter participation data represented citizens who were no longer students in K-12 public

schools. Argumentation towards causality could be established with longitudinal studies of the relationship of the SEI and voter turnout. If standardization of public education continues as it is or increases, longitudinal studies will build evidence to explain better the positive role of educational standardization in effecting voter turnout. In such a future situation, analysis of the two variables will reveal moderate to high positive correlations if the standardization of education is helping increase voter participation. However, continuation of weak or low negative correlations, or perhaps moderate to high negative correlations, will indicate that the standardization of public education is not helping increase voter participation.

Exploration of States

With an improved SEI, future research should spring from the study to further explore exemplar states using case study methodology. One recommendation is to further explore states from the four quadrants of the 2x2 grid, LH, HL, HH, and LL, to determine if the initial suggestions of attributes of LH and HL hold up under closer scrutiny. Another area recommended for further study would answer the question: Are residents of states with higher SEI scores less likely to have high school diplomas or graduate degrees than states with higher SEI scores?

A more complete exploration of educational standardization and student educational outcomes, as well as voter participation, would examine the role of confounding variables such as socio-economic status and race / ethnicity. Investigation into the relationship of educational standardization and voter participation would benefit into a deeper investigation of the subgroups in the population, including categorization by

age, income, amount of time in the educational system under the constraints of the standards based reform of NCLB.

Development of Active Civic Knowledge

Given the lack of progress in addressing wide variability of voter participation among states and between groups, continuous lower voter participation in the U.S. compared to other countries, and the role of education as a moderator for individuals faced with obstacles to voting, education can serve the public interest in the generating an informed electorate with commitment of instructional time to the development of active civic knowledge.

Instruction in the content area of active civic knowledge (Hope, 2012; Kahne & Westheimer, 2003; Ross, 2012) would develop an education system that promoted active citizenship with a curriculum that educated and nurtured students so that they would be able to "understand both their own identity and the nature of society, and how to actively engage with the complex relationship of rights and responsibilities that exist between the two" (p. 7). This study raises the question: would instruction in active civic knowledge engender informed democratic citizens?

Addressing Larger Social Issues

Darling-Hammond (2007) and Herman (2008) pointed to a basic flaw in the reasoning behind NCLB and other standardized reform efforts: the futility of attempting to improve the socio-economic status of the poorest American students by demanding more of their teachers while making no attempt to resolve the greater social and historical inequities that frame our American social structure. Darling-Hammond and Herman suggested that the solution to disparity in educational outcomes was high-quality

universal preschool, health care for children, central and equal funding of schools, additional funding for struggling schools, smaller class sizes, intensive after school and summer school programs, excellent teacher preparation, continuing professional development, and higher teacher salaries. This study gives rise to another future research question that asks would an education that produced an informed electorate be more likely if U.S. educational policy attended to Darling-Hammond and Herman's suggestions?

Conclusion

This exploratory research has helped inform the framing of the relationship of educational standardization and voter participation. It provided evidence that a higher level of educational standardization is not related to higher voter turnout. The attributes of states that embraced standardization of K-12 public education, as measured by the 2012 SEI, were not the attributes of states that generated higher voter turnout, whatever those attributes may have been. The exploratory study of Arkansas and New Hampshire for elements of educational standardization in administrative rules, obstacles to voting found in laws and regulations, cultural/geographic evidence and demographic data revealed differences in values and orientation that contributed to divergent framing of relevant governmental policies along with divergent results in voter participation.

The language of standardization, which emphasizes preparing students for college and career, as well as preparing students to compete in global markets, reveal an emphasis on the fostering of efficient workers. Does this preparation of citizens to become competitive workers in global markets come at the direct cost of preparation for their participation in democratic systems of governance? Would this lack of focus on

active civic knowledge leave citizens less capable of using the power inherent in a democracy to resist exploitation by corporate employers? Would education for an empowered electorate increase the likelihood of the use of the tools of government to ensure jobs with safe working conditions, family wage jobs, health care, and secure retirement and to address the economic inequities that currently leave many Americans unemployed, under-employed, and contingently employed?

Jefferson advocated for an informed electorate, so that a government “instituted among Men, [and] deriving their just powers from the consent of the governed [would] secure certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness” ("U.S. Declaration of independence," 1776). Du Bois called for “the development of power and ideal, . . . a right to know, to think, to aspire” (1970, p. 172) which he contrasted with schools whose purpose is ”to educate black boys and girls simply as servants and underlings, or simply for the use of other people” (p. 172). Franklin D. Roosevelt articulated this message to “the teachers and patrons of American schools: . . . democracy cannot succeed unless those who express their choice are prepared to choose wisely. The real safeguard of democracy, therefore, is education” (1938, paras. 1-4). In proposing education that produces “intelligence plus character” (King Jr., 1947, para. 5), the most influential American civil rights activist warned that “education which stops with efficiency may prove the greatest menace to society” (para. 3).

This exploratory research has helped inform a framing of the issues around educational standardization and voter participation, but has perhaps created more questions than it answered. Fundamentally, is the increase in educational standardization

a problematic indicator of declining support of democratic institutions, particularly the most important attribute of empowerment in a democracy: voting?

APPENDIX A

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APPENDIX B

FULL ACHIEVE WEBSITE REPORT FOR TENNESSEE

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Achieve

All students should graduate from high school ready for **college, careers** and **citizenship**

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Tennessee

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PARCC SCIENCE

Making the Case for Action

This fact sheet and slide deck provide essential state-specific information to promote a college- and career- ready agenda. These resources can be used on their own or serve as the foundation for a personalized presentation.

Advancing the Agenda

As states continue their efforts to promote college and career readiness, Achieve regularly surveys the states to identify their progress in adopting critical college- and career-ready policies. Below is a summary of Tennessee's progress to date:

College- and Career-Ready Policy	
Align high school standards with the expectations of college and careers	Yes
Align high school graduation requirements with college- and career- ready expectations	Yes
Develop college- and career-ready assessment systems	Yes
Develop P-20 longitudinal data systems	
Develop accountability and reporting systems that promote college and career readiness	

*See **Closing the Expectations Gap** for more information*

Defining Accountability

State accountability systems focus the efforts of teachers, students, parents, administrators and policymakers to ensure that students and schools meet the established goals, including the goal of ensuring all students graduate ready for college and careers. Tennessee has yet to begin to use any college- and career-ready indicators in their accountability system.

	Annual School-level Public Reporting	Statewide Performance Goals	School-level Incentives	Accountability Formula
Earning a college- and career-ready diploma				
Scoring college-ready on a high school assessment				
Earning college credit while in high school				
Requiring remedial courses in college				

*For an explanation of the indicators, their uses and Achieve's minimum criteria for college- and career-ready accountability, see **here**.*

APPENDIX C

RACE TO THE TOP THEORY OF ACTION SECTIONS

Partnership for Assessment of Readiness for College and Careers

The theory of action submitted by PARCC (2011) claimed that the assessment system would:

> provide students, educators, policymakers and the public with the tools needed to identify whether students — from grade 3 through high school — are on a trajectory for postsecondary success and, critically, where gaps may exist and how they can be remediated well before students enter college or the workforce. Developing and implementing PARCC‘s proposed assessment system is a fundamental and necessary step in Partnership states’ larger efforts to dramatically improve student achievement, but states know that assessments alone cannot accomplish this. The partnership‘s proposed assessments are one lever for improvement in the broader education system. The design and implementation of these assessments will provide a platform for enriching professional development and modeling good instruction, but the assessments‘ success is tied to the strength and rigor of classroom curriculum; the efforts of teachers, school principals, and district administrators; and the involvement of parents in their children‘s education. (pp. 34-35)

Smarter Balanced Assessment Consortium (SBAC)

In their application, Smarter Balanced Assessment Consortium (SBAC) (2010) presented a theory of action which featured seven principles:

> Grounded in a thoughtful, standards-based curriculum and representing an integrated system; assessments produce evidence of student performance; teachers involved in development and scoring of assessments; system is state-led with transparent governance; assessments are structured to continuously improve teaching and learning; useful information on multiple measures that is educative for all stakeholders; [and] adhering to established professional standards (Willhoft, 2010, p. 20)

APPENDIX D

NEXT GENERATION SCIENCE STANDARDS

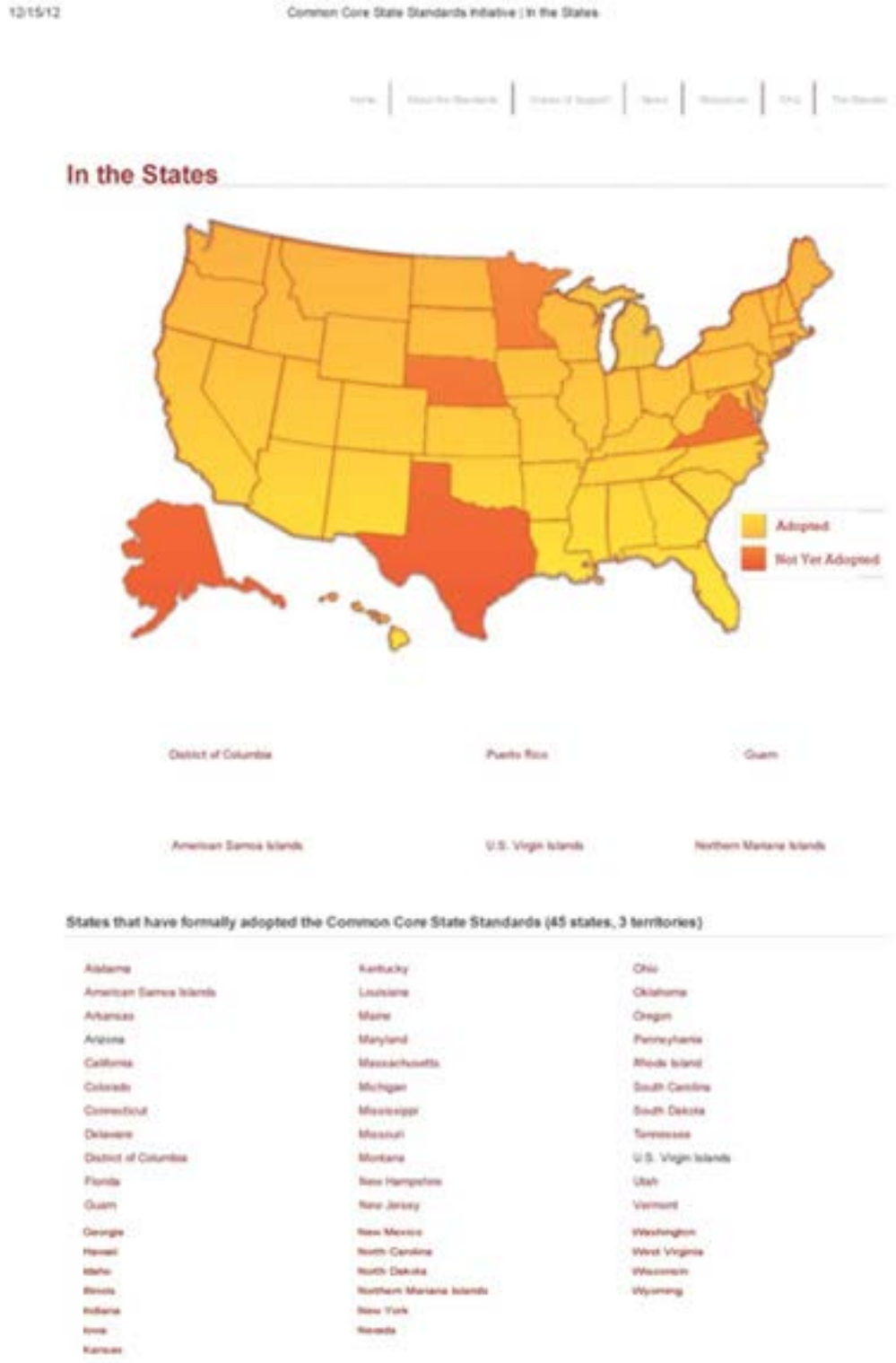
Explanation of Next Generation Science Standards Lead Partner States Responsibilities

According to the Achieve website, (Achieve, 2012c, para. 2) lead state partners will:

- Give serious consideration to adopting the resulting Next Generation Science Standards as presented.
- Identify a state science lead who will attend meetings with writers to provide direction and work toward agreement on issues around the standards, adoption, and implementation.
- Participate in Multi-State Action Committee meetings (Committee of the Chief State School Officers) to discuss issues regarding adoption and implementation of the new standards.
- Publically announce the state is part of the effort to draft new science standards and make transparent the state's process for outreach/receiving feedback during the process.
- Form broad based committee that considers issues regarding adoption and provides input and reactions to drafts of the standards.
- Publicly identify timeline for adopting science standards.
- Utilize the collective experiences of the states to develop implementation and transition plans while the standards are being developed that can be used as models for all states.

APPENDIX E

ADOPTION OF COMMON CORE STANDARDS



(CCSSI, 2012)

APPENDIX F

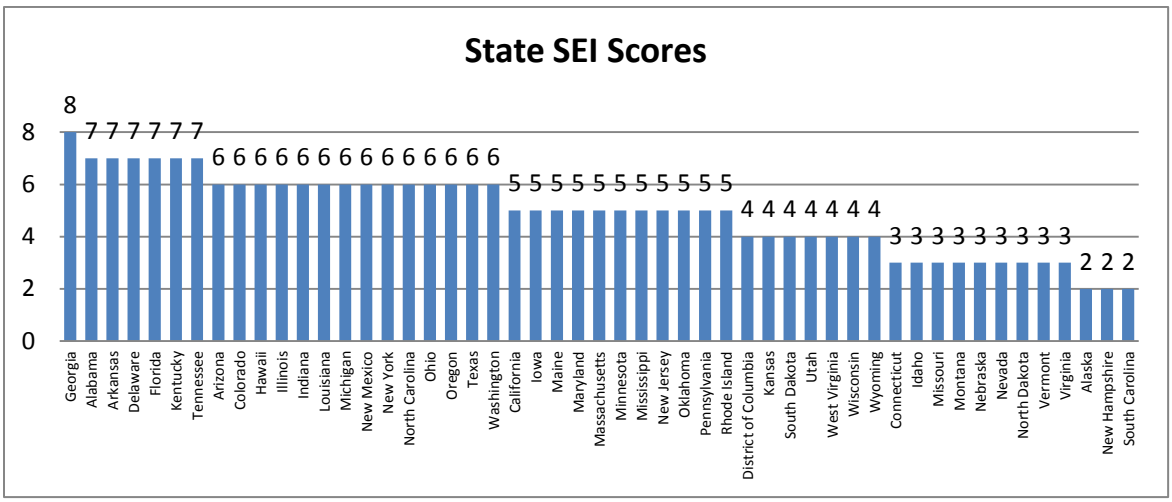
STATE VOTER PERCENTAGES

State	2000	2012	State	2000	2012
United States	54.2%	58.9%	Missouri	58.2%	62.5%
Alabama	51.6%	58.8%	Montana	61.6%	62.6%
Alaska	68.1%	58.9%	Nebraska	56.9%	60.1%
Arizona	45.6%	52.9%	Nevada	45.2%	57.1%
Arkansas	47.9%	50.5%	New Hampshire	63.9%	70.1%
California	55.7%	55.2%	New Jersey	56.9%	61.8%
Colorado	57.5%	70.3%	New Mexico	48.5%	54.7%
Connecticut	61.9%	60.9%	New York	55.1%	53.1%
Delaware	59.0%	62.7%	North Carolina	50.7%	64.6%
DC	48.3%	61.9%	North Dakota	60.3%	60.6%
Florida	55.9%	63.5%	Ohio	56.7%	64.6%
Georgia	45.8%	58.4%	Oklahoma	49.9%	49.2%
Hawaii	44.2%	44.2%	Oregon	64.9%	63.2%
Idaho	57.2%	59.6%	Pennsylvania	54.1%	59.4%
Illinois	56.2%	58.9%	Rhode Island	54.2%	58.0%
Indiana	49.3%	55.1%	South Carolina	47.0%	56.6%
Iowa	63.2%	69.9%	South Dakota	57.7%	59.4%
Kansas	55.6%	57.0%	Tennessee	49.9%	52.2%
Kentucky	52.2%	55.3%	Texas	49.2%	49.7%
Louisiana	56.4%	60.4%	Utah	53.8%	55.4%
Maine	67.2%	68.1%	Vermont	64.1%	60.4%
Maryland	55.5%	66.2%	Virginia	54.0%	66.4%
Massachusetts	59.9%	66.3%	Washington	60.7%	64.1%
Michigan	59.9%	64.7%	West Virginia	46.6%	46.3%
Minnesota	69.5%	75.7%	Wisconsin	67.6%	72.5%
Mississippi	49.1%	59.7%	Wyoming	59.2%	58.9%

APPENDIX G

SEI SCORES WITH TRANSFORMATION TO Z-SCORES

State	SEI score	*z*-score	State	SEI score	*z*-score
Georgia	8	2.03	Minnesota	5	0.06
Alabama	7	1.37	Mississippi	5	0.06
Arkansas	7	1.37	New Jersey	5	0.06
Delaware	7	1.37	Oklahoma	5	0.06
Florida	7	1.37	Pennsylvania	5	0.06
Kentucky	7	1.37	Rhode Island	5	0.06
Tennessee	7	1.37	DC	4	-0.59
Arizona	6	0.72	Kansas	4	-0.59
Colorado	6	0.72	South Dakota	4	-0.59
Hawaii	6	0.72	Utah	4	-0.59
Illinois	6	0.72	West Virginia	4	-0.59
Indiana	6	0.72	Wisconsin	4	-0.59
Louisiana	6	0.72	Wyoming	4	-0.59
Michigan	6	0.72	Connecticut	3	-1.25
New Mexico	6	0.72	Idaho	3	-1.25
New York	6	0.72	Missouri	3	-1.25
North Carolina	6	0.72	Montana	3	-1.25
Ohio	6	0.72	Nebraska	3	-1.25
Oregon	6	0.72	Nevada	3	-1.25
Texas	6	0.72	North Dakota	3	-1.25
Washington	6	0.72	Vermont	3	-1.25
California	5	0.06	Virginia	3	-1.25
Iowa	5	0.06	Alaska	2	-1.90
Maine	5	0.06	New Hampshire	2	-1.90
Maryland	5	0.06	South Carolina	2	-1.90
Massachusetts	5	0.06			



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